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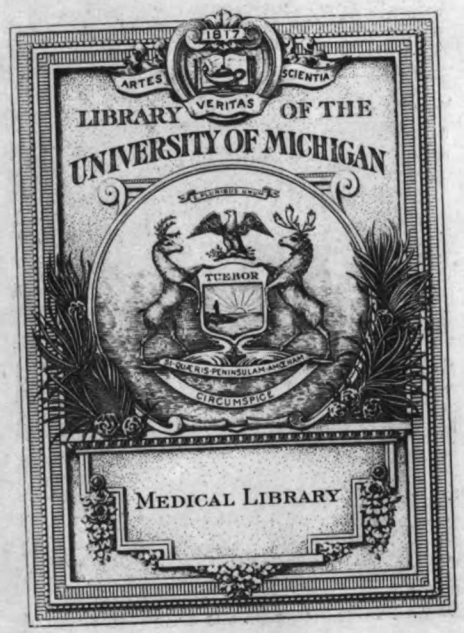

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The Lumleian Lectures

ON

THE SEQUELS OF DISEASES.

Delivered before the Royal College of Physicians of London

BY SIR DYCE DUCKWORTH, M.D., LL.D. EDIN.,

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LECTURE II.[1]

Delivered on March 24th, 1896.

IN my last lecture I discussed at considerable length the varieties of sequels which may occur after enteric fever. We shall not find so much to claim our consideration in respect of many other diseases. I was led to dwell in detail on most of the residual disorders of enteric fever, because it appears to me probable that we have in this instance a typical example of the several consequences that may supervene upon the occurrence of specific and infectious diseases generally, one which may well serve to illustrate for us the intimate nature of, possibly, the majority of bacterio-toxic sequels. The task of tracing the hitherto hidden causes of sequels in a large class of diseases is made easier, by far, when we have to pursue the evolution and manifestations of microbic elements which are known and accurately recognised. We have not this knowledge as yet in respect of several of the infectious fevers, but we are now fully justified in forming opinions speculatively regarding a similar etiology for these, judging by the remarkable analogies that exist between those of which we have this knowledge and those of which, up till now, we have not. That we are still in ignorance of the exact and particular nature of the elements which generate the toxines of variola, varicella, scarlet fever, and some other diseases is somewhat remarkable when the researches of so many competent observers, pursued with untiring industry in all the great schools of medicine, is considered. We can hardly believe that these elements will much longer elude the scrutiny that is now focussed upon them. The subject is of paramount importance, and we may feel happy in the belief that no amount of sentimentalism or fanatical obloquy, either in this country or in the United States of America, will long delay the progress of knowledge in this direction. To those whose humane efforts are still curtailed and chastened in this country I would say, "*durate, et vosmet rebus servate secundis.*"[2]

I am indebted to my colleague Dr. Kanthack for knowledge of some recently recorded facts respecting the influence of typhoid bacilli. Dmockowski and Janowski have proved that these microbes, when injected into rabbits, are capable of producing suppuration, and the same occurs in dogs previously weakened by loss of blood or whose subcutaneous tissues have been first injured, also if these bacilli be injected under scars. The bacilli are found to wander to an inflamed or artificially predisposed site in from ten to twenty days after inoculation. These observers found typhoid bacilli in suppurative foci occurring after the fever, as in parotitis. They met with none escaping by the urine after the crisis of the fever.[3] In a case of ulcerative endocarditis which occurred in a patient suffering from typhoid fever, Dr. Kanthack found typhoid bacilli in the valvular excrescences. Janowski met with them in a case of fatal suppurative parotitis which followed seven weeks after the fever, when the Peyerian ulcerations were found quite healed. Wasserman of Berlin, as the result of his researches, believes that the complicating lesions of typhoid fever are usually due to mixed infections, as he found both typhoid bacilli, streptococci, and others in these conditions. These are the latest contributions to the subject, and they have the merit attaching to the researches of inquirers whose competence for the difficult task cannot anywhere be disputed.

Scarlet fever in severe cases has many complications and several sequels. Pleurisy is amongst the latter, and may be purulent from the first. Endocarditis is not infrequent, and some cases of valvular heart disease met with in later life are probably attributable to this. I shall presently discuss the intimate nature of this condition. Sero-fibrinous or purulent pericarditis may develop during convalescence, also myocarditis associated either with rheumatic or pyæmic conditions. Lymphadenitis may remain, become chronic, and prove but slowly amenable to treatment. Osler records an instance in which the neck remained enormously enlarged and surrounded by a mass of firm brawny glands for two years after an attack. Multiple neuritis, with progressive paralysis and muscular wasting, may occur. Cerebro-spinal insular sclerosis is alleged to have followed scarlet fever. The possibility of associated diphtheria must be borne in mind in some of the paralytic cases. Mania, idiocy,[4] insanity,[5] and melancholia have been recorded as sequels. Handford quotes Dr. Griffiths, of the Nottingham Fever Hospital, for the facts that in 1500 cases he met with two of chorea, one of disseminated sclerosis, and one of spastic paraplegia (probably functional) lasting only a few weeks. Slight hemiplegia (recoverable) has been noted, in all probability due to embolism or thrombosis. Optic neuritis may occur independently of organic cerebral change. Acute myelitis is noted amongst the sequels and epilepsy with more frequency than after any other acute infectious disorder. Nephritis is rather to be regarded as a phase of the disorder, or at least as a complication, and not a true sequel of scarlet fever. It is a definite form, attacking primarily the glomerular system of the kidney. Although it so commonly supervenes on apparent convalescence about the third or fourth week, and while desquamation is in progress over the body, I think it should be regarded as part of the original disease. It is as specific as the cutaneous exanthem, and its significance may be taken to indicate a late invasion of the kidneys by the microbic elements[6] or their toxines as yet not eliminated from the body, and possibly finding their way out by this emunctory channel. The occurrence of dropsy in some cases without albuminuria lends support to the old idea that the anasarca is probably a specific inflammatory exudation into the integuments and cavities. It is rare for such cases to recover ultimately without some degree of albuminuria.[7] Cirrhosis of the liver may be a sequel of scarlet fever. Barlow and others have noted this, and an interstitial overgrowth has been frequently observed in the livers of patients who have succumbed to the disease.[8] The sequels of otitis media suppurativa, perforation of the tympanic membrane, suppuration in the labyrinth, and necrosis of the petrous bone may be far-reaching and tedious.[9] Facial palsy, thrombosis of the lateral sinus, meningitis, and cerebral abscess may all ensue. Permanent deafness thus results. The tonsils may remain permanently enlarged. Goodhart records two cases of torticollis as a sequel. Suppurative peritonitis, enteritis, chronic diarrhœa, symmetrical gangrene, noma, and perforation of the palate have been noted, though rarely, as sequels. After enumerating such a grievous list of troubles as this it is interesting to know that in recent years this terrible pest has been generally present in a somewhat milder form than formerly, and that, therefore, the gravest sequels are rather less commonly met with than was the case five-and-twenty years ago. The disease has generally been of a severer type in this country than on the continent of Europe, and consequently is regarded with greater apprehension amongst ourselves. The arthritis which occurs in connexion with scarlet fever has been carefully studied only within a recent period. It has commonly been regarded as "rheumatic," or, at all events, as rheumatoid. Henoch proposes for it the term "scarlatinal synovitis." Goodhart believes that some cases are truly rheumatic, and others, such as suppurative arthritis, are pyæmic in nature. There is an apparent analogy between scarlatinal and gonorrhœal rheumatism (so-called), the former being regarded as a pyæmic infection from sores in the fauces. But articular

[1] Lecture I. was delivered on March 19th, and published in THE LANCET of March 28th.

[2] Æneid I., 207

[3] Ziegler's Beiträge, vol. xvii., p. 222-366.

[4] Nine cases in 2000 (Dr. Fletcher Beach). In most cases there was a family history of neuroses.

[5] Four cases in 1000 (Dr. Clouston).

[6] Some variety of streptococcus pyogenes.

[7] Vide paper by Dyce Duckworth, St. Bartholomew's Hospital Reports, vol. xix., 1883.

[8] Klein.

[9] Mr. Charles Parker has lately expressed the opinion that this sequel is probably due to the rapid development of post-nasal growths (adenomata), and considers it important to examine early for such and to remove them as soon as possible after convalescence.—Post-nasal Growths, 1894, p. 12.

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disorder occurs in the course of scarlet fever *sine anginâ* when there is no source for infection from the fauces; and endocarditis may also be present in such cases. As indicated by Archibald Garrod, it is the association with arthritis of a series of other rheumatic phenomena which points to the truly rheumatic nature of the process, at least in some instances. Thus, endocarditis and pericarditis may occur, and chorea may supervene. Subcutaneous nodules may appear, also erythema nodosum and marginatum. With these facts before us, it is, I think, impossible to disregard the conclusion that scarlet fever strongly predisposes to rheumatism, and my belief is that the occurrence of it will be found most frequently, if not solely, in children of an inherited arthritic diathesis—an opinion of M. Peter in which I fully concur. This and other forms of zymotic disease may so test this habit of body as to awaken and reveal a rheumatic tendency hitherto dormant in the patient. I am indebted to Dr. Dickinson for his observation that the onset of true rheumatism following scarlet fever is especially apt to be succeeded by chorea, the latter, as I regard it, being a cerebral (cortical) manifestation of rheumatism. In my opinion, then, we may regard it as nearly certain, (1) that true rheumatic complications and sequels may be met with in scarlet fever and (2) that varities of arthritis, due to septic or pyæmic influence, may also occur. Of the latter, Dr. Ashby describes an early and late form, the latter occurring during desquamation. A purulent arthritis is rare.[10] We shall subsequently find that measles may act, as does scarlet fever in evoking rheumatic manifestations, or in preparing the way for them.

Measles is occasionally followed by chronic catarrh of the bronchi and lungs. Tuberculosis may become generalised, probably starting from a source in the bronchial glands or from patches of broncho-pneumonia. Enlarged tonsils and lympharia may remain long after the illness. Post-nasal glandular growths may occur as a sequel. Some observers mention the occurrence of endocarditis. I have never met with an instance of this. Rheumatic fever, however, sometimes supervenes on measles, and the latter condition appears to predispose to rheumatic manifestations in predisposed subjects. Endocarditis (rheumatic, not morbillous) may be one of these.[11] Cancrum oris and gangrene of the vulva have been noted. Destruction of nasal cartilages and necrosis of the upper or lower jaw may result in feeble children. A case of post-morbillous disseminated myelitis has been described by Dr. Barlow with rapidly spreading paralysis and a fatal issue on the eleventh day. Paraplegic symptoms due to polyneuritis have also been witnessed.[12] Dr. Dawson Williams has described an instance of false disseminated sclerosis of the cord as a sequel. Diarrhœa from intestinal catarrh and dysenteric symptoms due to colitis have been noted. The kidneys very rarely suffer. In 103 cases of acute nephritis collected by Dickinson measles was noted as an antecedent in only three cases. A condition of low health may long remain after an attack of measles, with a general vulnerability of most of the textures of the body. Dr. Fletcher Beach met with 11 cases of idiocy which followed on measles out of 2000 cases, and, *per contra*, Dr. Colman reports 2 cases of mentally backward children who both began to improve after measles. According to Barlow, infectious diseases are found to reinforce pre-existing nerve-lesions, and he gives as an instance the case of a child with infantile paralysis of the lower limbs who contracted measles, and after the paralysis had become general died comatose during the infective period. There has long been observed a relation between pertussis and measles. Dr. Charles West is of the opinion that the occurrence of any one of the eruptive fevers during the epidemic prevalence of another increases the liability to become affected with that which is epidemic, and that thus pertussis may supervene upon either measles or varicella. Dr. Goodhart noted the occurrence of pertussis fourteen times after measles in 305 cases of the latter. The same may be said of membranous laryngitis (diphtheria), which sometimes coexists with, or follows shortly after, an attack of measles. We have here an illustration of what may be termed a succession of diseases, one preparing the way, as it were, for another. The following series of illnesses in a family of three young children indicates fairly well what I mean—albeit the intervals between the several disorders were somewhat protracted. In the middle of June, 1895, all had measles. In November all had whooping-cough. Post-nasal adenomata occurred in one child as a sequel and were removed. In January, 1896, all these children had chicken-pox. Occurrences of this kind are by no means uncommon. No sequels are known after *rubeola* (German measles). Nephritis sometimes, but rarely, persists.

Variola is sometimes followed by peripheral neuritis, or a diffuse myelitis may cause paraplegia—ataxie-variolique. The pharynx may be paralysed alone or with other parts, as after diphtheria, from multiple spreading neuritis. Hemiplegia with aphasia sometimes follows encephalitis. Epilepsy, mania, and melancholia have been met with. Boils are not an infrequent sequel, and local gangrene may occur. Suppurative arthritis, epiphysitis, and necrosis of bone, also otitis media, may give trouble long after convalescence has been established. A grave degree of anæmia sometimes ensues after variola.

Parotitis in the milder forms has no sequels. In the severe forms meningitis is the gravest complication, and hemiplegia and coma may result. Such cases are generally fatal. Metastasis to the testis is rare before puberty, and atrophy of the organ may occur, with hindered development of it, if it occurs early in life. Albuminuria, uræmia, endocarditis, peripheral neuritis, also acute mania and insanity, have been recorded as sequels of mumps, but are happily most of them infrequent. Permanent deafness may result. Optic atrophy has been noted.[13] Arthritis has been observed to follow the subsidence of parotitis, and is probably one of the manifestations of the specific poison of this disease.[14] The pancreas appears to suffer in no degree from the specific toxine.

Pertussis is not seldom followed by chronic bronchitis with pulmonary emphysema. Hemiplegia is rare as a sequel. It may occur in a paroxysm of cough. The associated broncho-pneumonia is sometimes of tuberculous nature. Enlargement of bronchial glands is of frequent occurrence, and one or more of them, especially at the bifurcation of the trachea, may prove infected with caseated tubercle and lead to subsequent general tuberculosis. It is suggested that cardiac valvular disease may be induced by long-continued strain upon the heart and give rise to urgent symptoms in the future. Neither albuminuria nor glycosuria, if present, tends to persist, and the same may be affirmed in respect of the pulmonary emphysema which so commonly arises and of the interstitial emphysema which occasionally occurs, owing to rupture of the lung or trachea in a paroxysm of coughing. Pertussis is sometimes responsible for the supervention of post-nasal adenoid growths. Hæmorrhage into the adrenal bodies has been met with, due to the violence of the cough checking the flow of blood into the veins.[15]

Varicella has no true sequels save in respect of changes which may occur in the rash. Prurigo may result, so-called varicella prurigo (Hutchinson). Ecthymatous sores resembling pemphigus are sometimes met with. The vesicles may become gangrenous in delicate or tuberculous children, and the result is probably due to the supervention of extraneous microbic infection and not to the influence

[10] An excellent account of such cases is recorded by Bellingham Smith and Mary Sturge (Brit. Med. Jour., Nov. 16th, 1895, p. 1213). They met with nine examples of purulent arthritis in 5000 cases. The joints were attacked in the following order of frequency (in forty-five published cases) wrist and hand, elbow, ankle and joints of foot, knee, hip, and sterno-clavicular joint. The time of onset was from the third to the fifth week of the disease, chiefly early in the fourth week, or concomitantly with the onset of nephritis. Cardiac lesions were not commonly present. The arthritis varied from a simple serous to a purulent and destructive form. The simple form is generally called scarlatinal rheumatism. Streptococci were found in the serous effusions. Some cases were purulent from the first. The throat is the common source of infection, but empyema and peri-arthritic abscess may be the original focus. Epiphysitis was not met with, though it was common in the great Dublin epidemic of 1834–1842, according to Kennedy. Septic thrombosis of the jugular veins was not met with.

[11] Sansom records a case in which chorea with pericarditis and endocarditis developed during convalescence from measles. J. H. Hutchinson also records four cases in this connexion.—Transactions of the Royal Medical and Chirurgical Society, vol. lxxiv., 1891, p. 229.

[12] Bury states that sixty cases have been described (up to 1893) of paralyses of cerebral or spinal origin developing during the course of, or in early convalescence from, measles. Some of these were probably due to multiple neuritis.

[13] Dr. Caleb Parry records a case of orchitis following parotitis in which obstinate suppression (? retention) of urine occurred long requiring the use of the catheter. Cases of secondary parotitis are of extreme interest. Stephen Paget and others have well described them. They do not, however, concern us in these lectures, inasmuch as they may all be classed as complications rather than sequels of disease. I may refer the reader to an excellent essay on the subject by Dr. Hawthorne of Glasgow, published in the Glasgow Medical Journal, July, 1895, with a complete bibliography of the subject.

[14] Treatise on Rheumatism: A. Garrod, 1890, p. 186.

[15] Museum at St. Bartholomew's Hospital, No. 2320a. Child aged seven months.

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directly of varicella poison. Like the eruptive fevers, varicella may be followed by pertussis, a lowered condition of health thus induced paving the way for fresh infection with increased susceptibility to it.

Influenza.—The sequels of this disorder have only been studied with care in the course of the epidemics which have prevailed in the last seven years. They escaped the attention of the older observers. They are very numerous. It may be fairly affirmed that many of the gravest characters of the malady occur after the acute stage has passed away and when convalescence is apparently assured. I think there has possibly been exaggeration in respect of some of the alleged sequels of influenza; still they are, as I have said, numerous. The general asthenic type of the disease is well recognised. The enfeebled mental and bodily states left behind it have been forcibly and sadly brought home to most of us of late, both in our own persons and in our patients and friends. Recognising the fact that each epidemic is signalised by a dominant form for the most part, we may discuss the particular sequels attending, first, the thoracic, secondly, the gastro-intestinal, and, thirdly, the nervous varieties of influenza. The personal factor comes in here strongly in respect of each individual affected, and, as has been said, "each patient convalesces according to his temperament" and, no less, I would say, his diathesis. Nearly sixty years ago Sir Henry Holland noted the long persisting influence of this disease upon the constitution as a remarkable feature; also the variation of parts affected in different individuals or at different periods in its progress. In respect of sequels ensuing on the thoracic forms we may note the prolonged course of the peculiar broncho-pneumonia so often fatal to the weakly and the aged in its earlier stage. Next, the onset of tuberculosis. Abscess of the lung has been several times met with supervening on pneumonia, and Pfeiffer's bacillus has been found in the yellowish brown sputa expectorated from it, together with elastic fibres from the lung. Hitzig[16] records a case in which careful examination proved the matter from the abscess to be free from streptococci, staphylococci, and from tubercle bacilli, and to contain only influenzal bacilli. Pleurisy is common and empyema may result. The heart is often severely affected. Great weakness of the organ is common; arhythmia, bradycardia, tachycardia, and pseudo-anginal attacks with dilatation, may occur long after the illness. Pericarditis and endocarditis are but rarely met with. Vertigo is a very frequent symptom, a tendency to it persisting for months after an attack. The gastro-intestinal variety of influenza may lead subsequently to vomiting, simple catarrhal jaundice, chronic gastro-intestinal catarrh, diarrhœa, or constipation, with marked nervous depression. The nervous variety is apt to lead up to many subsequent troubles. A rapid denutrition of nerve centres is more or less common in all cases presenting any severity in the early stages. Neurasthenia may prevail for one or two years subsequently. Polyneuritis is a common sequel. The arms may be paralysed, with both motory and sensory disturbance, and wrist-drop may occur; moreover, the same process may occur over large areas. Neuritis may involve cranial and other nerves locally. Encephalitis, myelitis, sclerosis of various tracts of the spinal cord, neuralgia, especially the intercostal variety, conjunctivitis, iritis, otitis media, mastoid abscess, malignant endocarditis, parotitis, orchitis, and lymphadenoma, with many other affections, have been noted amongst sequels in various recent epidemics in all parts of the world. Somnolence, or extraordinary drowsiness, with hebetude, is a noteworthy feature. Headache, vomiting, and various mental disorders may occur. Melancholia leading to suicide is by no means uncommon. Mental incapacity long remains, and many patients affected in middle life tell of inability for efforts, mental and bodily, that were easy to them previously. They feel many years older in all respects.[17] The natural level of health may never be regained, or not fully re-established, for two or three years after a severe attack. Abscess of the brain has been several times noted as a sequel, also simple lepto-meningitis. Dr. Harry Campbell has recorded a case in which a young man, a victim of hemicrania, lost this tendency after an attack of influenza. Mental affections may also sometimes subside after an attack. The sequels of this disease are doubtless often very varied and often extraordinary. A medical friend of mine has been unable to take coffee since he suffered from a severe attack in February, 1895, without feeling considerable cardiac discomfort, although there was no arhythmia and the heart sounds remained normal. In his case, too, and in another there remained for months subsequently a liability to paroxysms of low temperature, with extreme chilliness and distressing sensations, observations made in the mouth, axillæ, and rectum recording a temperature of only 96° F. Such attacks continued to occur once in every eight or ten days and not unfrequently in the night. (Nothing afforded so much relief as an ounce of whisky taken as hot toddy.)

Influenza, in common with other infectious diseases, distinctly appears to predispose to the onset of other diseases. The lowered vitality induced by the primary malady leaves the patient a more ready prey to the attack of any other he may be exposed to. Sir William Broadbent has expressed the opinion that an attack of influenza may in this way determine the outbreak of enteric fever, the pyrexia of the former running on into the latter, so that the new malady may appear to be, as it were, a prolongation of influenzal fever. Or a distinct interval may elapse between the one disorder and the other. Translated into the language of to-day, we may substitute for the term "lowered vitality" a condition of the solids and fluids of the body in respect of their powers of resistance to invasion by specific toxines which is unequal to the struggle between them and the infection. We have already noted instances of a like kind in the cases of measles, varicella, and pertussis. It is also conceived by Broadbent and others that germs of diseases may lie latent in the body and remain inoperative till the resistance of the host is impaired by some circumstance, such as infectious or other illness, or traumatism, which forthwith liberates the latent germs with the consecutive onset of a fresh ailment. The occurrence so frequently of tuberculosis after injuries and infectious fevers may possibly be explained in this way, also the development of tertiary syphilitic disorders.

Relapses of influenza are commonly met with and may occur several times at fairly long intervals after the primary infection, and long after the original epidemic has passed away. We may doubt the occurrence of fresh infection from without, as by sporadic influence, in many such instances, and I think we may consider as probable a view of this matter for which I am indebted to our registrar, Dr. Edward Liveing. He conceives it to be not unlikely that the toxine of influenza may act very much as does that of malaria, leaving behind it residues of specific infective matter, which wake up into activity from time to time, and induce fresh outbursts of the disease in response to any conditions which temporarily lower the general vitality of the body. We may thus regard such relapses as evidence of sequels of the direct residual class. I have experience of cases in which four or five attacks have occurred within two or three years and at varying intervals. The conditions in respect of symptoms, type of pyrexia, and general character leave no doubt as to the true nature of the disorder, and intelligent patients, in three cases in the persons of well-known members of our profession, have recognised only too well the specific qualities of it.

Acute bronchocele has been several times observed to follow influenza. One lobe may become greatly enlarged and give rise to dyspnœa or orthopnœa, with a fluctuating tumour. Incisions give exit to viscid fluid with relief to the symptoms, but the discharge may continue to flow for months—thirteen months in a case recorded by Dr. Browne of Alderley Edge.[18] In another case there remained enlargement of the gland for eighteen months, acute inflammation having begun three days after the influenzal temperature fell to normal. One of the most remarkable cases I have seen occurred in a man aged sixty-eight years, brought to me by Dr. Elliott of Chester, in whom great wasting had occurred in the pectoral muscles. This followed an attack of influenza nine months previously. Twenty-eight pounds weight had been lost during that time. The ribs were plainly visible: There was marked difficulty of inspiration and the upper portion of the chest hardly moved. There was no myoidema. The brachial muscles were soft but those of the lower limbs were firm.

[16] Munchener Medicinische Wochenschrift, Aug. 27th, 1895.

[17] One of my patients aged sixty-eight years, a former athlete at Cambridge, stated that he felt like a man of thirty-five till he had influenza; afterwards he felt like a man of seventy.

[18] Brit. Med. Jour., June 8th, 1895, and references to other cases May 2nd, 1895.

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There was general weakness and early fatigue on walking. Improvement slowly followed treatment by massage, warm douching, and dosage with strychnine, phosphorus, and arsenic. This man was at one time apparently in peril from respiratory difficulties. There was evidently some focal myelitis in the cervical portion of the cord. My colleague, Dr. Lewis Jones, has given me particulars of a case in which wasting of the muscles of one buttock followed after an attack of influenza. Recovery ensued after treatment. Bladder troubles may set in and persist after an attack. Diabetes has been several times observed as a sequel.[19] Arthritis and multiple synovitis sometimes follow influenza. At the outset of many cases it is sometimes difficult to be sure that rheumatic fever is not in progress. There may be pains in the joints and pyrexia. The two disorders may even occur together and lead to a very grave condition owing to carditis. Cases have been carefully observed in which symptoms of myelitis, involving several tracts in the cord as well as the cornua, have led to arthritis or true spinal arthropathy. Dr. Sansom has directed attention to such cases, and has carefully studied them.[20] He has shown that there may be both affection of the cord and of the peripheral nerves in such instances. In a case he relates at length there was polyarthritis and symptoms pointing to disease of the anterolateral columns, muscular spasms, and contractions, motor paralysis and muscular wasting, also sensory changes, incoördination and delayed transmission of thermic and other impressions. No pyrexia was present. The subject was a woman of rheumatic proclivity, but Dr. Sansom found no ordinary symptoms of rheumatic fever. The illness began four months after a confinement and was clearly influenza, and many of the above symptoms were present on her admission to hospital. She left benefited, but returned in two months' time with arthritis of the left knee newly set up. This was six months after the attack of influenza. An almost perfect recovery from all the symptoms ensued, and this is an encouraging fact to note, since it relates to the prognosis of nearly all such grave conditions following influenza. My colleague, Mr. Howard Marsh, has recorded several examples of arthritis of this nature.[21] He has found the hip-joint most often attacked. Synovitis first sets in, with stiffness and swelling. Muscular wasting soon follows. Severe sciatica occurred in one such case. There was fever, with a temperature of 102° F., in one case. The symptoms usually subside in two months' time. In one instance the disorder followed six months, and in another seven months, after attacks of influenza. The conditions appear to simulate tuberculous disease of the joints, but the prognosis is generally satisfactory. Mr. Jennings has recorded two cases in which influenza appeared to cause reopening of old wounds in the skulls of miners which led to abscesses and fatal results.[22]

Were I to enter at length in laying before you an account of the sequels of influenza as set forth in the special literature on the subject during the last five years the whole time allotted to me would not suffice for the purpose. For a minute account of these I would refer you to the second edition of Dr. Althaus's work on influenza.[23] He records instances of every variety of complications and sequels with an elaboration into which I cannot attempt to follow him. They amount to at least sixty in number, and this writer has calculated that varieties of sequels may be looked for in about 20 per cent. of all cases. After perusal of this work one must not feel surprised to meet with almost every known malady as a sequel of influenza, and the prospect is, indeed, almost overwhelming. At this moment, however, I may perhaps venture to say, *Satis est, quod sufficit.*

Erysipelas.—Mental disturbance is rarely a sequel, but mania and delusions may occur on the subsidence of local symptoms. Recovery is the rule. Palatine and laryngeal abductor palsy followed one case complicated with pneumonia. The laryngeal paralysis necessitated tracheotomy and was permanent.[24] Bradycardia has been noted. Disappearance of chronic skin diseases has sometimes occurred after an attack of erysipelas, such as eczema or lupus, and sarcomata have also been similarly found to subside. Treatment for the latter has accordingly been practised of late by introducing cultivations of toxine from erysipelatous textures into the growths, so far, I believe, with no very satisfactory results.[25] The tendency to recurrence of erysipelas, which has hitherto been explained by fresh infection with the specific poison, is now believed to be due to the survival of germs (Fehleisen's streptococcus) which have remained latent in the tissues, and are provoked into activity by the irritation of traumatism or by exposure to undue heat or cold. Patients of gouty tendency were formerly believed to be especially liable to attacks of erysipelas; Caleb Parry and James Gregory in particular directed attention to this fact, but I am not prepared to confirm their statement so far as my own experience guides me. Traumatism in any degree predisposes to erysipelas, with or without breach of surface, in the former case by admitting specific germs, and in the latter, probably, by affording a *locus minoris resistentiæ* wherein those that may be dormant in the system may become active and potential. Malignant endocarditis has been observed, though rarely, as a sequel; and streptococci have been found in the aqueous humour in a case of cyclitis following erysipelas.

Diphtheria.—The sequels of this disease are so remarkable and at times so serious that they have attracted close attention. I cannot discover evidence that these very obvious consequences were witnessed or described by the older physicians. But since diphtheria became endemic in this country in 1855 they have not failed to be noted and recognised as depending upon the original malady. The albuminuria which is so common during the active stage of the disease usually passes off leaving no trace of nephritis. But it may persist for two months subsequently. Dropsy is of very rare occurrence in this relation. Parenchymatous nephritis has been noted, but it is open to question whether the disorder thus complicated is not scarlet-fever rather than diphtheria. It is certainly very rare. The albuminuria is probably of toxic origin and so far specific. The gravest sequels are paralytic conditions, and the latest researches respecting them plainly indicate that they are due to a toxic neuritis which may be widely spread. These paralyses occur in from 10 to 20 per cent. of all cases. They occur usually in from two to six weeks after the onset of diphtheria and are commonly more marked in adults than in children. They may be local or general. Of the former we note palatal and pharyngeal palsies, strabismus, ptosis, ophthalmoplegia interna, and facial palsy. With some of these may be associated symptoms of general paresis or actual palsy. The general paralyses are of the same nature as the local, and are due to polyneuritis of toxic nature with loss of reflexes. The vagus nerve is especially apt to suffer, and the evidence of this is afforded by great cardiac weakness with bradycardia or tachycardia, or by fatal syncope. Vomiting may be troublesome, and may precede the cardiac symptoms. Loss of knee-jerk may sometimes be the only sign of nervous sequels. This is, however, always a symptom indicating gravity and demanding vigilance in any case. The sphincters, as a rule, are unaffected. With due care in treatment and an intelligent appreciation of the special dangers of such cases the prognosis is on the whole good. Perfect recovery may be anticipated within three or four months. Fagge records a case in which signs of palatal palsy had remained for four years after diphtheria. Rarely there may persist some enfeeblement of muscles in the limbs. I have a general impression, although unsupported by any figures in proof of it, that the nervous sequels of this disease have been less frequently met with since treatment by antitoxin has been employed. We are fairly justified in anticipating that such may be the case. Recent researches of Sidney Martin and Kanthack plainly indicate that the diphtheria bacillary toxine induces a specific and spreading neuritis in animals, and hence we are justified in the assumption that a precisely similar process occurs in the human subject. According to the observers just mentioned the neuritis of diphtheria is primary, the sheath of Schwann being first attacked and the axis-cylinder of the nerve subsequently. Kanthack has found the bacilli in the spleen and in the lungs. Dr. Pasteur has directed attention of late to the association of respiratory paralysis with cardiopulmonary symptoms in diphtheritic multiple paralysis.[26] In a series of 64 cases of diphtheritic paralysis serious cardiopulmonary "crises" occurred in 20, and in 17 of these there

[19] Hennig: Beiträge zur Symptomatologie und Therapie der Nervosen Formen der Influenza. Münchener Medicinische Wochenschrift, Sept. 3rd, 1895.

[20] Clinical Journal, Jan. 9th, 1895, p. 165.

[21] Diseases of Joints, second edition, 1895, p. 30.

[22] Brit. Med. Jour., June 8th, 1895.

[23] Influenza, &c., London, 1892.

[24] Frith: Berliner Klinische Wochenschrift, 1874, No. 49 (quoted by Gowers).

[25] Butlin: Clinical Journal, Jan. 29th, 1896, p. 213.

[26] Clinical Society's Transactions, vol. xxviii., 1895, p. 111.

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was associated paralysis of the diaphragm. Most of them occurred between the ages of two and six years. Dr. Pasteur relates the particulars of 32 cases in which the diaphragm and intercostal muscles were more or less involved and gives an admirable and suggestive *résumé* of them. He makes a distinction between cases in which the disorder of the phrenic and intercostal nerves is peripheral and those in which the phrenic nerves are involved centrally or near to their nuclear (bulbar) origin. In the former the diaphragmatic paralysis may develop insidiously and is altogether less grave, in the latter it may come on suddenly, in an acute crisis, with symptoms of dyspnœa and asphyxia, also with transient pyrexia and vomiting. Such cases are almost certainly fatal. Phrenic or intercostal palsy appears, according to Dr. Pasteur, to determine collapse of the adjacent portions of the lung and especially of the base of the right lung.

As indicating the remarkable advance made in pathological and clinical study in quite recent times I may recall here a passage taken from Sir Thomas Watson's classical lectures to be found in the last edition, issued just twenty-five years ago.[27] He remarks: "All these sequelæ are significant of blood-poisoning. We cannot suppose that the nervous symptoms—transient and wandering as they often are—can have their cause in any grave or material damage in the nervous centres. They denote, I presume, disturbed nutrition of the tissues from imperfect or altered conditions of its circulating blood." Watson was right in his belief that the nerve-centres were not involved, but the whole subject of neuritis in its many forms now constitutes a new chapter in medicine, one for which few materials existed in Watson's time, and those the careful observations of Chomel and of Graves, now sixty-eight years old, which might have, but somehow did not, set inquirers upon the track to discover peripheral neuritis.

As indicating how the supervention of a new infection may prepare the way for fresh outbursts of diphtherial disease I may quote the case, recorded by Dr. Hayward, of a child who, while recovering from diphtheria, was attacked with measles. On the invasion of the latter there was a renewed activity of the lingering diphtherial bacilli with a reformation of faucial membrane. We have already noted how similar troubles may ensue when the vitality is lowered in cases of influenza, measles, varicella, and pertussis. Disorders of the mucous membrane of the nose and otitis are to be included amongst the occasional sequels of diphtheria, also post-nasal adenoid growths. It is probable, if not certain, that some of the post-diphtherial sequels are due, as in other cases, to the results of mixed bacillary infections. The commonly associated broncho-pneumonia has been proved by Kanthack to be due to specific bacillary invasion of the lung. Malignant endocarditis is sometimes a sequel of diphtheria.

Malarial fevers.—The sequels of these present several problems upon which much light has been recently shed since the discovery of their intimate nature and their dependence upon the several phases of the life of certain hæmatozoa or sporozoa. We have the fact that, according to the degree of impregnation of the system by these parasitic bodies, there remains for long, sometimes for life, a tendency to recurrence of specific pyretic processes under certain provocations, and not seldom the establishment of what is well known as malarial cachexia. A subject of the latter condition may resist all treatment and die of anæmia or from hæmorrhage. The liver and spleen are commonly, but not always, enlarged. Paraplegia, sometimes spastic, has occasionally been noted. Intermittent paralyses, intermittent aphasia, cramps, hyperæsthesia, anæsthesia, articular pain and swellings, œdema, and urticaria very specially have been noted to follow malarial impregnation, all of these impressed with a periodic or intermittent character. These strange conditions we now explain by reference to the particular organs infested from time to time, and yielding manifestations of the development of the specific blood-parasite. Saccharine diabetes is sometimes distinctly traceable to previous malarious impregnation. Neuralgia in various forms has been noted as a sequel affecting intercostal, occipital, sciatic, and testicular branches. The supra-orbital branch of the fifth cranial nerve is especially liable to be thus involved, the condition being sometimes described as "brow ague." We have to be careful in assigning to malarial influence any conditions of a periodic or intermittent character which may not certainly be connected with submission, at some time or other, to exposure to specific hæmatozoal infection. It is a character of all neuralgias to be paroxysmal and intermittent, even, as shown by Weir Mitchell, when of traumatic origin. But it appears certain that the effects of malarial impregnation may for many years induce a condition which modifies the course and characters of other ailments. Thus, according to Fayrer, "periodicity complicates all diseases in India." A chill induced in any way may awaken activity of febrile symptoms many years after subjection to malarial influence. Neurasthenia and spasmodic asthma are amongst the protean manifestations recognised in this relation, also intermittent torticollis, and a rebellious form of hiccough. This peculiar latency of malarial influence has now to be considered with reference to the modern doctrines held as to the nature of the disease. It is believed that the malarial germs are not absolutely destroyed, but only rendered impotent or latent by drugs held in repute for cure, such as quinine and arsenic. Improved general health of the patient appears to render the hæmatozoa latent for a time. New forms of illness may induce fresh activity of the hitherto latent germs. According to Manson, the causes of latency are various even for the same micro-organism. It has been proved that individuals may become immunised to the toxines of bacilli although the microbes may continue to exist and grow. The latter may thus apparently remain latent or dormant, englobed in cells or prevented by a barrier of cells from gaining access to the body (Washbourn). In malarial infection there is often evidence of the presence of varieties of hæmatozoa, or admixture of parasites, each of which may cause various types of fever. Quinine has more power in destroying some of these than others. It appears certain that some of these bodies undergo development in various organs of the body, especially the liver, spleen, intestinal mucous membrane, brain, and bone-marrow. Many of the symptoms appear to depend upon the organ selected for their accumulation and sporulation. The blood is most impregnated at the beginning of a paroxysm of fever, and least so in the apyretic intervals. As Manson has pointed out, the principal acts in the drama in pernicious cases are played out in the viscera, whence, at intervals, swarms of parasites are embolically shed into the circulation, producing the varied symptoms of malarial pyrexia. We may account for the lingering tendency to recurrence of paroxysms by supposing that the specific hæmatozoa in a given case have never been quite annihilated, but have remained latent or quiescent, locked up, as it were, in some viscus or tissues of the body, and only set free by the onset of some general disturbance which lowers the vitality and resistance of the patient. I think we may fairly anticipate that some absolute proof in support of this conception will be presented to us before the lapse of many years.

Dengue may be followed by troublesome enlargement of the lympharia for many weeks after the illness, and the same mental and physical prostration may long remain after an attack, as is witnessed after influenza.

Epidemic cerebro-spinal meningitis may have for sequels persistent vomiting and sometimes a spinal arthropathy, even purulent arthritis. Optic neuritis with atrophy and blindness has been noted, also otitis interna with deafness, leading in children to deaf-mutism. Headache may persist for months or years. Chronic hydrocephalus, imbecility, and aphasia may occur. Peripheral neuritis of some of the cranial or spinal nerves has been observed.

Several sequels are recognised as results of *Dysentery*. A form of arthritis sometimes sets in, perhaps a month after recovery, rheumatoid but not rheumatic, possibly akin to gonorrhœal or infective arthritis. Several joints are commonly involved, but there is not much pain. These troubles generally pass away within a few weeks or months, and have been observed to supervene in milder rather than in severer cases of dysentery. The swelling may be very great. No sweating or cardiac complication has been noted, and the degree of pyrexia is usually mild. Chronic nephritis may follow an attack of dysentery. Neuritis leading to paraplegia has been noted. Chronic dyspepsia, irritability of the bowels, and a cachectic condition, with wasting and anæmia, may ensue after severe and repeated attacks. This state is doubtless due to destruction of large tracts of the mucous coat of the colon, which are replaced by scar-tissue of no functional activity.

Cholera.—Convalescence is sometimes protracted. Anæmia may long remain, and the menstrual functions may cease

[27] Lectures on the Principles and Practice of Physic. Fifth edition, 1871, p. 895.

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for many months. Tetany may affect all the limbs, and may spread to the trunk and involve the glottis, causing suffocation. Phlegmonous furunculosis, sometimes ending in gangrene, may supervene, and this condition has been found associated with glycosuria. They are not improbably due to secondary infections from the intestinal surface. Dyspepsia and rebellious diarrhœa may persist after an attack. Bronchitis, pleurisy, pneumonia, suppurative parotitis, gangrene of the extremities, and ulceration of the cornea have all been noted, also diphtheritic inflammation of the fauces and genitalia. Paralytic sequels have been met with, also mental disturbance. One attack is not prophylactic against a second one.

Oriental or bubonic plague.—Some sequels have been noted in patients who have suffered and recovered from this specific and most contagious disease. Furuncles, dropsy, partial paralyses, and mental disturbances are amongst the most frequent. The fact that Kitasato's bacillus has been found in the blood, glands, and viscera, affords an explanation of such consequences and leads to the belief that they depend, like those of enteric and some other fevers, upon microbic residues, with, possibly, additional and fresh (mixed) infections of other, though non-specific, toxic elements.

In my next lecture I shall discuss the sequels of syphilis.

A Presidential Address

ON THE

PRESENT AND PROSPECTIVE CONDITIONS OF MEDICAL EDUCATION.

Delivered at the Fourth Session of the Inter-colonial Medical Congress of Australasia at Dunedin, New Zealand, on Feb. 3rd, 1896,

BY FERDINAND CAMPION BATCHELOR, M.D. DURH., L.R.C.P. EDIN., M.R.C.S. ENG.,

FELLOW OF THE OBSTETRICAL SOCIETY OF LONDON, VICE-PRESIDENT OF THE BRITISH GYNÆCOLOGICAL SOCIETY, LECTURER ON MIDWIFERY AND GYNÆCOLOGY AT THE OTAGO SCHOOL OF MEDICINE.

[THE President commenced by thanking the members of the Congress for the honour they had conferred upon him in electing him as their president and then briefly referred to the place of medicine among the exact sciences. He reviewed the progress that had been made, first, in regard to certain instruments of precision, such as the clinical thermometer, the stethoscope, the sphygmograph, and the microscope, and then passed on to some of the more striking advances within the last twenty-five years of chemistry in its relation to medicine. The progress of experimental physiology was the next topic dealt with, and the progress of bacteriology and the antitoxin investigations were ably passed in review. Dealing with the scheme of professional study the President said:—]

In the face of these vast changes, what corresponding advance may there be discerned in the education provided to meet the consequent new conditions? Practically, a survey of the range of medical education throughout the empire shows that there has been very little change in the education we provide at the earlier stages of a young man's course. The conditions of entrance into professional study vary in a remarkable degree. While the Universities of Oxford and Dublin do not confer a medical degree unless the candidate has previously graduated in arts, there are many examining bodies which ask for no further proof of preliminary education in literature and science except that of a common leaving certificate such as a schoolboy may win in England by way of the local examinations or in Australasia by a somewhat low-graded matriculation. Now ever since 1873, the year of Forster's Act, there has been in Great Britain and throughout the empire a fairly satisfactory system of primary education, graded into standards of which the highest is usually passed by children at the age of thirteen. Three years' further study at a respectable high school on the lines of a liberal education should bring a boy to the level of a sound test of a higher quality, I think, than our matriculation examination here provides. Then should ensue two years' study of special scientific subjects preparatory to the strict professional education, which should continue for at least four years further. What, however, is the case with regard to this preparatory study—the belt of ground occupying the space between leaving school and beginning professional education? I venture to think that this most important detail of junior professional work remains in the most chaotic and unsatisfactory condition. The medical man of the immediate future should, above all things, aim at being scientific in his habits of thought and methods of practice. He should have acquired the eye of science, the ear of science, the hand of science, the judgment of science; he should know that he really sees what he is looking at, hears what he is listening for, and touches with discrimination what he handles. He should be capable of judging clearly in his diagnosis and be in the habit of looking for clearly recorded phenomena on which to base his ultimate conclusion; his practice and his theory should be mutually helpful. He should be able, not merely in a humble way, to follow the great pathologists of the hour in his application of their work, but also to appreciate their methods and their labours, if not actually ambitious to emulate them. As fast as medicine continues to travel out of the region of empiricism, so will it be needful for empirical modes of thought and practice to be laid aside. We may say, after the great German poet, "More light"—that is, "more science, more science"—for to us science is light. In my own time the apprenticeship system as a training of young aspirants to the medical profession was still in vogue. It was thought that after registration the best way a young man could commence his work was to enter what might be called a medical man's dispensary. Readers of "Middlemarch," that most faithful picture of medical life in England fifty years ago, will recollect how justly a medical man was then identified with his dispensary. Compounding drugs, extracting teeth, bleeding, dressing of small wounds and sores, with occasional clinical practice among the poor amidst the most adverse circumstances—these were the conditions which were held to seriously incline a young man to his professional career. I believe there are many respectable opinions still expressed in approbation of this older style of medical training. It produced good men; why should it not continue to produce good men? Doubtless, for the knowledge than accessible, the training was good and sound. Most work was empirical, and it was surely of some advantage to be associated with an empiric of great experience and possibly considerable success. So much depended upon observation of more or less transitory significance that in the absence of scientific or theoretical principles the methods of actual practice were, doubtless, as good as might be got. However, I am inclined to think that if anyone still advocates the old apprenticeship plan as suitable to modern requirements, such a man has allowed the tide to run past him; he has failed to note the signs of the times, and does not observe that exact science has advanced, is advancing, and will continue to advance in every department of our work, and that the need for increased opportunities for scientific training become for our junior students more and more impressive. It would be, in my opinion, most beneficial to have one standard of junior work fixed by the General Medical Council—a course covering at least two years from matriculation. About the matriculation itself, except that it should be a fairly exact test examination for high and grammar schools so as to give boys a respectable leaving certificate—about this I say nothing, but I am strongly of opinion that for two years subsequently, if not more than two years, the whole time should be given up to purely scientific study. It ought to be noted that with remarkable prescience the senate of the University of London have for many years past insisted upon a scientific intermediate between matriculation and the first professional examination. This preliminary scientific examination is of such a kind that it practically enforces two years' work at physics, chemistry, and general biology, and the candidate is not eligible for the final M.B. examination until four years after his success in the preliminary scientific examination. I do not now argue whether it is desirable for us to aim at a standard so rigorously high, because I do not think, in our conditions in Australasia, it is possible to command the supply of men willing to undergo such severely exacting tests; but it seems to me that the first two years of the medical curriculum of the University of Sydney is quite good enough for our wants at the present

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stage of our population and requirements. In the University of Sydney professional subjects do not come under the student's notice until his third year, during which year he is limited to materia medica and therapeutics. His professional studies do not commence until his fourth year, while chemistry, physics, anatomy, physiology, and biology form the whole of his studies for the first two years. Thus in this admirable course full provision is made for the scientific habits of thought and method for which I am pleading—habits which, if once acquired, hasten amazingly all subsequent progress and make a man more apt to learn for all the rest of his days. It seems to me that what we have a right to demand is that our junior men shall be trained in scientific lines. It is the manner of their training that is paramount; the matter of their training, however important of itself, is really of subsidiary interest. In making this reference to the University of Sydney I desire to record my respect for the work done in the other medical schools in Melbourne, Adelaide, and in our own. I have visited each centre of medical work quite recently and have endeavoured to form some estimate of the value of each. I am convinced that according to the standards for which I am contending that the University of Sydney approaches most closely to my ideal. As to the rest of the empire, the condition of things is still most disorderly. It was no part of my original design to include in this address the subject of professional education. I had been, in the main, contending that the rapid and wide extension of scientific knowledge has not been yet overtaken by a proper readjustment of the subjects of study for our junior students, to which argument has been added a word or two of suggestion looking towards reform.

But there is a point connected with our colonial system of superior professional education which should not be omitted. I refer to the point of contact between our hospitals and our medical schools. In Great Britain many of the hospitals are of a respectable antiquity, and are older by many generations than the schools attached to them; it is not, therefore, true matter of surprise that these hospitals, hoary with age, find themselves unequally matched with the child that has become almost their rival, and that traditions, vested rights, and antiquated regulations should from time to time cause a harsh note of discord to be struck as between hospital and school.

In Australasia, where every institution is young—where hospitals, instead of being maintained by endowments and voluntary contributions, are for the most part supported directly out of rates or taxes, while the medical schools have been called into being by universities or Acts of Parliament, and are principally maintained out of endowments or rates and taxes,—in such a case it ought to be that each is the handmaid of the other; that the home of suffering and the message of relief should be united in the close ties appropriate to the necessities of each; that the science of healing should profit directly and progress directly where its work is subjected to the severest tests; that, in fact, methods in healing should be identified with the science of healing, that the teaching body should be identified with the executive body in any hospital where there is a medical school. What, however, do we find to be the case? With one exception, to which I shall advert later, our hospitals are under a control which has nothing to do with any university or any collegiate board. As a matter of fact the managers of the hospitals know little, and would at times seem to care less, about the medical school, so that the clinical teachers in Australasian hospitals are in no way responsible to the university councils, which in their turn are responsible to the public for the character and results of the teaching offered to the students. I take the worst case I know of, perhaps the worst in the British Empire, in which the interests of the public, of the patients, and of the profession are sacrificed to collateral questions or subordinated to side issues. In Melbourne every third year the whole medical staff is exposed to the ordeal of a public election; the board of management, much less the University Senate, is allowed no voice and no control; the election is in the hands of the subscribers; hence when the fateful day arrives all the features of a contested election become prominent—election tickets are put out and election devices prevail, cards soliciting your interest and vote for Dr. D— — and Mr. C—— are found in hotels and bars and railway stations and in cabs. Dr. D—— and Mr. C—— are for the next three years to be entrusted with thousands of pain-racked men and women, the clinical teaching by the bedside, and the ethical training of aspirants to our profession. To secure the position, so responsible, so admirable, they are driven to have recourse to the usual mischievous dodges, practices, and traps of an election contest. Surely it is a scandal that in any British community, much less in a community which takes pride in its progressive spirit, such a pernicious system should survive for an hour. In Adelaide difficulties arise out of a system not so mischievous, but radically bad; the university has little control in hospital affairs—in fact, only one member of the University Senate has a seat on the hospital board. It so happens that in Adelaide matters have worked with reasonable smoothness because the Government in the past have taken care to appoint to the board men known to have some interest in, and sympathy with, the medical school, but there is no guarantee for permanency in the constitution of things, which seem to be based upon an unreasonable jealousy of the profession or that wider and deeper impatience and distrust of learning—a sentiment noticeable and operative in every democratic community. In New Zealand a similar state of affairs obtains, modified in its features, but powerful enough to have occasionally imperilled the very existence of the medical school. Our survival is simply owing to the enlightened good sense and moderation of the men who have happened to have been elected to the board of management during the past few years, and who retain their position on that board in virtue of considerations entirely other than those of the interest of our school. I do not think our profession should escape its share of blame for these results. In a town possessing a medical school it is clear that of our professional men some must be excluded from the university appointments, while others win them; the former, being more numerous as well as unsuccessful, coöperate strenuously to oppose the university teachers should they make any claim for priority in the distribution of hospital appointments. The consequence of all these combined sentiments and customs is to dislocate and derange our teaching, to render clinical instruction of relatively weaker value, to attenuate the responsibility and to sacrifice the future of our profession to the jealousies and bickerings of the hour. The university, however, now stands clear of animadversions such as these. The difficulties between the university and the board of the Sydney Infirmary were felt to be so great and the prospects of a satisfactory solution so remote that it was in a great measure at any rate to obviate these troubles that the Prince Alfred Hospital owes its foundation. The relations between this hospital and the university senate are of a satisfactory character—a fact which, added to what I hold to be the superior arrangements of their course of study, should go far to see the Sydney school the most efficient and most useful of all the Australasian schools of medicine. Surely here is a point upon which we might close up shoulder to shoulder and, in view of the requirements of the age, insist that for the public good it is requisite that our students should be sent out fully armed to cope with the increasing demands upon their knowledge, their skill, and their judgment, and that the bodies responsible for the proper education of our students should have a controlling voice in the appointment of their teachers and in those details of hospital management which directly concern the education of their students. I have digressed a little upon this matter before bringing my address to a close, because until these barriers are removed our progress will be both painful and slow.

Passing, however, from considerations that are local and must be temporary, I would desire indulgence for a few words dealing with more general notions connected with our profession. It has been finely said that the most valuable asset of a State or of a nation is the people. A healthy mind in a healthy body is the gist of the old Roman prayer, a sentiment obviously applicable in the widest sense to the condition of a people. The joint prosperity and advancement of a nation depend upon its physical and moral health, on that well-balanced condition of the human framework which interprets and affects all that belongs to thought and action. How far morality depends upon health it is not my province to discuss, but if, as without doubt is the case, the blocking of a minute artery in the brain will ultimately reduce a reasonable and self-restrained man to the condition of a vicious brute, it is obvious that morality and health are united to each other beyond the power of dissolution. If this is so, it must be further admitted that a man's health vitally influences his life, determines the quantity and quality of his work, the nature and variety of his temperament, the influence of his

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intercourse with his fellows, and his general civic value. The conditions of civilised life often tend to increase the difficulties of maintenance of health. By crowding men into cities disease is more quickly propagated and harder to arrest. New varieties of disease are noticed; perhaps the variety is actually evolved. The changed environment of men tends to slowly bring about a corresponding change in their condition and vital necessities—a change always slow, frequently dangerous, and often ill-understood. Side by side may be noticed a group of moral and social facts, some of them highly disturbing and disintegrating to the previous social and conventional structures—facts which influence directly mental phases, which in their turn bring about much dislocation of healthy conditions and states. From this quarter arise all the fads, hobbies, and follies of experiment, which go far just now to interfere for the time being with true progress, and tend to substitute quack remedies for those social troubles which really have their roots deep down in the physical condition of men. It will be largely the duty of the medical man of the future to watch vigilantly these factors, observe their tendencies, and be on his guard in an attitude of expectancy for some manifestation of disorder which will test his sagacity while evoking his powers of admonition and advice. Among other things, it becomes his duty to enforce the claims and necessity for a duly organised department of public health. This is, perhaps, the one point upon which medical men may aspire to a reputation for disinterestedness. If, according to the common notion, we have such a direct selfish interest in disease that an epidemic or period of general sickness means prosperity for the medical man, it is clear that the whole duty of a medical man to himself should be to leave questions of public health alone, to treat with silence all agitation for the supply of pure water, the control of drainage and sewerage, for the improvement of hospital management, for the destruction of filthy and corrupt habitations, for the restraints on adulteration, on the sale of butcher's meat and fruit, for stricter administration of preventive laws with regard to quarantine, and generally agitation of any kind in the direction of health reforms. But what, as a matter of fact, is the case? It may be fearlessly asserted that Sir John Simon and Mr. Edwin Chadwick, both men eminent in our profession, "invented" Public Hygiene. These men undertook their work in pre-Pasteurian days, when all they could do was to improve paving and scavenging, attend to drainage, lighting, and water supply, and prevent overcrowding; but the gospel of cleanliness, at any rate, was established beyond all cavil.

In Great Britain, where there are, on the whole, fewer restraints on personal liberty than anywhere else in the world—where in consequence that education that free men give each other is of a higher standard than elsewhere; in Great Britain, I say, which stands at the head of the world in the matter of public health and all that pertains to it, matters have been brought to such a stage of perfection that our profession, backed by a highly trained and sympathetic public opinion, has practically more than once rolled the advance of cholera back from the shores of Britain. I was in England in 1892, when the cholera was raging in Hamburg, and nothing struck me more than the zeal and energy of our hygienists in teaching and warning the people of England what to do in the dread emergency. Millions of printed notices and bills were distributed by local health boards and health societies; sensible, pithy, and lucid little articles, useless, of course, except among an educated community, which, however, were so widely read and applied that, a'ded by them and a most watchful system of quarantine, Great Britain came through the threat of that scourge unscathed. Thousands of pounds were spent in that campaign, and never were thousands more profitably and perhaps more skilfully expended. The impulse to hygienic reform is weaker and more easily expended and exhausted in Australia and New Zealand than it is in Great Britain. There is nothing on this head even now to add to what was so well put before the Congress at its last meeting by Dr. Whittell in his presidential address on Public Health; but in our New Zealand towns generally, I believe, a movement in the right direction has commenced—public attention has been drawn to the matter by voluntary associations, which have now all the vigour of youth. I hope they will succeed in educating the people out of that ignorant impatience of control or still more deadly apathy which, both of them, are characteristic of weaker notions of the duties and obligations of civilised life. Legislation of a more central and less permissive character is desirable—legislation that does not depend for its administration upon the fortuitous and baffling currents of local political feeling. There is need also of increased activity among ourselves who, if we live *by* the public, live also *for* the public and have duties which, according to the trust reposed in us, are not measurable by fee or reward. It is always difficult to rise to higher lines of professional duty and activity, but for the younger men it is always desirable that they should cultivate aspirations and ideals; and of this I am certain, that in the immediate future there lies before our profession increased—vastly increased—scientific means and appliances for coping with our noble work and that to intelligently use these appliances and means will require increase of aptitude and development of opportunities for necessary training. For this augmentation of our power augments as well our responsibilities, it will demand on our part a greater mental energy, a more rigid discipline, a more single devotion to our ideal of duty, and a more general appreciation of the work submitted by a few eminent leaders to the opinion of thousands in the practice of our profession. Our increased resources should in the long run tend to produce among ourselves a distinct advance in professional type, while in society at large, by removing or obviating the causes and outbreaks of disease, they should increase the general volume of happiness and thus augment the social and moral well-being of mankind.

HOSPITAL ACCOMMODATION BY THE USE OF SHIPS (HOSPITAL SHIPS).

BY P. MURRAY BRAIDWOOD, M.D., F.R.C.S. EDIN.

Prelude. — That ever-recurring screen of ignorance euphemistically termed "experience" obscures at present the state of our Naval Medical Service. In the event of our nation being suddenly implicated in warfare how would the members of our oldest public service be cared for according to present arrangements? Our Naval Medical Service, as at present constituted, meets its claims fairly well, though those who form part of it have good reason to complain of its many defects. My aim in the following paper is to point out a better way of preparedness to meet emergencies. When this country is dragged into war we utilise our Naval Medical Service as it is, but have no reserved medical aid to requisition if necessary. Our Naval and Army Medical Services unite in supplying the needs of the sick and wounded. The navy during the Ashanti war undertook the lodging, victualling, and conveyance of the sick, and furnished everything necessary for these purposes; the army furnished medical and other attendance on the sick, provided all articles of hospital clothing and bedding, medical, surgical, and hospital appliances used by them, and undertook the washing of all hospital clothing and bedding.[1] Our standing army service can be supplemented by the "reserved forces" (militia, volunteers, &c.), with their medical officers; but in the case of our navy we can reckon on no such supplement. This lesson we have been taught by all recent wars and we continue still in the same state of backwardness. We rest contented with meeting our daily wants, and when our Government proclaims war we meet our suddenly incurred responsibility by makeshifts. We subsidise from passenger-carrying steamship companies large vessels like the *Carthage*, *Coromandel*, &c., at an enormous cost and have them knocked about (converted is the official phrase) to suit hospital purposes. This aim is, however, reached very imperfectly; such vessels are often, so to speak, "spongy," often unwieldy, with corners, crevices, and angles of all descriptions admirably calculated to house and retain objectionable peculiarities, and often needing repair. Henri Dunant exposed, in most pathetic language, the horrors of a battlefield when he described that of Solferino, where more than 300,000 men fought for fifteen hours on June 24th, 1859. Here "the best organised military medical services of three of the best armies of Europe were not able to render proper help and shelter to all the sufferers at the proper time." Rob. Hall in 1802 wrote in his "Reflections on War" that to confine our attention to the number of the slain would give us a "very inadequate idea of the ravages of the sword."

[1] THE LANCET, Feb. 16th, 1874.

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His detailed account of the accompaniments of warfare in his time is very touching and contrasts with those of the present day. The Red Cross Societies and like aids have remedied the sad state of matters which existed at the commencement of this century.

Historical sketch.—At different periods we read of some solitary instances of conventions made between the chiefs of belligerent armies for the neutralisation of the hospitals and the medical service of the sick and wounded received into the hospitals; but these contracts were mere temporary agreements depending on the momentary disposition of the chiefs in command of the belligerent powers and ended with the campaign for which they were made. "At the time of the Crusades Sultan Saladin allowed his enemies, the Hospital Knights of St. John, to remain nursing and tending their comrades in the city of Jerusalem, which he had conquered. In 1743, during the Austrian Succession War, an agreement was signed at Aschaffenburg between the Austro-Hanoverian (Pragmatic) army, under George II., represented by General Count de Stair, and the French army under Marshal de Noailles, the belligerents agreeing to regard the hospitals neutral and to give protection to the wounded. A similar convention was made in 1759 during the Seven Years' War, and signed by the English general, Sir Henry Seymour Conway, and the French chief, Marquis du Barrail. A convention between Louis XV. and Frederick the Great, stipulating the neutrality of the hospitals of the wounded and of all the persons belonging to the hospital service, was signed at Brandenburg, the 7th of September, 1759, by the French Marshal de Rougé and the Prussian General von Buddenbrock."[2] At the last naval battle between the Austrian and Italian fleets (1866) "the want of neutral aid, which was enjoyed by the warriors of the same nations on land, was bitterly felt by the navy." In impartial statistics it was stated that more than 400 men were drowned uselessly in this battle while they might have been easily saved.

My thoughts were directed to the deficiencies of our Naval Medical Service during warfare by the published accounts of the arrangements for the transit and treatment of our sick and wounded at sea during the Egyptian War in which we last took part, corroborated as these statements were by personal friends who served in this work on that occasion. With regard to hospital ships, I must, in the first place, call attention to a deficiency which exists in the organisation of the Naval Medical Service of most nations. This organisation is very expensive, and yet it seldom answers the purpose from want of a sufficient number of surgeons and nurses to supply the fleet and of the necessary room on board a fighting vessel for attending to the sick and wounded. The best medical help on board a war vessel might fail in time of action from want of space and proper security to exercise its functions. The treatment of the sick and wounded at sea is coeval with naval warfare, and its history divides itself into three periods. Thucydides (who died in 391 B.C.) and Herodotus (about B.C. 445) were probably the earliest historians of naval warfare. The former states that the engagement was one of man to man; the ships served only as the vehicles of this warlike force. Herodotus remarks that Duillius Nepos won the victory over the naval power of Carthage (B.C. 260) by grappling the enemy's ships to his own and boarding the Carthaginian ships with his legionaries, so that it became a man-with-man engagement. The second epoch of development in hostilities at sea began with the employment of artillery, which led to the destruction of the enemy's ship by shot. The third epoch commences with the introduction of steam, of iron-plated vessels, of rams, and of perfected cannon and shot. We are, however, interested in the medical aid obtainable during naval warfare.

Our first line of defence, our warships, is being supplemented, but no regard has yet been paid to affording necessary medical aid to those who may suffer when taking part in such defence. For some years past the Army Medical Department has received a considerable share of public attention and is ably aided by the promoters and members of the St. John Ambulance Association with its ever busy workers. The Naval Medical Department has no such adjuvant. This leads me to give a short notice of the "Red Cross" Societies, which afford the most noble example of the humanitarianism of this century. It is easy to fix the precise date of the origin of the Red Cross. This was the war in Italy in 1859. The "Hospitaller" orders were called into existence by the Crusades, and from time to time during certain wars the benevolence of private individuals induced them to found societies for succouring the sick and wounded. But no very deep traces of this spasmodic philanthropy remained, and the experience gained at various times was not available for subsequent generations. About 300 years ago a medical service attached to armies was regarded as a happy innovation and likely to be sufficient for every emergency, but this illusion was dearly paid for during the Crimean War (1853 to 1856). "Nevertheless, when the war in Lombardy broke out (1859) similar inefficiency was apparent, and cries of distress were again raised, which were emphasised by M. Henri Dunant's thrilling and heartrending description of the battlefield of Solferino. Hardly had three months elapsed after the publication of M. Henri Dunant's 'Souvenir de Solférino' before the suggestions it contained were discussed at a meeting of the Société Génevoise d'Utilité Publique." Feb. 9th, 1863, marks "the real starting-point of the Red Cross movement." A small committee of five members was appointed, but it was "not then known in Europe what prodigies had been accomplished in America by the Sanitary Commission of the United States during the War of Secession." To assist this committee in overcoming their early obstacles an International Conference was convoked and assembled in Geneva on Oct. 26th, 1863. Of Governments "Austria, Spain, France, Great Britain, the Netherlands, Prussia and six other German States, Sweden, and Switzerland took a direct part in this conference, whilst encouraging addresses were sent from Belgium, Denmark, Italy, Portugal, and some of the German principalities." In December, 1863, the first Red Cross Society was formed in Würtemberg by Dr. Hahn. From its first appearance the Red Cross has had many fervent apostles, of whom some belong to royal families. One of the most interesting points connected with the organisation of the Red Cross is the participation of women in the work. "That which is really international in the Red Cross Societies is the spirit which animates them, the sentiment of universal charity which forces them to hasten to any place where blood is flowing, and to feel equal sympathy for all the wounded whoever they may be," remarks G. Moynier.[3]

The hospital ship is to be regarded as an integral part of the fleet of war. It ought never to be wanting, and should accompany the fleet as the ambulance or the field hospital the army. As long as hospital ships and rafts are wanting the Naval Medical Service will be incomplete. Our work in warfare at sea consists not merely in tending the sick and wounded, but also in rescuing from an element whose strength it is above our power to control. The Red Cross Societies assist the Army Medical Service with men and material, and they should likewise supplement the Naval Medical Service. The aim of a Naval Ambulance Association such as I advocate must be to succour all during and after the battle, without regard to nationality, and to proceed with their rafts to the assistance of the crew. Directly after the battle they indicate by a signal that they are able and ready to receive the sick and wounded. The surgeons, nurses, helpers, and the *personnel* of these ships must be procured by the Aid Society through the local committee of the seaport where the hospital ship is to be fitted out, and placed under the direction of the chief surgeon of the fleet or squadron. It is necessary to establish a separate corps of surgeons, nurses, and helpers for the hospital ships' service at sea and to make them accustomed to the life on board ship. The peculiar nature of this field of work admits none inexperienced with life at sea without the risk of failure. Hence the importance of a naval ambulance association corresponding with the St. John Ambulance Association. Such *personnel* should be trained in times of peace; all that is regarded as requisite for the army is of no less consequence for the peculiar task at sea. It may be asked why not continue to meet our wants in the Naval Medical Service as we have hitherto done by hiring or renting from the large steamship companies some of their finest passenger steamers as required, and converting them into hospital ships? Two objections arise at once—such vessels are very costly in their conversion from one line of work into another, and they cannot be as efficient as a hospital ship arranged *ab initio* and built for the purpose. At the meeting of the Social Science Congress held in Birmingham during September, 1884, I first made public my views on hospital ships. At the meeting of the Hospitals Association in

[2] The Red Cross Alliance at Sea, by Dr. J. H. Ferguson, p. 13.

[3] The Red Cross, p. 32.

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February, 1885, Sir Edmund Hay Currie in the chair, I read a paper on this subject. My plans were exhibited and received awards at several international exhibitions. They form a portion of my more extensive scheme for a naval ambulance association for the treatment of sick and wounded at sea. The Naval Medical Service as at present constituted serves no doubt excellently in times of peace, but there is no reserve force to meet at once a sudden call or any system of efficient nursing in connexion with our mercantile marine. The organisation of a naval ambulance association would remedy these defects, and why should not our mercantile marine have the advantage of such a scheme? It is well known and generally acknowledged by hospital staffs that their patients recover better when treated in a house specially arranged and built for the purpose. This holds equally true of the treatment of sick and wounded at sea. A passenger steamer converted into a hospital ship can *never* be equally efficient with a vessel arranged and built for this special purpose.

Plans for hospital ships.—The accompanying illustration is made according to scale, and represents one of two forms of steamers—the spar deck and the shade deck. At the first glance at my plan it will be observed that the primary consideration has been to arrange for the comfort and efficient tending of patients at sea. To obtain this speed has been sacrificed and the propelling power (the engines) has been placed well aft. Each form of ship affords accommodation for 250 sick and wounded and carries sufficient stores to build and equip a temporary shore hospital. In the next place, special attention has been paid to the principle so much approved of in the construction of modern hospitals on shore, namely, economy of space, labour, and time. The patients being congregated instead of segregated in twos and fours can be properly nursed by a competent person in a room next door or near of call and a surgeon is at hand instead of being on another deck. My original designs represent vessels of two different types but of similar dimensions—namely, length 325 feet, breadth 50 feet, depth 25 feet, tonnage 3722, displacement about 4100 tons. By hospital ships are meant sea-going vessels propelled by steam and specially constructed and adapted for the treatment of the sick and wounded. Whilst very great advance has been made during recent years, especially since the Crimean campaign and the civil war in America, in the treatment of wounds and accidents among our shore population and in the proper conveyance of such wounded persons to hospital, very little attention has been given to the comfort of patients treated "on board ship." Brigade-Surgeon-Lieutenant-Colonel G. J. H. Evatt, M.D., says: "It is absolutely essential at the outbreak of a war to have a definite plan ready in the War Office for the equipment of this class of vessels, and that their staff of attendants and interior economy should be completely understood." The steamers I suggest would serve as: (*a*) ambulance ships of any size, but in motion; (*b*) isolation ships, at anchor or in motion, for infectious cases; (*c*) stationary ships anchored off unhealthy coasts; and (*d*) convalescent ships moored near large towns receiving patients from them and then going off for a longer or shorter cruise. When not needed for hospital purposes these steamers would make excellent transport ships.

An ambulance hospital organisation.—It is desirable to have an organisation at sea analogous to that so wonderfully perfected during recent years for the care of sick and wounded persons on land. A division of labour (a law of nature) permits of more work being accomplished well. If the tending of the sick and the feeding of the healthy be looked after by the same individuals neither receives the undivided attention it requires. When conducted on a large scale the nursing of the sick should be separated from the commissariat department. The proper and efficient treatment and nursing of sick and wounded persons "on board ship" necessitates the arrangement not only of an efficient naval *medical* service, but also that of an equally efficient naval *nursing* service. The medical care (by nurses as well as by medical men) of sick and wounded persons on board ship should be managed by an organisation entirely independent of extraneous influences, educated to its special work, and devoting its entire energies to such work. Next, as to the abodes in which this work is to be carried on. A certain and smaller portion of it can be conducted on shore, but much the larger part forms a continuous routine, which must take place on board ship. To do so special arrangements are required. Not only must the service which performs this work be "on the spot," but there must be ready at command the necessaries for the work. Not only must the medical and nursing staff to attend on the sick and wounded on board ship be in proximity to the patients, but they must have at hand the various apparatus and conveniences they may require in their work. In the drawings exhibited these ends are met. The steamer sketched is so arranged that the comfort of the patients is the primary consideration. To meet this the propelling power (the engines) is located out of the way, as near as possible to the stern of the vessel; a lift, worked by steam power and admitting of two patients being lowered together in their beds, carries the patients on board the hospital ship or lowers them to the deck on which they are to lie, the best and largest portion of the steamer is arranged as wards; on each deck not only is the nurses' room in immediate proximity to the ward, but there are also one or more surgeons' rooms, a dispensary, a ward kitchen, laundry, and other necessaries. As compared with the *Victor Emanuel* my hospital ships differ by being arranged for a number of patients to be treated in one compartment and watched over by a nurse or nurses who, from living next to this compartment or ward, have a constant oversight of its inmates. The officers (both those sick and those in health) are accommodated in the best part of the vessel—the stern. Many details, including such important matters as ventilation, heating, lighting of the various cabins and wards, are purposely not arranged for until a steamer is built on the plan shown. My wish is to see steamers of larger and of lighter draught built on the principles here enunciated, and after the general type represented, and utilised for the treatment of sick and wounded persons at sea.

Spar deck and shade deck ships.—Each to a certain degree has special merits that the other has not, and each may be made available or adapted according to the requirements of the special service for which it is used. A "shade deck" vessel has the special feature that it affords the best means of lighting and ventilating the lower wards through continuous skylights arranged along the outside of the walls. One of the disadvantages of this plan is that the space occupied by these skylights contracts the cubic space and makes the wards on the deck above of a smaller size than they would otherwise be. This sacrifice of space is avoided in the plan which accompanies this paper, somewhat to the detriment of the ventilation of the lower wards, for this has to be obtained by means of openings or windows in the vessel's side which must necessarily be closed in bad weather. The plan shows the "spar-deck" vessel, which gives much greater deck area than the former and larger wards in the main or upper deck. These wards occupy the full width of the vessel and, like those on the lower deck, are fitted with ventilating shafts passing through them to the lower wards. In considering the relative merits of these two classes of steamers, if built entirely for service as hospital ships, the preference should be given to the one which affords the most advantages. In each instance ample accommodation can be provided for all the accessories and necessary rooms for servants, dispensaries, linen and food stores, laundry, suitable kitchens, and all the requisites for a complete service of attendance which are usually provided in modern shore hospitals, and these can be arranged in immediate proximity to the several wards. Complete isolation can also be obtained, because of the vessels being subdivided by entire water-tight partitions or iron bulkheads extending to the upper deck. It might be well that these should not have any doorways through them, such as are usually fitted in similar water-tight partitions. In the plan, owing to the removal of the long skylights, the wards in the upper deck occupy the full width of the ship, and consequently are much larger and more commodious than those afforded by the other type of vessel. The uppermost wards of all (those in the long-deck houses) are exposed to the open air and are pretty much the same in both types, affording about the same accommodation in each instance. But these vessels can be employed for totally different purposes from that of hospital ships in time of war: they can be utilised for the carrying of infantry troops, and in such service as this the vessel with the largest available deck area would afford the most advantages. These are found in steamers of the type of the plan given, and this is therefore recommended as being the best model for a hospital ship, both on account of the additional facilities that such steamers afford through their more commodious accommodation

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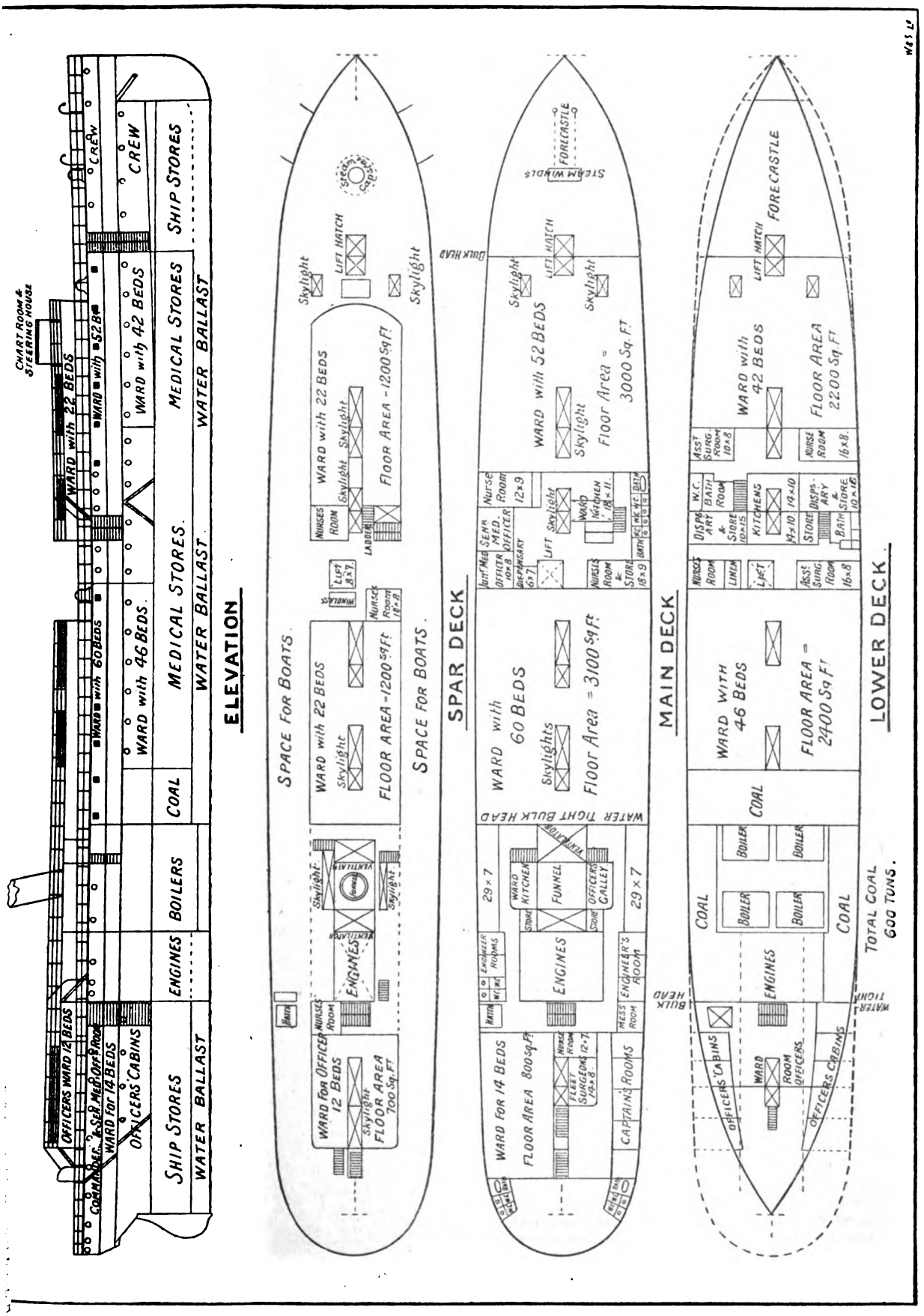

Spar Deck Vessel. Principal dimensions: Length, 325 feet; breadth, 50 feet; and depth, 25 feet. Tonnage, 3722 tons (B.O.M.); displacement about 4100 tons.

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and on account of a larger deck area in the eventuality of the vessel being utilised for the carrying of troops. The steamer depicted in the plan is of light draught and would be able to ascend most rivers, so that if war were raging at a seaboard or near a large river or lake one of these steamers could sail up to a spot nearest the seat of battle and receive any sick and wounded, whilst it could also convey the necessaries for erecting on shore a hospital to accommodate 300 patients. Some may argue that on board ship sufficient air space is not afforded and cannot be obtained for the treatment during a long space of time of sick and wounded persons. This argument is based on a comparison with the space required in shore hospitals. But it must be borne in mind that a steamer being constantly in motion a speedier and more continuous circulation of air takes place than through a like amount of space on land. Our knowledge of such matters is as yet incomplete; but in my designs there is represented twice as much cubic area (floor space) for each patient as is afforded each saloon passenger in a first-class passenger steamer. We have no gauge by which to calculate how many cubic feet of air each patient in a hospital ship should have, but taking superficial area as our guide this result is obtained.

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* Those works marked with an asterisk are the ones I have been able to consult.

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SOME CLINICAL REMARKS ON PNEUMONIA.[1]

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THE latter part of the present century has so advanced our knowledge of the influence of bacteria on most pathological processes that a study of their relation to the more important pulmonary diseases claims special attention. The various parts taken by micrococci and by certain distinct kinds of bacilli and how far they share in the initiatory and sequential phenomena of the differing forms of inflammation of the lung have to be considered. Not only has the germ theory of disease given increased interest to pathological investigation and to experimental research, but it has resulted in larger and clearer views of etiology and has important bearings upon clinical medicine both in prognosis and therapeutics. In the latter sense I do not here refer to the attempts at treatment by bactericidal drugs; this is now in the actively empiric stage, but it is one thing to kill bacteria in a test-tube and another to destroy them in the body. In the study of disease causation by the light of our knowledge of morbific organisms two factors demand attention—the seed and the soil; not only must the micro-organism be studied, but the conditions under which it will flourish. This is well recognised by the bacteriologist in preparing his culture media, and to the clinical observer and practical physician the influence of the soil on the life and virulence of the disease-germ are of the greatest importance. The "personal" equation in medicine has received a new interest and an increased importance from the discovery of the association of bacteria with certain diseases. The influence of the "personal equation" in disease is no new discovery, but we may note in the present day a greater tendency than was formerly the rule to treat individuals rather than diseases. In pneumonia the influence of the personal factor is well seen. Inflammation of the lung in a healthy child is a very different matter from the same accident occurring in an adult of impaired or shattered constitution, even though the initial lesion were of less extent or intensity. It is this individuality of each case of pneumonia which, whilst it renders the disease exceptionally interesting to the clinician, makes the management of each case a matter of peculiar anxiety. I propose to go through my case-book and touch upon some points of interest which my experience has furnished.

Etiology.—It is now almost universally agreed that acute lobar pneumonia must be considered as a general, not merely a local, disease. And although there are difficulties in the way of fully accepting this view there are many features of the illness which give it strong support. The discovery by Friedländer and Fraenkel of the micro-organisms with which their names are now associated seemed to furnish the proof of the general nature of the illness. We must, however, remember that similar or identical organisms are associated with other diseases besides pneumonia and are to be found in the saliva in health, and probably exist in the lungs and other organs without producing ill-effects. When some local change in the tissues furnishes a suitable soil these micro-organisms develop rapidly and produce inflammation, whilst the toxic substances formed by them give rise to general symptoms. These local changes may be caused in various ways—for example, by traumatism or by chill—and they are more readily induced in organs of lowered vitality, whether this is permanent or temporary. Thus we find alcoholism predisposes to pneumonia, and that inflammation of the lung is a common accident in many illnesses where the general vitality of the tissues is impaired—e.g., typhoid fever and influenza. So, too, the fatigue consequent upon excessive exertion renders a chill more dangerous; the overdone competitor in a long distance bicycle ride finishing in a cold drizzle is more likely to get pneumonia than the spectator who has stood shivering to watch the result. It is a fact, sometimes imperfectly recognised, that over-fatigue is an important factor in the production of pneumonia. I have seen more than one case of pneumonia following a chill during the latter part of a long bicycle ride. The changes in the lung tissue which favour inflammation are probably the result of nerve influence which may originate at a distance from the affected organ. We know that in animals inflammation in the lung will result from injury to the vagus. The influence of chill to the surface of the body probably affects the lung by reflex nerve action. Such a result is perhaps most likely to ensue with exhausted nerve control, and pneumonia from chill is thus more prone to happen during fatigue. The pneumonia of alcoholism has been considered to be a trophic neurosis originating at the vagus centres, and possibly the poisons of enteric fever and influenza may act in a similar manner. On the other hand, the lung tissue may be directly damaged by local irritation. This may be mechanical, as from a blow, fractured ribs, or inhaled mineral particles, or the local irritation may in some cases be due to the toxic effects of micro-organisms. It may be that even local irritation produces its effects by reflex nerve action. These considerations may help us to understand the occurrence of pneumonia under such widely different conditions as traumatism and chill, or as a secondary result of disease.

Just as fatigue increases the risk from chill, so may the debility after an illness render a chill more dangerous. In the following case we have a good example of the effect of

[1] A paper read before the Harveian Society on Feb. 20th, 1896.

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measles in predisposing to pneumonia from chill. A man aged about thirty-five years had an attack of measles, which went through its course without any noteworthy characters until the patient was sufficiently well to sit up in his bedroom for an hour or two during the day. Being so well he sent the nurse out for a walk and in her absence he took a bath, and then, without completely dressing, he threw open his window, although it was in March, and began to arrange some papers. That evening he had a rigor, and the temperature, which had been normal for some days, ran up. He had a sharp attack of pneumonia. The readiness with which convalescents from measles suffer—and often suffer severely—from chill, though well known to medical men, is imperfectly appreciated by others, and the large mortality after measles is due to the preventible complications and sequelæ. The case I have just mentioned is one of idiopathic pneumonia following after measles and is quite different from the pneumonia which occurs in measles as a part of the disease, coming on before the original fever has disappeared. The lungs are always affected to some extent in measles (as a part of the disease) and are liable to remain for a time in a condition which renders them a suitable soil for the development of any micro-organisms which may be present in these organs already or which may get to them from outside. Thus we find measles often an antecedent to pulmonary tuberculosis.

I have seen several cases of pneumonia associated with enteric fever and some of them have had this point of special interest—Was the pneumonia present the substantive disease and the actual cause of the illness or a complication not infrequent of enteric fever? The recognition of the signs of pneumonia has, in some cases which I have seen, been taken to explain the illness and so misled as to the true nature of the case. Whenever in obscure cases signs of pneumonia are detected it is important to consider whether the condition of the lung will sufficiently explain the course of the illness as well as the existing symptoms. As a good instance of the importance of this I may refer to a case I saw recently in consultation. I was asked to see a boy aged about eleven or twelve years because pneumonia had been diagnosed. On examination there was no doubt as to the presence of pneumonic patches in both lungs, especially the right, but the lung trouble did not seem to me sufficiently intense to explain the serious condition in which the boy obviously was at that time. Further examination disclosed pericarditis with effusion. Pericarditis may complicate pneumonia, but here on further inquiry I was led to a diagnosis of acute rheumatism, which the further course of the illness seemed to justify. The boy recovered, but with an endocardial murmur, which has now, after three months, almost disappeared.

The pneumonia of influenza presents some peculiar characteristics. The sputa may be rusty and the symptoms severe, but the physical signs are often obscure and the course of the disease unexpected. One marked peculiarity which I have noted is the tendency of the pneumonia to appear in some distant part of the lung or on the opposite side when resolving at the original seat. Here is a characteristic case. A young man about twenty-five years of age was seen in consultation in the country. On the right side of the chest the percussion note was "tubular" (high-pitched and sharp, with diminished resonance, but not dull) from the apex to the fourth rib, with tubular breathing. The rest of the right front was clear except for a few crepitations. The right back was dull almost all over. The left side was clear. Expectoration was very tenacious and had a slight brick-red colour, not typically pneumonic. The medical history showed that the pneumonia commenced at the right base, and as that resolved the apex became affected with another rise of temperature. This is quite different from what is found in typical acute pneumonia.

With reference to the influence of malaria on pneumonia, in my experience at Suakin in 1885 malaria was not a frequent cause of illness, except in those cases which have been called "typho-malarial," and which I believe to be dependent upon malarial poisoning. In these cases, as well as in some of the cases of enteric fever there, pneumonia occurred as a complication. A malarial pneumonia has been described, but Osler, with his large experience of malaria, says he has never yet met with a case of pneumonia which seemed to be in any way connected with paludism. The debility which is induced by a malarial attack may, however, predispose to pneumonia, as in the following case. A man aged thirty-three years arrived in England in April from the West Indies, where he had been for about five months, and had been eight weeks seriously ill with malarial fever. I saw him in consultation the day after he landed and found pneumonia affecting the right apex. When I saw him again, three weeks later, the chest was clear, the pneumonia having completely resolved. Tubercle had been suspected as the cause of the lung mischief, but no bacilli were found in the sputa, and the complete resolution within three weeks is in itself almost sufficient to confirm my opinion that the pneumonia was not due to tuberculosis. The patient recovered and still keeps well after nearly three years. Whether malarial fever predisposes to pneumonia or not, the cachexia left after severe malarial poisoning adds to the danger of a subsequent pneumonia. Some years ago I attended a man aged thirty-nine years during an acute attack of pneumonia, from which he died on the tenth day. The patient had served in the marines and had suffered from malaria. The illness with the pneumonic attack was very acute, the temperature was high, with delirium from the fifth day. In this case I believe the previous malarial poisoning had left him without power to resist any severe illness, for his age and habits were not unfavourable to recovery.

The foregoing remarks will emphasise the importance of the "soil," in addition to the causative bacteria, as a factor in pneumonia. There is this analogy between pneumonia and tuberculosis: in both a micro-organism is the essential cause, but the germ is harmless unless the soil is favourable to its development. The difference between the two diseases depends upon the different characteristics of the causative micro-organisms. The pneumococcus or pneumo-bacillus, developing rapidly, quickly produces its full effects, and sufficient toxines are formed to cause an acute illness and usually to poison the germs before they can become widely distributed. Thus we have a sharp but short illness usually terminating by crisis. The tubercle bacillus also produces a pneumonia, but develops slowly; the consequent small total output of toxines in the early disease leaves the blood-stream non-poisonous to the bacilli, and they are carried by it to other parts, where they set up fresh centres of disease. In pneumonia, as in tuberculosis, the various predisposing causes, such as cold, exhaustion, or debility, render the individual susceptible; the character of the "tissue soil" (to quote Osler[2]) has been so changed that the specific germ of either can grow and produce its ultimate effects.

Course and symptoms of pneumonia.—There is a very interesting point on which opinions are not unanimous—namely, whether there are cases which justify a diagnosis of acute congestion of the lung. The French consider active congestion of the lung to be a distinct disease (maladie de Woillez), but most authorities in this country consider the cases so described to be cases of pneumonia. Cases undoubtedly do occur, commencing suddenly with the symptoms which mark an attack of pneumonia, which either terminate fatally before the lungs become consolidated or which resolve without going through the ordinary course of pneumonia. Such cases may be termed "abortive pneumonia," and these are the cases to which the term "acute congestion of the lung" is sometimes applied. I select two of my cases bearing upon this point—one in a child, the other in an adult. A little girl aged four and a half years, who was said to have had congestion of the *left* lung the previous winter, was taken ill rather suddenly with feverish symptoms and slight cough. I found the temperature considerably raised and the base of the *right* lung dull. A mustard poultice was applied, and the next day the dulness had cleared and the temperature went down in two days. In the other case a woman past middle age, having just got over an illness of a few days' duration (supposed to be influenza), was found to have a return of fever with signs suggestive of pneumonia. When I saw her the next day the temperature was 101° F., and there was diminished resonance over the right base up to the angle of the scapula, with weakened breath sounds and fine crackling over the affected area. A mustard leaf was applied. I again saw her three days later. The temperature was down and the patient felt well. The right base was resonant, the breath sounds still somewhat weaker than on the left, but there were no crepitations. This was hardly a hypostatic congestion, for it was accompanied with a rise in temperature and the conditions which induce hypostatic congestion were absent. These two cases, though presenting different clinical phenomena, have this important characteristic in common—viz.,

[2] The Principles and Practice of Medicine, second edition, p. 547.

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that in both the febrile illness was short and the consolidation of the lung was rapidly absorbed, whereas the consolidation of pneumonia usually takes some time to resolve after the febrile illness is over. In this sense they may both be described as "abortive" pneumonia.

The pathological conditions found in pneumonia may be referred to in explanation of such cases. These, as given by Dr. Douglas Powell, consist "first of an acute hyperæmia of the affected lung resulting in a fibrino-corpuscular exudation into the alveoli, sometimes including the smaller bronchioles and forming a film upon the pleural surface. This exudation, secondly, coagulating *in situ*, fixes the lung in a state of immovable expansion more densely solidified than it could be by any artificial injection with coagulable fluid."[3] The facility with which these exudations may be absorbed varies with the nature of the effusion and of the corpuscular elements and the degree of coagulation obtained. In the cases of which I have just been speaking the fluid exudation is presumably absorbed before coagulation takes place. We have thus only the first stage of the pneumonic process.

It is unnecessary here to describe the symptoms and course of an ordinary case of pneumonia, but I propose to mention one or two peculiarities or divergencies from the normal course which have come under my notice. We sometimes find that in cases of acute pneumonia the fever subsides gradually instead of by crisis, and it has seemed to me that this is more common in hospital practice than in cases seen at home. Possibly removal of the patient may have something to do with this. If a patient is taken to hospital when the disease is well established—say from the third day onwards—the febrile period becomes somewhat prolonged and the crisis is delayed or wanting. When consolidation of the lung has occurred resolution necessarily takes time, and in the most favourable cases is not complete until some days after the temperature has fallen. We meet with cases, however, in which this resolution is delayed for a considerable period, it may be several weeks or even months. I have notes of a case of a girl aged twelve years in whom resolution was not complete for nearly two months, but it may be delayed longer than this. Such cases may get absolutely well, as this girl did, the lung eventually clearing up completely. In other cases where resolution is delayed we find some further mischief, either as the cause or a result of the delay; for example, tubercle or pleuritic effusion or an abscess may form in the lung. I have in a previous paper[4] before the Harveian Society drawn attention to the risk of tuberculosis after pneumonia, especially in those cases where resolution has been long delayed. The pneumonic process nearly always leaves the lung in a condition favourable to the growth of germs which may subsequently reach the organ; thus we find that, unlike what is the rule in a general disease, one attack renders the person more liable to suffer again from pneumonia and predisposes also to phthisis. Some years ago I had a case of gangrene of the lung following pneumonia,[5] and I have lately had an interesting case of pneumonia affecting the upper lobe of the left lung in which a pyo-thorax developed which was also localised in the upper portion of the left chest. The patient, a boy ten years of age, was one of three inmates of a school who developed pneumonia. In due course the crisis occurred in all, but whereas two of the boys had an uninterrupted convalescence the temperature of the third, after being down for a day or two, ran up again and showed the large diurnal range of septic fever. The left chest was immovable in respiration and quite dull on percussion. The boy had a tuberculous family history, and I took him into hospital to have him under observation. Being satisfied of the presence of fluid in the pleural cavity I got Mr. Watson Cheyne to open the chest. A large quantity of offensive pus was evacuated and the boy made a good recovery. I have had several cases of empyema following pneumonia, but this case of empyema localised at the apex is exceptional.

The case just quoted leads one on to refer to cases of apex pneumonia. Pneumonia affecting the apex of the lung is not necessarily more severe or more dangerous than inflammation occurring at the base. Cases of apex pneumonia are sufficiently common to make it unnecessary for me to quote instances here. One important point of interest in these cases is the difficulty of distinguishing between a simple pneumonia in this situation and tuberculosis. The apex of the lung being the most frequent seat of commencing tuberculosis we may be led to diagnose phthisis when we get consolidation of the apex without fully considering the history and physical signs. It is important also to remember that pneumonia may be induced by a patch of tubercle, the presence of which is not recognisable until the surrounding pneumonia subsides. I have elsewhere referred to cases illustrating this and other points in reference to the connexion between pneumonia and tuberculosis.[6]

With regard to the sputum in pneumonia, viscidity is perhaps a more general characteristic than the rusty colour. In catarrhal pneumonia the rusty colour is not infrequently absent, and it may be so in lobar pneumonia. On the other hand, I have seen the characteristic rusty sputum when careful examination failed to detect any dulness; here the pneumonic patch was probably deep-seated. The prune-juice expectoration, which is often a sign of danger, is not always so. The change from marked viscidity to a more liquid as well as darker sputum is more significant of danger than the deepened colour alone.

Diagnosis.—Theoretically the signs of pneumonia are sufficiently characteristic to be recognised easily and with certainty, but practically we find ourselves often obliged to weigh carefully all the evidences obtainable before we can give an opinion. I have mentioned the difficulty occasionally met with in deciding between tuberculosis and pneumonia, and I have on more than one occasion found a pleural effusion where pneumonia has been diagnosed. Pleurisy may follow pneumonia, and when the signs of pneumonia have been correctly recognised in the first place dulness on percussion at subsequent examination has been interpreted as indicating non-resolution when it was in reality caused by fluid. Careful auscultation should be practised throughout the course of a case to avoid such an error, and repeated testing of the vocal fremitus must not be omitted; but even with this care the mistake is not always avoidable. The dulness of hypostatic congestion or of œdema from heart or kidney disease and the dry crackle of emphysema may at first suggest the presence of pneumonia. But with the aid of the thermometer and consideration of the history and general symptoms there should be no difficulty in forming a correct opinion. The marked alteration in the pulse-respiration ratio—due to the quickening of the breathing out of proportion to the acceleration of the pulse till we may have one breath to every two pulsations instead of one to four—may often guide us to the detection of even a limited pneumonia. Finally, we have to remember the possibility that the pneumonia may be symptomatic of some disease—such as typhoid fever—requiring the fullest attention, or an accident of a tuberculosis which would modify prognosis.

Treatment.—I strongly advocate the stimulant treatment of pneumonia. We have here an illness which is of short duration but often of great severity, and recovery is almost certain if we can keep up the patient's strength till the fever is past. As most of us know by experience, exhaustion may come on so rapidly that if we wait until it shows itself treatment may be too late to counteract it. We may, however, do much to prevent this excessive exhaustion by commencing with stimulant treatment from the first. By stimulant treatment I do not mean necessarily or solely alcoholic treatment, though I consider alcohol one of our most important drugs in the treatment of pneumonia. A full supply of nourishment in suitable form is necessary as well as stimulant drugs, and good nursing is essential. In many cases the nurse is what the practitioner makes her; and if the medical man shows a knowledge of what good nursing means and gives minute instructions to the nurse, taking measures also to satisfy himself that his instructions are carried out, he will probably have little cause to complain of want of attention on the nurse's part. In severe cases I am in the habit of writing out a time-table for the nurse, stating not only the hour at which nourishment, stimulant, or medicine shall be given, but the nature and quantity of each to be administered on each occasion. I then expect the nurse to keep a diary which I may compare with my time-table at every visit. Whether it is ever allowable to cease giving a patient food, drink, or medicine on the grounds that it can do no good and only bothers the dying patient we need not now discuss. It is certainly never justifiable in a case of pneumonia. I can recall two

[3] Dr. Douglas Powell: Diseases of the Lungs, fourth edition, p. 221.
[4] Medical Press and Circular, April 20th, 1892.
[5] THE LANCET, July 20th, 1889.
[6] The Hygienic Prevention of Consumption. Charles Griffin and Co. 1893.

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or three instances of recovery after a patient had been "given up" in which any relaxation of the details of nursing would have taken away the last hope. I cannot too strongly insist on this point.

Local applications over the affected portion of the lung are, in my opinion, very useful. Whether they exert any appreciable influence on the disease may be questioned, but they often ease the patient's discomfort and soothe him. I prefer a poultice as generally most comfortable to the patient, but ice-bags are also recommended. The inhalation of oxygen is often of service, especially when a large extent of lung is consolidated; and I have seen marked improvement in breathing and in general symptoms from placing a patient with high fever in a tepid bath, after which the patient dropped off into a quiet sleep. As to drugs, there is room for individual choice within a certain range, and symptoms will guide us in our selection. I have a liking for carbonate of ammonia, to which digitalis or strophanthus may be added if there is any danger of cardiac failure. A caution is to be observed as to the use of even simple aperients. Of course the patient must not be allowed to get up, and sudden danger may result from undue action of the bowels. An enema may be needed, and this means of giving both nutriment and alcoholic stimulant also must not be overlooked.

With regard to alcohol, I prefer to begin to use it early in small doses (two to four ounces in the twenty-four hours), and to increase the quantity on the first indication of increasing weakness. Many cases will complete their course without needing any increase of the initial amount, but I have known cases where the alcohol has had to be given in large amount for a day or two. I sometimes tell the nurse in serious cases that if exhaustion is great an extra half ounce of brandy should be given before calling the medical attendant. I well remember, when I was a house physician, a patient with double pneumonia who took about thirty ounces of brandy in one twenty-four hour period. The case was pronounced hopeless by the visiting physician, but I and the nurse decided that we would keep the patient alive over the crisis if it could be done by stimulant, and we succeeded. This experience coming so early in my medical career made a great impression on my mind. I believe there is no better stimulant for use in the exhaustion of pneumonia than alcohol; others I know prefer not to use alcohol at all, but if they are wise they make use of some other stimulant in such cases as the one to which I have just alluded. As I have already intimated, your pneumonic patient will probably recover if you can keep him alive over the tenth day. The personal equation has such a marked influence on the character of the disease that, though we may lay down some general principles for the treatment of pneumonia we must be guided as to details by the individual peculiarities in each case.

Harley-street, W.

THE PROVISION OF ISOLATION HOSPITALS: A REPORT PRESENTED TO THE ESSEX COUNTY COUNCIL.

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In the various districts which I have visited I have found that many members of the sanitary authorities hold very erroneous views on two important points—viz., the objects for which isolation hospitals are required and the character of the accommodation necessary. It will probably be well, therefore, if I briefly refer to both these subjects.

The most erroneous opinion held is that isolation hospitals are structures only required for use during the prevalence of an epidemic of some of the more serious infectious diseases, such as cholera, typhoid fever, small-pox, diphtheria, and possibly scarlet fever. It is quite true that these are the diseases most frequently isolated in hospitals of this character, but it is a fundamental error to suppose that they are only to be used when an extensive epidemic prevails. Their real use, their greatest use, is for isolating the odd cases of infectious disease which occur in all districts, cases which may have been imported from without or the origin of which cannot be certainly traced, but cases which if not promptly removed become foci from which epidemics start. If the important fact be once clearly grasped that isolation hospitals are intended to prevent rather than to arrest epidemics much misconception on certain other points will be prevented.

The second error to which I refer relates to the nature of the accommodation required and really arises out of the first. I have frequently heard it stated that as the hospital would only be occasionally used a permanent structure is not needed, that a wooden hut or tent which can be put up at one or two days' notice is all that is necessary to meet any emergency. On the other hand, the view is sometimes expressed that a permanent structure ought to be erected of such a size that it would afford accommodation for all the cases arising in a widespread epidemic. As usual, the truth lies between these extremes. Temporary structures such as those referred to are totally inadequate, whilst permanent hospitals capable of receiving all the patients in a widespread epidemic are totally unnecessary. Temporary hospitals are of little value for several reasons. 1. They are rarely erected until an epidemic rages and therefore do not fulfil the primary object of an isolation hospital. 2. They are never in actual readiness. Valuable time is lost in erecting the structure or in preparing it for occupation, obtaining nurses, &c. 3. When erected they are neither so commodious nor comfortable as properly equipped permanent hospitals. That such hospitals have, though very rarely, their uses will be seen shortly. A permanent hospital capable of receiving all the cases which may occur during an epidemic period is unnecessary because with a small permanent hospital and a proper administrative block the earliest cases notified can be isolated and epidemics will be of infrequent occurrence; in fact, small hospitals properly utilised would probably prevent nine-tenths or more of the epidemics which now occur. If notwithstanding early isolation an epidemic happens then temporary accommodation can be provided within the hospital grounds to meet the exceptional emergency. The only legitimate use for tents and wooden structures is to supplement the permanent buildings on those very rare occasions when they are inadequate for the requirements of the exceptional conditions.

There is a further question with reference to isolation hospitals well worthy of consideration, and that is whether it is better to have a few large hospitals throughout the county or a larger number of small ones. This question can be discussed from two points of view—efficiency and economy. I will not take up space by discussing this subject, but will simply state the conclusion I have myself arrived at after full consideration. I think that only under exceptional conditions is it advisable to have an isolation hospital serving more than one Poor-law union. Such an area usually includes one or more urban districts surrounded by a rural district. Where a town—i.e., an urban district—is surrounded by a rural district within the same union it will in probably all cases be desirable to have a hospital for their joint use. Such an arrangement will be of advantage both with regard to efficiency and economy, economy in first cost and economy in management. The number of beds necessary will vary in nearly every district, chiefly depending upon the degree to which the population is crowded on space and the extent to which overcrowding in cottages prevails. In thinly populated rural districts some considerable proportion of the cases of infectious disease which occur will not require removal; in the poorer quarters of towns and in populous villages nearly every case may have to be removed. Again, in the manufacturing towns, where there is a large proportion of children, more accommodation will be required than in agricultural towns, where there are fewer children. Speaking roughly and having regard to the special requirements of the county, in the urban districts the permanent provision should be one bed for every 1000 to 1500 of the population, and in the rural districts one bed for 2000 to 3000 of the population. In laying out the hospital grounds provision should be made for the erection of temporary structures should such ever be required to supplement the permanent accommodation.

There is one disease which has exceptional features and requires exceptional treatment. I refer to small-pox. The prevalence of no disease, excepting possibly cholera, causes greater alarm or more easily creates a panic, and yet it is one of the most controllable, if not the most easily controlled, infectious disease with which we in this country have to deal. Promptly isolate the sufferers and revaccinate all

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persons who have to come near them and the disease will be effectually and at once stamped out. Unfortunately the infection of small-pox can be aerially conveyed to some considerable distance, but I am firmly convinced that this only occurs where a considerable number of patients are aggregated in one hospital. I do not think it would ever occur in our smaller hospitals, especially if the patients were treated in Berthon huts or properly constructed hospital tents.

It is of course desirable that provision should be made for treatment of two diseases, scarlet fever and diphtheria for instance, and for the separation of the sexes. For these purposes four wards will be required. As examples of hospitals which meet all the Local Government Board requirements the following may be cited:—Chelmsford Rural District: Hospital with two wards (five beds) and nurses' room, and caretaker's house with four bedrooms, two of which are used for isolation purposes. The cost of the buildings was £1000, of the disinfector and ambulance £100, and of sheds for same £100. Saffron Walden Urban and Rural Joint Hospital: Caretaker's house, hospital with two wards (four beds) and nurse's room, drainage, outbuildings, &c., cost £1200. The old hospital (a small farmhouse) adjoins the new premises and is used when more than one infectious disease is prevalent. Southend Urban District: The hospital here, which is approaching completion, has two ward blocks each accommodating about ten patients, administrative block, laundry, mortuary, disinfecting apparatus, &c. The estimated cost is for buildings £3700 and for furnishing £350. Three different diseases can be isolated and the sexes separated. Halstead Urban District: The hospital here is also approaching completion and resembles the one in the Chelmsford rural district. The administrative block is, however, larger and the whole more expensively built.

Other subjects, such as the equipment of hospitals, provision of ambulances, disinfecting apparatus, hospital management, &c., which require consideration, I shall report upon at an early date.

Chelmsford.

A CASE OF CARCINOMA OF THE UTERUS COMPLICATED BY PREGNANCY.

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LATE ASSISTANT DEMONSTRATOR OF PATHOLOGY, EDINBURGH SCHOOL OF MEDICINE.

THE following case presents several points of sufficient interest and rarity to warrant its publication.

A woman aged twenty-nine years, five months after her second confinement, was sent to Dr. Ramsay Smith on Feb. 28th, 1896, for gynæcological examination and opinion. The result of the examination is embodied in the following note: "Cervix uteri split in several directions and eroded; what remains of it is hard, nodular, and immovable, and covered with cauliflower excrescences; os patulous and its margins friable, the whole bleeding freely on touch. Possibly malignant disease and a case for hospital." The patient, however, refused to go to hospital, so she was received into Dr. Ramsay Smith's private Home on March 9th, where she came under my observation. Her condition on admission was as follows. In appearance she was a small spare woman, much emaciated, with flushed cheeks and poor appetite, but with no cachexia. She complained of severe gnawing pain over the sacral and lower lumbar regions, the pain sometimes shooting down the outside of the thighs. The pain was so constant as to render her almost helpless. According to her own statement the patient had been five years married. Her first labour, eighteen months ago, was lingering, and the child was stillborn. Her second confinement, five months ago, extended over a period of five days. The child (stillborn) was rather large. After the confinement she complained of pain, and as her medical attendant put off examining her she consulted another medical man, who sent her on to Dr. Ramsay Smith, as stated above. The nature of the condition as determined by the first examination was doubtful. In favour of malignant disease were the rapid emaciation, pain, hardness and immobility of the cervix, and infiltration of the vaginal vault. Against this were the comparative youth of the patient, the absence of menstruation and hæmorrhage, except at the examination described above, the absence of rectal and vesical symptoms, and the recent pregnancy, which was only the second. Metastasis and cachexia were both absent, but these conditions occur so seldom in cancer of the uterus that nothing could be argued from their absence. The family history was decidedly good, tuberculosis and cancer being absent from the record. Though the diagnosis was doubtful the indications for treatment were clear enough. If the condition was non-malignant then the proper treatment was to remove the excrescences and stitch the rents in the cervix. If the condition should turn out to be malignant then the only possible course, considering the nature of the case, was to remove as much as possible of the diseased tissue as a palliative measure. So, without further examination, Dr. Ramsay Smith operated the day after her admission. After a preliminary hypodermic injection of morphia and atropia the patient was chloroformed. All the diseased tissue was rapidly removed by help of the finger-nails and curette, leaving the uterus excavated in all directions. There was a good deal of bleeding and the smell of the tissue removed was most offensive. Altogether about four-fifths of the entire uterus were removed, and the cavity, after being swabbed thoroughly with iodised phenol, was packed with iodoform gauze. The after-treatment consisted of hot douches three times a day with permanganate of potassium and mild morphia suppositories. In a week the patient was able to be up, was comparatively free from pain, had become more cheerful, and was acquiring an appetite for food. Microscopic examination confirmed the diagnosis as determined at the operation—cancer. Some facts elicited subsequently make the history of the case more complete and interesting. Pain and slight bleeding had usually occurred on connexion before the last pregnancy, and this, with other circumstances, point to the great probability, if not certainty, that pregnancy had occurred after the uterus had become diseased. The first labour, eighteen months ago, had been tedious, and the child was stillborn, leading to the presumption that cancer had originated in a torn cervix after the confinement. In cases of cancer of the uterus inquiry as to the condition of the husband's penis often elicits the fact that smegma accumulates behind the glans and under the prepuce, and this was so in the present instance. The outstanding points of interest in this case are that pregnancy occurred in a young woman in a cancerous uterus and went on to term, the disease being unsuspected, and that the symptoms were so obscure and indefinite even when the disease had become so extensive as to render a radical operation hopeless. The lesson to be learned is that every patient who has a tedious labour should be examined some time after confinement, and that, though it is not necessary to operate on every case of torn cervix, it is desirable to operate on some.

Rhyl, North Wales.

HUNTERIAN SOCIETY.—A clinical meeting of this society was held at the London Institution on March 25th, the President being in the chair. Sir Hugh Beevor showed for Dr. Woods a case of Spasmodic Tremor in the right hand and forearm which had been treated by short hypnotic sleeps for about six weeks. Gradual recovery took place. He also showed another case of a man aged forty-three years who was successfully treated by the same means for localised headache and giddiness.—Dr. F. J. Smith showed a man the subject of Addison's disease treated by supra-renal extract twice daily. The pulse had improved and the vomiting was less.—Dr. Arthur Davies brought before the society a case of imperfect closure of the left upper eyelid in a patient who suffered from mitral regurgitation. Suggestions as to the cause of the imperfect closure of the eye were made by the President, Dr. F. J. Smith, Sir Hugh Beevor, Mr. Rawes, and Mr. Tubby.—Dr. Davies finally expressed his opinion that the cause of the apparent projection of the eye was spasm of the left orbitalis muscle.—Dr. Arnold Chaplin presented the case of a man aged forty-six years the subject of bronchiectasis of the lower lobe of the left lung. He was placed in a room eight feet in each of its dimensions and subjected to the vapour of creosote for from a half to one hour daily. After some weeks the following results were noticed. The temperature fell to normal, the fœtor of the breath was less, there was a decrease in the moist sounds of the chest, and the patient had gained 5 lb. in weight.—Sir Hugh Beevor, Dr. Davies, Dr. F. J. Smith, and Mr. Tubby joined in the discussion which followed, and Dr. Chaplin replied.—Dr. Glover Lyon showed a patient the subject of Extensive, Painful, Glandular Growths, probably due to lymphadenoma.—Dr. Davies inquired if bone marrow had been given.—In his reply Dr. Lyon stated that there was no anæmia present.

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Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

CASE OF SEVERE HEAT-STROKE; RECOVERY.

BY P. J. ATKEY, M.R.C.S. ENG., L.R.C.P. LOND.,
SURGEON TO THE PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY.

As cases in which the temperature has risen over 108° F. and the patient has subsequently recovered are not often recorded, or at any rate well authenticated, I think the following will be of interest.

The patient, aged twenty years, of good physique, was a steward on board the Peninsular and Oriental steamship *Parramatta* and on his first voyage from England. He was quite well until the Red Sea was reached, where the heat became very trying and oppressive, although the temperature of the air in the shade did not exceed 90° F. He first came to me on July 21st, at 12 A.M., complaining of severe pains all over, but worst in the back, and of great weakness in the limbs. His temperature was then 102·5°, the skin was dry, and the pulse full and rapid. I gave him ten grains of phenacetin and sent him to lie down. He stated that he had not been directly in the sun and that except for feeling tired, which he put down to extra work, had felt quite well till half an hour previously. At 2 P.M. I was sent for, as he seemed much worse, and found him in his berth quite unconscious; his breathing was fast and shallow and the pulse was full and laboured. While making arrangements for moving him I took his temperature in the axilla and found it to be 108·2°. His eyes were wide open and staring, the pupils being slightly contracted and not acting to light. He was immediately put into a bath of iced water and at the same time ice was applied to the head. When put into the bath his respirations became deeper, though still fast, and his pulse quieter. After five minutes his temperature had fallen to 103·5°, and after being in eight minutes, his pulse getting bad, he was put in a blanket on a bed and a little brandy poured down his throat. His pulse was now 108, the temperature 103°, and the respirations quick and weak. A few minutes later he began to vomit and brought up a large amount of semi-digested food, after which the pulse and respiration both began to improve, and at 3 P.M.—i.e., one hour after I first saw him—his temperature was 102° and the pulse was 96. He continued like this till 8 P.M. with teeth firmly clenched, and he could not be made to take any fluid, being still quite unconscious, when he suddenly raised himself in bed and began to struggle, and soon afterwards swallowed a little milk. His temperature had since 4 o'clock kept between 100° and 100·8°. I now had him fed with a little milk occasionally and gave him seven grains of calomel. He continued quiet, apparently sleeping, with the pulse about 100 and the temperature from 99° to 100° till 3 A.M., when he regained consciousness and talked sensibly, recognising people. The calomel acted freely three times later in the morning, and during the day (July 22nd) his temperature varied between 99·2° and 99·8°, the pulse ranging between 80 and 84. On the 23rd his temperature was between 98·2° and 99·8° and the pulse between 80 and 90. On the 24th and 25th the maximum temperature was 98·8°. The patient had been doing well and complained of nothing except at times a slight frontal headache. He took his diet well, which consisted of slops. On the 27th the patient was up on deck for an hour and complained only of weakness. On Aug. 1st he returned to his ordinary duties and seemed quite well.

Having had a considerable number of cases of insolation under my care since I have been in the service of the Peninsular and Oriental Company I can say that they do exceedingly well on board ship, and as there is an unlimited supply of ice and every necessary immediately at hand have a better chance than they would have elsewhere. The rapid recovery and absence of sequelæ, so common after severe heat-stroke, are the most interesting points about the above case, and I should like to know what other similar cases have been recorded. Dr. Clennell Fenwick of St. Thomas's Hospital, and Mr. Gilmour, R.N., very kindly gave me every assistance, and were both present when the temperatures were taken.

Sydney, N.S.W.

A CARDIAC CURIOSITY.

BY J. REGINALD FULLER, M.B., B.S. DURH., M.R.C.S. ENG.,
LATE SENIOR RESIDENT MEDICAL OFFICER TO THE BIRMINGHAM CHILDREN'S HOSPITAL;
AND
F. R. GIBBS, M.R.C.S. ENG., L.R.C.P. LOND.

THE case about to be described is, perhaps, more interesting as a curiosity than as a contribution to medical literature, but the fact that a murmur of such intensity should occur in a subject whose actual cardiac disease causes so few inconvenient symptoms is sufficient excuse for the few notes here appended. The patient, a bright and intelligent school girl aged fifteen years, belongs to a family many members of which suffer either from phthisis or cardiac disease. Her personal history is good. She has never suffered from any serious ailment and has always enjoyed fair health. The cardiac mischief causes no other symptom than the fact that she easily gets "out of breath." The heart is not enlarged or dilated, there is a good first sound, followed immediately by a murmur and a low second sound. The murmur is mitral, and this is the interesting feature of the case, for it can be heard when the patient is fully dressed at a distance of twelve feet or more. It can also be heard when with the chest exposed she is placed three feet away from a closed door and the listener is at the same distance on the other side in the hall. As might be expected, the murmur varies somewhat in intensity from day to day, but it is only very rarely that it cannot be heard a foot away from the chest without the stethoscope. We believe this to be unique.

"LANDRY'S PARALYSIS FOLLOWING INFLUENZA."

BY J. C. BOWIE, M.B., C.M. ABERD.

A CASE somewhat similar to the one referred to in the annotation under the above heading in THE LANCET of Feb. 29th has come under my care; the type of influenza differs, as does also the severity of the subsequent paralysis.

The patient is a lad aged seventeen years who was exposed to wet on Jan. 15th, 1896. The next day he had an attack of influenza, marked by the sudden onset of feverishness, depression, cough, and a slight amount of soreness of the throat which lasted only for a day. From Jan. 19th to Feb. 1st he travelled a good deal by sea, and was several times exposed to cold in a small boat. On Feb 1st he made one of these voyages which lasted nine hours in an open boat, and in the evening was seized with great feebleness, especially of the lower extremities, with numbness of the feet; and vomiting occurred. A slight amount of pain was felt in the back and head. Loss of appetite accompanied the depression. The feebleness increased for two or three days, so that the body was affected generally and also the arms, the right side rather more so than the left. The grasp of both hands was weak. There was a difficulty of lying on the right side from a feeling of soreness—this lasted four weeks. The heart's action was slow and feeble, but otherwise natural. The temperature was subnormal; the knee-jerks were lost; there was no difficulty in swallowing; the speech was somewhat slower than natural, but this might only be due to depression. On the 10th the temperature was normal (98·6° F.), but otherwise the patient's condition was unchanged. Soreness was felt on kneading the muscles of the limbs. There was slight sensory impairment in the feet. From the 15th to the 24th the bowels became more inactive and refused to react to laxatives, and laterally became loaded. On the latter date injection by enema was resorted to, followed by a dose of croton oil, and since then no difficulty was experienced. About this time, also, the urine was longer retained and consequently more copious at a time, but no paralysis occurred. Gradual improvement in muscular power occurred during that time, being still more marked during the following week. Appetite was regained, and since then slow but gradual improvement has taken place. On March 18th the knee-jerks showed a slight reaction after a long period of latency. The patient on the 27th was able to stand, but feebleness of the limbs was still present, so that he was not able to stand for any length of time.

Clousta, by Bixter, Shetland.

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A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

ST. THOMAS'S HOSPITAL.

TWO CASES OF OBTURATOR HERNIA, ONE BILATERAL; REMARKS.

(Under the care of Mr. WILLIAM ANDERSON.)

OBTURATOR hernia is one of the rarities of surgical practice. Only one case appears in the surgical reports of St. Thomas's Hospital from 1870 down to the date of the two examples now related, and only thirty operations are known to have been performed in Europe down to the present day. Case 1 appears to be the only example reported of bilateral obturator hernia treated by operation. Case 2 illustrates the extreme difficulty in the way of diagnosis before operation in some examples, and it points strongly to the disastrous consequences of delay in calling for the assistance of the surgeon in obscure conditions of intestinal obstruction. There is little doubt that the patient's life would have been saved could the operation have been done a day earlier. For the notes of Case 1 we are indebted to Mr. E. H. Cobb and for those of Case 2 to Mr. Everett Millais.

CASE 1.—The patient, a woman aged seventy-one years showing the usual senile emaciation but of fair power and vitality, had been suffering for the last seven years from occasional attacks of intestinal obstruction, accompanied by pain on the inner side of the left thigh and some fulness in Scarpa's triangle; the symptoms disappearing at the end of a day or two and leaving no ill-effects. During the last two years a local prominence had been noticed below the groin. On Nov. 24th, 1895, symptoms of strangulation set in without obvious cause, and the patient was sent to St. Thomas's Hospital three days later. There were then signs of obstruction, indicated by constipation, vomiting, and prostration, and a tender swelling as large as a walnut was found over the position of the left obturator foramen, and complaint was made of pain radiating along the inner side of the thigh. The tumour was deeply placed on the inner side of the femoral sheath in a position a little below and internal to that of a femoral hernia; it was most visible when the thigh was extended, and most easily palpable when the limb was flexed, adducted and rotated outwards, and was then felt as a tense rounded mass irreducible and free from impulse on coughing. On examination per vaginam a slight fulness on the left side could be distinguished in the direction of the obturator canal. Nothing was observed on the right side. The condition was diagnosed as strangulated obturator hernia, and an operation was performed without delay. An incision about two and a half inches in length was made over the tumour, downwards from the level of Poupart's ligament for about two and a half inches on the inner side of the femoral sheath; the pectineus muscle was exposed and its fibres were separated and held aside with retractors, exposing what appeared to be the sac of a hernia about an inch and a half in diameter. This membrane was of a dull white and as thick as a sheet of stout parchment. It was incised, and beneath and somewhat adherent to it appeared the true peritoneal sac. This was laid open and after the escape of a little reddish serum a small knuckle of intestine was visible. It was deeply congested, but retained its lustre and was not adherent to the sac. Its neck could be traced into the obturator canal and appeared to be nipped below by a semilunar fibrous band in the position of the external obturator membrane. A director was then passed into the canal below the intestine for nearly an inch, and the constriction was divided for about a sixth of an inch in a downward and slightly inward direction with a bistoury. No hæmorrhage followed. The intestine, after a brief inspection, was then emptied and returned without difficulty. The sac was next isolated from the surrounding tissues and twisted, and a ligature was tied around it as far within the canal as possible. The thread having been cut and the superfluous portion of the sac removed, the stump was pushed well into the pelvic cavity and the wound was closed. In the course of the operation the pulsation of the obturator artery could be distinguished at the upper and inner part of the canal. The nature of the membrane covering the sac could not be determined. It appeared to be quite free from muscular fibres and detached from the pectineus muscle. The operation was well borne. All symptoms of obstruction disappeared and at the end of a week the wound was found to be healed. The patient regained strength rapidly, but complained from time to time of neuralgic pain along the course of the obturator nerve.

On Dec. 22nd, twenty-six days after admission, a hernia appeared on the opposite side, but vanished spontaneously at the end of a few hours. Four days later, however, it returned, in company with sickness and other signs of obstruction, with considerable prostration of strength. The tumour was almost identical in its size, position, and character with that on the left side, but was less tense and tender. A second operation was performed in the same manner as before. The sac was found beneath a thick fascial covering, as on the left side, and on opening it the exposed small intestine appeared almost uninjured and was reduced without further use of the knife. The sac was isolated and ligatured and the wound was closed. The progress was again favourable and the patient made a good recovery except for the appearance of a small sinus apparently due to suppuration around a stitch. The patient was fitted with a double truss, with fixed semi-elliptical pads each so adjusted that its straight edge lay over the pectineus muscle parallel to the femoral sheath.

CASE 2.—The patient, an emaciated woman of cachectic aspect, was admitted on Dec. 9th, 1895, with symptoms of intestinal obstruction. She was in a state of extreme prostration and the history was difficult to obtain. She said she had been suffering from constipation and abdominal pain for five years, with frequent diarrhœa and pain referred to the umbilicus and vulva; the motions were usually scybalous, and no blood had been seen in the stools. Five months ago the bowels were constipated for three weeks, but were at length relieved under purgative treatment. A week before coming to the hospital acute symptoms of obstruction set in and the vomited matters had a strong fæcal odour. On admission she was extremely prostrate. The abdomen was but moderately distended, and no tumour could be felt either at the hernial apertures or within the abdomen by rectal or vaginal examination. An immediate laparotomy was decided upon. The abdomen was opened and a long coil of contracted small intestine was exposed, but before this could be traced to the point of obstruction the pulse stopped and the patient died. It was noticed that a peritoneal pouch extended into the right obturator foramen large enough to admit the tip of the forefinger for about three-quarters of an inch, and it was thought probable that the seat of obstruction would be found in the opposite obturator canal. At the post-mortem examination a knuckle of small intestine was found strangulated in the left obturator canal, not reaching to the anterior opening. It was not gangrenous, and the constriction involved only about two-thirds of the circumference of the gut.

Remarks by Mr. ANDERSON.—The obturator canal has received inadequate attention in our anatomical text-books, but a most elaborate essay upon the Anatomy and Surgery of Obturator Hernia by Piqué and Poirier[1] almost exhausted the subject down to the dats of the articles. This was preceded by an equally painstaking monograph by Englisch.[2] The obturator canal may easily be studied in the dissecting-room by a simple sagittal section through the pelvis at a point about an inch external to the pubic spine. From such a section the accompanying figure has been copied. A reference to it will show the canal as a passage about an inch in length, bounded in front[3] by the body of the pubic bone and behind by the

[1] Piqué et Poirier: Étude sur la Hernie Obturatrice. Revue de Chirurgie, 1891, Nos. 9 and 11, and 1892, No. 4.

[2] Josef Englisch: Über Hernia Obturatoria, Wien, 1891.

[3] This description implies that the pelvis is placed in the position of station (i.e., with the axis of the brim forming an angle of from 150° to 155°, with a vertical line falling upon the promontory of the sacrum). The plane of the obturator foramen is then seen to form an angle of about 30° with the horizontal, and the obturator canal lies behind the body of the pubic bone, and below it only to a slight extent at its femoral extremity.

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external[4] and internal obturator membranes and muscles. In the female it is usually large enough to admit the little finger and becomes still larger when the soft structures undergo senile atrophy; in the male it is narrower. These peculiarities will explain the great relative frequency of the condition in women of advanced years. The direction of the canal is chiefly downwards, with an oblique inclination inwards and forwards, but towards its lower or crural end it curves forwards at an angle of about 45° with the horizontal. The nearly vertical direction of the inlet of course favours the occurrence of hernia when the other conditions are favourable. The posterior wall of the canal presents two branch passages, one (K) running backwards between the two obturator membranes, the other (I) downwards, traversing the fibres of the

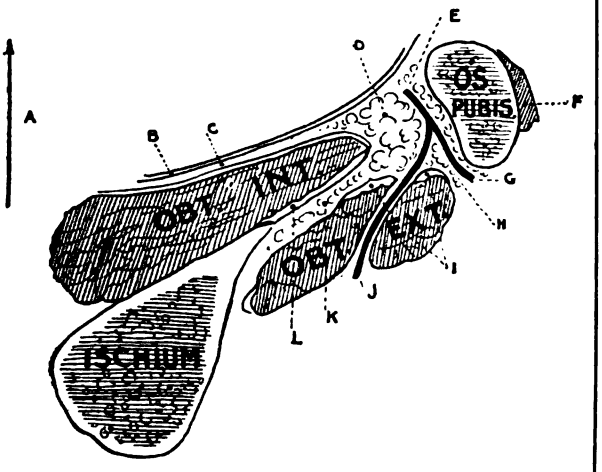

Diagram of the obturator canal, from a preparation in St. Thomas's Hospital. A, Longitudinal axis of body. B, Parietal peritoneum. C, Sub-peritoneal tissue. D, Fat in obturator canal continuous with C. E, Obturator nerve. F, Pectineus muscle. G, Anterior division of obturator nerve emerging from H, Lower (anterior) opening of canal. I, External obturator membrane of Fischer. J, Branch of canal transmitting posterior division of obturator nerve. K, Fat-containing space between the two obturator membranes (I and L). L, Internal obturator membrane.

obturator externus and transmitting the posterior division of the obturator nerve as well as some small collateral vessels. These diverticula are important to note because an obturator hernia may enter either. The canal is closed on the pelvic side by the parietal peritoneum, which is usually stretched more or less loosely across the inlet; and on the crural side by the pectineus and adductors. It transmits the obturator vessels (arteries, veins, and lymphatics) and nerve, and contains a mass of adipose tissue, which is continuous above with the subperitoneal plane of fat and sends processes into the space between the two membranes, and even through the canal for the posterior division of the obturator nerve. When this fat becomes absorbed during the senile involution of tissues, the parietal peritoneum is apt to be drawn or pushed into the pelvic orifice of the canal as a pouch of varying depth and width, and the way is thus prepared for a hernia. Such a condition was found on both sides in Case 2 and is occasionally met with in the dissecting-room. The course that may be followed by a hernia is obvious: (1) it may remain within the main canal and yet as in Case 2 may become fatally strangulated; (2) it may pass into the passage between the two obturator membranes and, as in the last, may lead to no appearance of a tumour in Scarpa's triangle; (3) it may enter the inter-muscular cleft for the posterior division of the obturator nerve and so reveal itself as a deeply placed tumour externally; or (4) lastly it may complete the transit of the canal and project beneath the pectineus as in Case 1, or if sufficiently large may wander wherever the inter-muscular spaces will permit. According to Fischer a hernia may also run outwards between the external obturator membrane and the cotyloid notch, but it is doubtful whether this variety, although possiole, has been demonstrated.

[4] The external obturator membrane of Fischer is a fairly strong plane of fibrous tissue attached in front to the lower border of the pubic bone and behind approaches the middle of the internal obturator membrane (the obturator membrane is over that body). The two membranes are separated by a space containing fat. See figure.

Practically we need only consider the varieties named, but it is possible, though scarcely profitable, to subject each to minute sub-division, as in the classification formulated by Englisch. The anatomy of the obturator vessels and nerve is well known. It is only necessary to note that the obturator artery, when it arises normally from the anterior trunk of the internal iliac, will enter the canal below the nerve, while if it spring from the deep epigastric it runs close to the anterior or bony wall, each arterial branch accompanied by large venæ comites. The relation of the obturator canal to the pelvic cavity will indicate the probabilities as to contents of the hernial sac. The small intestines are always in close relation, and hence in over 91 per cent. of the recorded cases it is a coil of gut or a portion of a coil that finds its way into the canal. Next in order of frequency come the ovaries and Fallopian tubes, about 4 per cent. The uterus appeared in the sac in one case and the vermiform appendix in one. The great omentum is seldom found. From the constitution of the canal strangulation is proportionately less common than in inguinal or femoral hernias, but the history of some of the examples, as in Case 1, shows that passing attacks of incarceration are not infrequent, while owing either to peristalsis set up by purgative treatment or to the effect of the distension of the proximal portion of the gut above the constriction, the intestine is drawn out and relief occurs without surgical intervention. The signs of strangulation do not always clearly indicate the locality of the mischief. They may be analysed as follows:—1. Obstruction of the bowels, with the ordinary symptoms of the condition. 2. An external tumour in Scarpa's triangle, below Poupart's ligament, beneath the pectineus, and on the inner side of the femoral ring. It is most visible when the limb is extended, and most easily palpable when the muscles are relaxed by flexion and internal rotation. It will, however, be absent when the hernia lies within the canal or between the obturator membranes, or may be difficult to detect even in the complete form if, as rarely happens, the patient is very fat. 3. Internal indications of tumour by vaginal or rectal examination, as found in Case 1. 4. Tenderness on firm pressure with the finger tip in the region of the external opening of the obturator canal may assist diagnosis when there is no palpable tumour. 5. Irritation of the obturator nerve commonly accompanies incarceration as well as strangulation. It is shown chiefly by a neuralgic pain extending along the inner side of the thigh, and even to the knee or lower, and sometimes by a sense of stiffness or cramp in the adductors. In some instances, as in Case 2, the characteristic indications localising the seat of obstruction may all be absent. As a rule, however, an intestinal obstruction of obscure origin in an old and emaciated female should always lead to a careful examination of the external opening of the obturator canal before abdominal section, and an exploration of the internal opening afterwards when laparotomy is performed. Thirty operations for the relief of strangulation have been recorded, including those now described. Of this number sixteen ended fatally. Laparotomy was performed in five. In the fatal cases twelve deaths were due to the injury to the gut (gangrene perforation) by the strangulation, and could hence scarcely be attributable to the operation. The method of kelotomy is usually that adopted in the case now reported. It offers no difficulty, and almost the only risk for which the surgeon is likely to be responsible is hæmorrhage from a wound of the obturator vessels—a dangerous complication owing to the difficulties opposed to the arrest of the bleeding by the depth and inaccessibility of the source. The artery usually lies opposite the upper and outer part of the sac (in Case 1 the pulsation was distinctly felt above and internally), and a section of the constricting band in connexion with the external or internal obturator membrane may usually be made with safety in a downward and slightly inward direction. The incision should, however, be as short as possible. It would, perhaps, be still safer to introduce a steel director or some other strong edgeless instrument beneath the neck of the hernial sac and widen the opening by forcible pressure in a downward direction. This would involve no risk and would probably be sufficient to allow reduction. An attempt at radical cure will, of course, always be made after reduction. It is doubtful whether anything is feasible beyond ligature of the neck of the sac as high as possible. When a kelotomy reveals a gangrenous state of intestine the problem is similar to that offered by the same condition in other herniæ. An attempt to excise the

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gangrenous portion and to suture the two ends may not often be advisable; and probably the best practice, where the patient's condition permits, will be found in a laparotomy and the establishment of a lateral anastomosis between the two portions of the strangulated coil on the abdominal side of the canal. It is hardly necessary to press the advantages of promptitude when operation is found necessary. The mortality is that of delay, not of surgery. Taxis has been successful in a certain number of cases of strangulated obturator hernia, but in the present day this measure would be used with great caution if at all. Any persevering efforts at reduction by this means would be likely to increase the fatality of the condition.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

Tuberculous Kidney.—Series of Cases of Enterectomy, with Remarks on the Various Methods Employed in Securing Union of Divided Edges of the Hollow Viscera.—Successful Suture of a Duodenal Ulcer.

AN ordinary meeting of this society took place on March 27th, Dr. BUZZARD, President, being in the chair.

Dr. F. J. SMITH and Mr. L. BIDWELL read the notes of a case of Tuberculous Kidney, for which nephrectomy was successfully performed.

Mr. MAYO ROBSON gave the details of a series of cases of Enterectomy, with Remarks on the Various Methods Employed in securing Union of Divided Edges of the Hollow Viscera. He remarked that the whole of his personal experience of enterectomy was furnished in the table of cases, twelve in number, which he handed round; and that by the kind permission of his colleagues he had been able to add the whole of the enterectomies which had been performed in the Leeds Infirmary to the table, which thus represented a series of twenty-six cases, on which his arguments were based. He divided the series into three classes. 1. Those operated on by simple suture, nine in number, of which five died, yielding a mortality of 55·5 per cent. 2. Those operated on by the Murphy button, five in number, of which one died, giving a rate of mortality of 20 per cent.; two had had fistulæ and a retarded convalescence, and in one the button had not passed while the patient was under observation. 3. Those in which a decalcified bone support in the shape of a button or some similar contrivance was employed to support the sutures, of which there were twelve cases with one death, giving a rate of mortality of 8 3 per cent. After remarking on the disadvantages attending simple suture, such as multiplicity of stitches required, the danger of stenosis, and the fear of infection through the needle punctures, and after mentioning the advantages of Maunsell's method in intussusception and its disadvantages in other forms of enterectomy, Mr. Robson referred to the use of the Murphy button, which he said he preferred for cholecystenterostomy and for short circuiting in intestinal obstruction, but which he thought had great disadvantages in enterectomy. He mentioned cases where the button had caused ulceration, where it had produced obstruction, and where it had never passed; he also dwelt on the necessary pressure-necrosis and the fear of gangrene spreading beyond the parts embraced, leading to perforative peritonitis, or in case of recovery to after-contraction in the newly-established fistula. Mr. Robson said that before all other methods he preferred to suture the intestine by a continuous stitch and to support the line of union by a hollow decalcified bone bobbin, the safety of which he thought he had proved by the list of cases given in the paper and by the rate of mortality being reduced so low as 8 per cent. The advantages he claimed were a saving of time from the use of only one or at most two stitches; the prevention of subsequent stricture by the establishment of a continuous mucous canal; the perfect security against leakage; the absence of a foreign body in the intestine, as the bone dissolved when its work was done; the prevention of infection of the line of suture; the immediate continuity of the newly-made canal; and, lastly, the applicability of the bobbin to any of the operations required for the establishment of continuity of the intestinal canal. After describing, by the aid of diagrams and models, the operation he generally adopted he said that though it might be more ideal to do without any mechanical aids in these operations it was incumbent on the surgeon to carefully study the advantages and disadvantages of the different procedures before adopting any method because it was supposed to be the ideal one.—Mr. B. JESSETT expressed his regret that Mr. Robson had not alluded to Senn's papers on uniting the intestine by bone plates, the experiments establishing the utility of which were first repeated by himself in this country. Mr. Paul of Liverpool was the first to make a definite improvement upon Senn's method, then followed Maunsell's operation, which was one of the best. Murphy's button looked simple, but required delicate manipulation for successful application; if the button dropped back into the stomach it might prove the cause of ulceration and perforation later on. Of five cases he had adopted Maunsell's method in three and that of Robson in two. They had all recovered except one of excision of a portion of transverse colon for cancer by Maunsell's method. In one instance he had performed both Maunsell's and Robson's operations for two different fæcal fistulæ on the same patient, and both with a successful result.—Mr. W. G. SPENCER said that Czerny of Heidelberg had published an equally good series; the suture employed being practically the same but no bobbin being used. He inquired if Mr. Robson had used a potato or turnip out of which to fashion a bobbin; also whether he had used the bobbin with success on parts of the intestine incompletely covered or not covered with peritoneum.—Mr. H. ALLINGHAM referred to his paper before the Medical Society of London in which he related the fatal results which had followed the operation if the gut were distended at the time. He was sure that the use of some form of internal splint was of great assistance to the operator. At St. George's Hospital every time Murphy's button had been used the patient had died.—Mr. F. BURGHARD said that he had operated twice by Maunsell's method and four times with Murphy's button. He resected the cæcum for malignant growth about the ileo-cæcal valve and united by means of Maunsell's method, the patient being at the present time living and well two and three-quarter years after the operation. In a case of malignant disease about the beginning of the sigmoid flexure the patient died of perforation on the eleventh day. In that case there was no mesentery and he found it extremely difficult to carry out Maunsell's invagination. In two of his cases in which he used Murphy's button the patients died almost immediately of shock, and therefore the result of the use of the button could not be ascertained. In a case of pylorectomy the patient did well, though he died from recurrence seven and a half months after the operation. The operation was completed by the aid of the button in forty-five minutes and the button was passed on the thirty-fifth day. In the case of malignant disease of the descending colon Murphy's button was used and the patient did well being at the present time alive and with no recurrence.—Mr. BOWLBY remarked that Maunsell's operation was easy of performance upon undistended intestine, but he had tried it in a case of gangrenous hernia and found that it was extremely difficult to invaginate the gut. The patient died from peritonitis, from leakage at the stitch holes, and the lumen of the gut he found afterwards was almost occluded by the in-turned portions of the coats of the bowel. The free passage ensured for the immediate transit of fæces and flatus was not one of the least important merits of Mr. Robson's plan.—Mr. CLUTTON asked if Mr. Robson had considered the advantages of lateral anastomosis. In his own hands it had been eminently successful. He had also found that Murphy's button gave good results, its chief cause of failure appearing to be that it did not pass. In end-to-end approximation of gut he had had successes, but he had also had a large number of failures.—Mr. MAYO ROBSON, in reply, said that his paper only alluded to personal experiences and hence he had said but little of Senn's plates. Maunsell's method was excellent for intussusception, and he would like to remark that his colleague, the late Mr. McGill, suggested the details of this operation years before Maunsell brought it out. The outer line of suture should be passed through the outer coats of the bowel only, whether peritoneum or not. He agreed that there was danger in operating upon distended intestine, but in many cases there was great objection to an artificial anus, especially where the opening had to be made into the small

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bowel. The disadvantage of lateral anastomosis was that it gave three lines to suture up instead of one. He had suggested to Dr. Murphy that the distal flange of the button should be made larger, so as to prevent it travelling into the stomach or proximal part of the gut.

Mr. L. A. DUNN read notes of a case of Successful Suture of a Duodenal Ulcer. The patient whilst at work felt a sudden pain in the epigastrium, attended with nausea and faintness. He was taken home and subsequently to Guy's Hospital on Aug. 2nd, 1895. The abdomen was distended and remarkably tympanitic. The normal hepatic dulness was absent. He was suffering great pain and had an anxious expression of countenance. The abdomen was opened by median incision above the umbilicus, which allowed of the escape of a quantity of gas and yellowish fluid. A small perforation was found in the anterior wall of the first part of the duodenum. This was closed with five silk Lembert sutures and the abdominal cavity flushed out with boiled water. The flushing process interfered with respiration and so could not be thoroughly carried out, hence a Keith's tube was put into the upper parts of the wound for the first twenty-four hours. The patient progressed well for ten days, when his pain returned and his temperature was raised. He became worse till Aug. 27th, when the abdomen was opened a second time, on this occasion along the right costal margin, as it was thought that a collection of pus had formed between the liver and the diaphragm. Nothing was discovered except a few adhesions in this region, chiefly beyond the reach of the finger. An exploring needle passed through the eighth intercostal space was felt to traverse the abdomen and perforate these adhesions. A drop of pus was evacuated by this method. The wound was closed, the intention being to open and drain the abscess through the thorax at a later date. This was not, however, required as the temperature fell immediately after the operation, and remained low till the sixth day, when the wound was found to be distended with pus. The removal of two sutures sufficed to evacuate this, after which the recovery was rapid.—Mr. BLAND SUTTON said that some years ago he was interested in the subject of duodenal ulcers and looked up the cases. They occurred mostly in males past mid-life, and they had, he was sure, a different pathology from the gastric ulcers of chlorotic girls. They appeared to occur generally in subjects addicted to ardent spirits. The proper temperature to flush out the abdomen was 110° to 115° F.; if water colder than that were used shock would be induced, particularly in flushing out the upper regions of the abdomen.—Mr. DUNN, in reply, said that he had often used water at the temperature of 100° F. to flush out the abdomen, but he had never before seen such an effect produced on the respiration.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.

Some Factors in our Atmospheric Environment and their Relation to Health.—Modern Improvements in British Balneological Practice.

AN ordinary meeting of this society was held on March 4th at Limmer's Hotel, Dr. HENRY LEWIS, the President, being in the chair.

Dr. HENRY MCCLURE (Cromer) read a paper on Some Factors in our Atmospheric Environment and their Relation to Health, dealing with the composition of the atmosphere, its temperature, movements, and other conditions, and the phenomena produced by electricity and sudden changes of weather in human beings. He finally spoke of sunlight, its action on bacteria, and the probability that the ultra-violet rays penetrate below the surface of the skin. He believed that sunlight had a bactericidal effect due to the ultra-violet rays.

Dr. DOUGLAS KERR (Bath) then read a paper on Modern Improvements in British Balneological Practice. After stating that the application of water in the form of baths as a hygienic measure had been recommended for many ages, he discussed the origin of springs, the cause of their occasional high temperature, and the inherent property peculiar to each spring independently of its chemical composition, so that in selecting any one spa for any particular disease a medical man should be guided not so much by the mineral ingredients contained, unless present in very large amount, but by the combination of ingredients, and especially gaseous constituents, by the general character of the water as regards hardness or softness, by its effect on the system generally, and, above all, by the recorded evidence of credible witnesses as to its power in effecting cures. On the Continent for at least half a century thermal treatment had been steadily improved by scientific modes of application and had been recognised as an efficient treatment for some diseases which were not very amenable to drugs, while till within the past few years the English watering-places had been trusting to the obsolete modes of bathing handed down from former generations. Happily, all this was now changed, for at several English health resorts arrangements have already been or are being made for providing facilities for special treatment on the lines adopted at Aix-les-Bains and other Continental spas. He described various details and finally spoke of the Nauheim treatment as being carried on at various British spas.—Dr. MYRTLE (Harrogate) confirmed what Dr. Kerr had said about the immense improvements that had taken place with respect to baths in this country. At Harrogate they now had baths of almost every kind and all the arrangements were excellent.—Dr. GIFFORD BENNET (Buxton) said that during the twenty-seven years he had been physician to the Devonshire Hospital he could not remember a single fatal case occurring there during the whole of these years from the use of the baths. The only reason he could give was that every case received into the hospital was thoroughly and carefully examined. Some of the other cases who did not go from the hospital were examined, but on the other hand a large number went to the baths without any such preliminary precaution. They came to Buxton as to other spas, thinking that it was an ordinary water, and then plunged in, the consequence being that in some cases death took place.—Dr. EARDLEY-WILMOT (Leamington) considered that patients should be placed under the care of a medical man at the health resorts to which they were sent. He had known serious results happen to people who took these baths without this precaution and sometimes even without consulting a medical man in their own neighbourhood.—Mr. HOLBECHE (Malvern) said he had come to that meeting specially to get some authoritative opinion with regard to the Nauheim treatment of heart complaints by balneo-therapy. He could understand that the action of a hot bath and movement of the muscles might, by producing "fluxionary hyperæmia," relieve congestion of the right side of the heart; but he could not understand how reflex action of the skin or absorption of carbonic acid gas by the pores of the skin could be of any practical value in the treatment of heart complaints.—Dr. SNOW said that on this question of the treatment of the heart by this method he felt bound at the present time to take up a neutral position. Sufficient facts had not been put before them by independent observers to show the benefits which Dr. Bezly Thorne and others had mentioned as following that treatment.—Dr. LOUIS BLANC (Aix-les-Bains), speaking at the invitation of the President, expressed his pleasure at hearing of the reputation of the British baths. Many improvements had now been introduced in them, as he could personally testify from recent visits to Buxton and Harrogate. The practice of massage and the different methods of douching had special actions on the body, as in the treatment of rheumatism, but the waters themselves had something to do with the result apart from special appliances. Patients who went to these baths had often undergone massage and other treatment in London, Paris, and other large towns, where good accommodation and every convenience and modern improvements were to be had, but the effect produced had been but slight compared with that obtained at the mineral spas.—Dr. SEPTIMUS SUNDERLAND regretted that the details of the different modern improvements had not been gone into more fully. The rapidity with which the Nauheim treatment seemed to have taken hold of the profession upon very slender evidence reminded him of the Koch lymph craze a few years ago. He himself had no experience of the treatment, and while among the cases of which he had heard there had been some excellent results two had been disastrous.—Mr. SHIRLEY JONES (Droitwich) said that they had tried the Nauheim treatment on a few cases at Droitwich, but he was not in a position to specify definite results. He could not say whether it would or would not prove a success, and he considered that it would be premature to make any definite arrangements for it.

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NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

The Better Regulation of the Out-Patient Department.

A MEETING of this society was held on March 18th, Dr. W. B. RANSOM being in the chair.

Dr. KINGDON, in a paper on the Better Regulation of the Out-Patient Department, advocated the adoption of a uniform system of enumerating the total number of out-patients at each hospital. For instance, the same person on obtaining a fresh recommendation was often counted as a "fresh case." Patients coming from the country should be distinguished from those belonging to the town. Reference was made to the great variation in the number of patients in different towns where similar causes might be supposed to operate. Among the causes of the evil arising from unsuitable applications for treatment the recommendation system was specially condemned as favouring that which it was intended to avert. The Hospital Saturday and Sunday organisations, together with the fact of out-patients being prescribed for by an honorary staff, tended to increase the number of out-patients. The failure of the attempts made in different towns by committees of inquiry to reform the out-patient department was ascribed to too much having been attempted, and to the recommendations being overburdened with suggestions as to the formation of provident institutions and the like. It was suggested that suitable applicants were: 1. Those whose wages and that of the family were below a fixed standard. 2. Those whose wages exceeded the standard, but who had already paid a private medical man as long as they could afford. Both these classes were entitled to continuous attendance. 3. Those frequenting the hospital as a public consulting-room—e.g., members of sick clubs or those referred by a medical man. These should be seen once and the written opinion of the consultant forwarded to the medical attendant. The abolition of the recommendation system was advocated, also that the onus of proving their suitability should be placed on the applicants themselves; that each hospital should appoint an inquiry officer, male or female, who would interrogate each patient from printed questions; and that the answers should be written down by the officer and signed by the patient, and a distinguishing mark placed upon the prescription paper before the patient was seen by the medical staff. All unsuitable applicants should be at once rejected by the inquiry officer.

Dr. BOLTON thought public dispensaries unnecessary; the poor should be medically treated either by hospitals or the parish.

Further observations were made by Dr. RANSOM, Mr. MACMILLAN, Dr. WATSON, Mr. PRYCE, Mr. LANDER, Mr. STEPHENS, Mr. WILLIAMS, and Dr. MUTCH.

LIVERPOOL MEDICAL INSTITUTION.

Roentgen's Radiography.

A MEETING of this society was held on March 26th, Dr. RICHARD CATON, President, being in the chair.

Professor OLIVER LODGE (on the invitation of the President) gave a most interesting lecture on the Roentgen Radiography and its application to Medicine. He first traced the history of the subject previously to the discovery of Roentgen, calling attention to the researches of Crookes, Hertz, and Lenard, describing their methods and the extent to which their researches reached. He illustrated this part of the lecture by showing their instruments and repeating their experiments. He then explained the theory of the production of the rays and said that there were three different forms of rays proceeding from the kathode; each of these rays had its special properties. He then exhibited a screen prepared by Dr. Kohn with potassium tungstate. By means of a focus tube and a very powerful coil he projected on this screen shadowgrams of various objects, which were clearly seen by the audience. The objects consisted of a number of instruments in a wooden case, the hand and elbow joint of an assistant, and many more. With a magic-lantern he then showed upon a screen Radiographs of a sprained wrist, a dislocated thumb, a needle in a hand, and many other interesting pictures. Some excellent radiographs were handed round for members to examine; amongst the most interesting were a representation of the spine of a young woman who had sustained a fracture of the spine by falling out of a window, and one of a Murphy's button which had been retained for a long time in the abdomen of a women on whom an operation had been performed, the button having never come away. The position of the button was well seen.

A cordial vote of thanks was accorded to Professor Lodge for his kindness in giving the lecture, after which the meeting terminated.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

Exhibition of Cases and Specimens.

THE closing meeting of the present session of this society was held on March 12th in the Royal Infirmary, Newcastle-upon-Tyne, Dr. J. DRUMMOND, the President, being in the chair.

Dr. OLIVER and Mr. WILLIAMSON showed a youth aged seventeen years who had on three occasions hurt his head, one of the resulting scars being above the right ear opposite the face centre. For two years he had frequent attacks of *petit mal* and then a distinct epileptic convulsion preceded by severe headache. After admission to the infirmary he was delirious and had fits during the night. Double optic neuritis passing into atrophy was present. The fits always commenced on the left side of the face, passed to the left arm, then to the corresponding leg, and finally became general. A small hole was drilled over the face centre with the brace and bit trephine, and the skull was chipped away with cutting forceps over the motor area, but nothing was found, and though surgically the case did well the result was negative so far as the fits and the mental condition were concerned.

Mr. PAGE showed six men who had been operated on during the past year for Internal Derangement of the Knee-joint. In all the cases except one the result was perfect, for a freely movable, strong, and painless joint had resulted. The unsuccessful case was in a patient fifty years of age suffering from rheumatoid arthritis of the joint, which was opened and partially "erased" in the hope of benefiting him. He was no better and no worse for the operation. In each of the five successful cases the internal semilunar cartilage was excised through a transverse cut over it on the inner side of the knee, and in every case the wound healed by first intention.

Dr. DAVID DRUMMOND showed two men (miners) suffering from Leukæmia. One was fifty-four years of age and was first admitted into the infirmary in January, 1895, six weeks before which date he noticed himself becoming weak, breathless, and pale, and shortly before admission he discovered a swelling in his abdomen. His spleen was much enlarged, his legs were swollen, and his blood showed one white to six red corpuscles. There was a large amount of white uric acid in his urine, and a cardiac systolic murmur in the mitral area. He improved in general condition under arsenic, his blood at last contained one white corpuscle to 7·03 red corpuscles, and he was discharged. Seven months later he was readmitted, and his spleen then filled the left hypochondrium and reached to the umbilicus. His blood at present contains one white corpuscle to 4·7 red. The second patient was a man aged forty-five years whose spleen was large and whose blood contained one white corpuscle to four red corpuscles. An examination of the serum from the swollen legs of both men showed the presence of a large number of white cells (leucocytes) which were not found in the serum in heart or kidney cases. So far as Dr. Drummond knew this observation had not been made before. Both of these cases were examples of the spleno-medullary form of leukæmia, and the so-called myelocytes of Ehrlich (i.e., large uninucleated neutrophiles), the presence of which alone proves this form of leukæmia, were demonstrated.

Dr. GEORGE MURRAY showed a man, forty years of age, suffering from Hodgkin's Disease. When fourteen years old he first noticed that two of the lymphatic glands in his left axilla were enlarged and they have remained unaltered. A year ago the inguinal glands were noticed to be similarly affected, and a swelling was discovered two months later in the left side of the abdomen. Six months ago the enlarged inguinal glands softened, increased in size, and yielded a discharge for a time. Two months ago he noticed his skin

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darken. With the exception of some weakness he has felt nothing wrong. The inguinal glands now form tumours the size of cocoa-nuts, but the sinuses are healed. The axillary and cervical glands are large and hard, the spleen is much enlarged, and a nodule the size of a billiard ball can be felt immediately below its notch (probably a lymphadenomatous growth). In the blood there is one white corpuscle to 200 red corpuscles. Arsenic had not materially benefited him.

Dr. HUME exhibited a patient who had recovered from an operation for an abdominal tumour which proved to be a Lymphangioma of the Mesentery, and another on whom a successful operation had been performed for Intussusception with protrusion of the ileo-colic valve through the anus. He also gave a description of seven cases under his care now convalescent after operations for Appendicitis, and showed a man who had suffered from Free Internal Hæmorrhage, arrested after drainage and constant pumping. The patient had fallen from a height of thirty feet. At first his symptoms were not urgent, but at the end of twenty-four hours his abdomen was swollen and tense with fluid and he vomited everything. An incision was made in the right linea semilunaris and the peritoneum and pelvis were found full of blood, which was washed out, but search failed to reveal the bleeding point. A drainage-tube was left in and pumped out every half hour. Fresh bleeding followed the operation, but gradually ceased, and the patient made a perfect recovery.

Reviews and Notices of Books.

Mental Physiology, especially in its Relation to Mental Disorders. By THEO. B. HYSLOP, M.D. Edin. Pp. 552, one vol. London: J. & A. Churchill.

THIS work is, as its title indicates, intended especially for candidates for the M.D. at the University of London, but it is not merely a text-book, for the author takes a strong position of his own on many of the points which are still discussed on this very debatable ground. It is evident that a vast number of authors have been consulted and in most particulars the work is quite up to date. That it completely fulfils its object can scarcely be said. It is, indeed, difficult to see how one book can in such a subject be successful, for the many views held as to the nature of matter, the explanations ventured as to modes of brain action, theories as to the connexion between mind and brain, &c., are studies in themselves that can only be grasped by prolonged consideration, and, therefore, we think that whilst Dr. Hyslop's book is of considerable value to the teacher who wants to summarise his knowledge it will be found too concentrated for the student, there is in it too much pemmican for the imperfectly (in this subject) trained organs of the ordinary candidate. Mental philosophy is of all subjects the one that requires gradual elaboration, and to be suddenly thrown into the thick of abstruse and conflicting theories is to say the least confusing, and though Dr. Hyslop evidently sees this difficulty and endeavours to clear up the speculation by a dictum here and there, the process is not always to be readily seen through by the student. It is doubtful if complete success in the production of one single volume embracing the necessary psychological training with the adjustment of this to insane conditions is possible, because in the face of the new physical experiments that are constantly appearing changes of opinion and varying theories are started which compel a review of the subject from another point, showing upon what an uncertain basis our inferences as to psychological processes rest. We prefer to advise the student to ground himself in the terminology and nomenclature of the subject, to study a good text-book on psychology, and hand in hand with this to get the practical experience of an asylum. Only in this way can he have a sound knowledge of a subject which the majority of candidates look upon as a bore, a thing to be got up for a special purpose and afterwards thrown away on the dustheap of distasteful work. If there is to be a separate examination for the final M.D. after a rigorous one in medicine for the M.B. it is, we think, wise of the University of London to insist upon a certain amount of logical and metaphysical training, for there can be no doubt of the great practical value of such subjects in heightening the power of mental analysis, but the examination ought to be of primary importance and scarcely possible of compass by the study of one book such as that we are discussing.

Some of Dr. Hyslop's chapters are admirable, and we may refer especially to the one on Localisation of the Mental Faculties, to that on Evolution, and the chapter on Memory; but in other branches, especially in that of psycho-physics, there is room for improvement. If a candidate could make sure of examination in a certain few indicated directions he could have no better guide. It has been suggested that for this examination definite authors should be named and that the questions should be confined to their works, but where so many different modes of explanation of phenomena are given it is probably wiser to avoid individual theories and to rely upon a wide platform with varying possibilities of superstructure. Viewing this as the intention of the University we can only recommend Dr. Hyslop's book as one of several that will have to be consulted.

Transactions of the Epidemiological Society of London. New Series. Vol. XIV. Session 1894–95. Price 6*s*.

A PORTRAIT of the late Sir George Buchanan, M.D. Lond., LL.D., F.R.S., finds a very appropriate place in the recently issued volume of the Transactions, and the obituary notice which the volume contains was evidently written by one who was familiar with his life and work. Sir George Buchanan's services to the society will be held in grateful remembrance by all the older members. For no less than ten years he acted as its honorary treasurer, and during the years 1881–83 he occupied the presidential chair. The volume of the Transactions which is now before us contains some very valuable papers, and includes Mr. Shirley Murphy's presidential address on the Study of Epidemics, which we had the pleasure of printing in our columns at the time, and to which we also devoted a leading article.[1] There is also in the volume a very interesting paper on Epidemic Disease in the Royal Navy by Fleet-Surgeon T. J. Preston, R.N., the society's secretary for the Navy, which forms an admirable article of reference as to the part epidemic disease has played among the dwellers on our battleships and of the administrative changes which have taken place in the matter of food, the allowance of raw spirit, &c. A *résumé* such as this is will prove of great use to the students of epidemic disease in the Navy.

Dr. Joseph Priestley, now medical officer of health of Lambeth, contributes an article on the Use of Eucalyptus Oil as a Disinfectant in Scarlet Fever, in which he deals in a thoroughly impartial manner with the methods advocated by Mr. Curgenven.

The bacteriological side of the science of epidemiology has not been lost sight of in the Transactions. Dr. Klein's paper on the Relation of Bacteria to their Toxines we have already published in these columns,[2] as also the very lucid and concise article on Immunity by Professor Washbourn.[3] Professor Lane Notter contributes an exhaustive article on the Influence of Soil as a Factor in the Production of Disease especially in Hot Climates. The volume is one

[1] THE LANCET, Dec. 15th, 1894.
[2] THE LANCET, Jan. 5th, 1895.
[3] THE LANCET, May 4th, 1895.

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to be included in the libraries of all those interested in the more scientific aspect of epidemiology.

Cottage Hospitals, General, Fever, and Convalescent: Their Progress, Management, and Work in Great Britain and Ireland and the United States of America. With an Alphabetical List of every Cottage Hospital at present opened. Illustrated with nearly 50 Plans, Diagrams, &c., including a Portrait of ALBERT NAPPER, Esq., the Founder of Cottage Hospitals. Third edition. Re-written and much enlarged. By HENRY C. BURDETT, Author of "Hospitals and Asylums of the World," "Burdett's Hospitals and Charities," "Helps in Sickness and to Health," &c. Crown 8vo, cloth, gilt, 10*s.* 6*d.*

THE author of this work is well known to be an authority upon hospital management and finance and to take a deep interest in every subject connected with hospitals. The book now before us, though called a third edition, is practically a new book. Everyone is agreed as to the value of cottage hospitals; indeed, to the hard-worked country practitioner they are an absolute necessity, insomuch as they relieve him from much of the wearing responsibility which forms the chief worry of his life. And the benefit to the patient is no less, for the difference between lying ill and helpless in a not over-clean cottage and bearing the same suffering in a clean airy hospital, looked after by a good nurse, is immeasurable. If there be any, and we hope there are many such, who desire to found a cottage hospital we would refer him to this excellent work. Rules for construction, tables of expenses, hints for avoiding friction in management, appliances and fittings necessary, are all treated in a full and careful manner. The important subject of mortuaries is dealt with, and we are glad to see the necessity of them is insisted on. Even in London some of the parish mortuaries are far from being what they should be. Careful scientific investigation, to say nothing of the reverence due to the dead, is impossible in a dark, dirty, ill-ventilated shed. The book is fully illustrated with architectural plans and diagrams, while the various statistical and other tables will be found very useful.

LIBRARY TABLE.

Scattered Leaves for Working Women. By BESSIE BERNARD. Londonderry: James Montgomery. 1896.—This is an address which was delivered before a working girls' club by the wife of Mr. Walter Bernard, F.R.C.P. Irel., of Londonderry. It is throughout characterised by sound practical common sense as well as by a thorough appreciation of the requirements of those to whom it was addressed, and the publication of it in pamphlet form places some useful suggestions at the disposal of those who seek to improve the condition of the working classes by instructing them in the principles of domestic economy. In the pages dealing with the preparation of food Mrs. Bernard very truly says that a hastily cooked steak is in every way inferior to less expensive parts leisurely stewed with vegetables and farinaceous additions such as barley, macaroni, rice, &c. Much of the information herein contained should be useful to middle-class wives and mothers.

Proceedings of the Philosophical Society of Glasgow, 1894–95. Vol. XXVI. Glasgow: John Smith and Son. 1895. Price 10*s.* 6*d.* — The articles of special medical interest in this volume are on the Antitoxin Treatment of Diphtheria, by Dr. John Glaister, and on the New Rules of the Board of Trade as to Colour Testing, by Dr. Fergus. Professor Ferguson writes on printed editions (some of them quite recent) of the Greek and Arabian chemists; while Lord Kelvin, who was the President of the Royal Society last year, has papers on the Thermal Conductivity of Rocks and the Electrification of the Air.

Early Scoliosis or Curable Curvatures of the Spine. By PERCY G. LEWIS, M.D. Brux., M.R.C.S. London: John Bale and Sons. 1895. Pp. 49.—This little book contains a brief account of the anatomy of the spine, the etiology and pathology of scoliosis, and the diagnosis and treatment. The description of the anatomy is too short and indefinite for those who are unacquainted with the subject and unnecessary for those who have studied anatomy. The treatment is the portion of the subject which is most fully dealt with, and it accords with the view that mechanical restraint cannot strengthen weakened muscles, and that exercises of various kinds are necessary. The book treats only of the milder forms of lateral curvature and may possibly be found useful by those who wish to learn a little more about the treatment than is to be found in the ordinary text-books.

JOURNALS AND REVIEWS.

The *Quarterly Journal of Microscopical Science.* Edited by E. RAY LANKESTER, F.R.S., ADAM SEDGWICK, F.R.S., and W. WELDON, F.R.S. London: J. & A. Churchill. Vol. XXXVIII., Part 4. February, 1896. Price 10*s.*—This part of the *Quarterly Journal* contains: 1. An article by Dr. Bashford Dean of Columbia on the Early Development of Amia calva, a fish that is abundant in the Wisconsin lakes, to which region Dr. Dean betook himself in order to secure the eggs and larvæ in May of last year. This sole survivor of the mesozoic ganoids makes its way in the early spring from the deeper waters to the more shallow and reedy margins of the lakes, where nests are formed, about which the polyandrous female hovers and at length deposits her eggs, which are fecundated as they are emitted and immediately become adhesive, and fixing themselves are watched over by a single male. It appears probable, though this has not been actually seen, that on being hatched they attach themselves to the male and are carried away. The ova are large, oblong, and with well-marked germinal area even at an early period. They possess a well-defined zona radiata and a villous external layer, the villi of which become enormously elongated at the part where the egg is attached. The first cleavage occurs one hour after oviposition. The early gastrula stage is reached in forty-seven hours and the egg hatches in 192 hours. The eggs are meroblastic. Dr. Dean gives an interesting comparative table of the gastrulation of the allied genera of Lepidosteus, Acipenser, and a Teleostean fish. The paper is illustrated by several plates and many figures, and is a valuable addition to our knowledge of the life-history of this, as Dr. Dean terms it, most teleostean ganoid. 2. On Kynotus Cingulatus, by W. B. Benham., D.Sc. Lond. This animal is a new species of worm which has been obtained at Imerina in Madagascar. It is of considerable size, being about nine inches in length, but relatively thin, and is characterised by an extraordinary number of deep secondary annuli, so that from a superficial examination it is impossible to tell which are annuli and which are segments. There appears to be no prostomium. The clitellum is of extraordinary length. There are four pairs of generative pores and a pair of very large "claspers," which present details of structure that Dr. Benham describes at length. 3. Notes on the Ciliation of the Ectoderm of the Amphibian Embryo, by Richard Assheton, M.B., who, as the result of his observations, has been led to suppose that cilia may be with great ease acquired by an organism. The last article is a continuation by Julia B. Platt of her investigations on Ontogenetic Differentiations of the Ectoderm in Necturus, the present section embracing the development of the peripheral nervous system, a very creditable piece of work, but too technical to be abstracted.

The *Sanitary Record.* Vol. XVII. No. 321. Price 3*d.*—In addition to some valuable articles in this volume is

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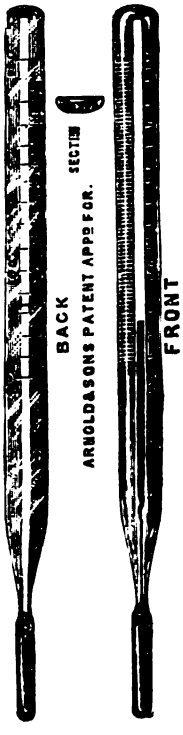
a most amusing and not altogether uninstructive paper by Mr. Percy Boulnois on Curious Answers at Sanitary Examinations. We have only space for a few examples, but the whole paper is well worth reading. The definition of a "Common Lodging-house" has puzzled a good many candidates, but we had not previously heard it defined as "a house used by strangers promiscuously for purposes of habitation." Another candidate apparently showed some knowledge of the aërial spread of small-pox when he wrote, "Small-pox is very 'catchy'; I've known cases spread over half-a-mile." A candidate who was questioned as to what precautions he would take during a severe epidemic of small-pox is said to have replied, "I should immediately get an order from the sheriff to seize and destroy the medical officer of health." The following example may be familiar to some of our readers. A death-rate was defined as "a rate which was levied on the living to support the cemeteries."

New Inventions.

IMPROVED CLINICAL THERMOMETER.

OF the making of thermometers there seems to be no end, and it is, perhaps, as well that this is so, for it is an important instrument both in medical and surgical practice.



The special improvement in the thermometer here figured is that all the numbers and graduations are distinctly marked on the back, which presents a flattened surface, thereby rendering the readings more easily and clearly defined, the column of mercury not being in any way obscured or shadowed by the figures and divisions, as is the case in all thermometers where the divisions are marked on the front of the instrument. This is an advantage which will be readily appreciated by the profession in general. Again, both the instrument and the case in which it is placed, having a perfectly flattened surface, it is impossible for either to roll off a table with the consequent possibility of a breakage. These thermometers certainly show a marked improvement over some of the instruments now on the market, and are manufactured by the well-known firm of Messrs. Arnold and Sons of West Smithfield, E.C., from whom they can be obtained.

THE "SPARE HAND."

THE "spare hand" is a very convenient pattern of funnel-holder, consisting of a ring about an inch wide tapering to the usual angle of a funnel and supported on three stout wires rising perpendicularly from a ring-shaped base or foot. This foot is sufficiently heavy to ensure stability and is made of flat bar-iron about ¼ in. wide bent hoopwise into three-quarters of a circle so that it stands on its edges. The funnel is made of ebonite; it is of the usual shape and is not attached permanently to the stand, but fits comfortably into the conical tin-plate ring at the top. The "hands" are of various heights, from 17 in. to 8½ in., the corresponding internal diameters of the annular base being from 7½ in. to 4½ in. In this way a funnel may be conveniently supported over any ordinary bottle, basin, glass, or other receptacle either for the purpose of bottling or filtering liquids or for transferring powders, berries, or small crystals to narrow-necked vessels. The appliance is the contrivance of Mr. A. Haslewood, M.R.C.S. Eng., of Buxton, who originally designed it for dispensing purposes, but it is obviously applicable to a multitude of domestic and trade operations. The London agents are Messrs. Burgoyne, Burbidges and Co., 16, Coleman-street, E.C.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

ELECTION OF PRESIDENT.

AN extraordinary meeting of the Comitia was held on March 30th, being the day following Palm Sunday. In the absence of the President, Sir JOHN RUSSELL REYNOLDS, Sir WILLIAM BROADBENT, as Senior Censor, was in the chair and explained that the President had asked him to express his extreme regret that, owing to indisposition, he was unable to be present, but Sir William Broadbent added that the College would be glad to hear that Sir J. Russell Reynolds was progressing favourably, and had that meeting been held a week or so later in all probability he would have been able to be present.

The Registrar, Dr. LIVEING, then read the President's address. Sir RUSSELL REYNOLDS passed in review the principal events which had happened in the College during the past year, making special mention of the medals and scholarships which had been granted and the various gifts and acquisitions which had been acquired by the College, including Dr. Weber's additional gift of £500 to endow the necessary expenses connected with the Weber Prize. The financial affairs of the College were stated to be satisfactory. The proposed formation of a Teaching University of London was also mentioned, together with a summary of the steps which had been taken to attain that object, and it was hoped that a Bill would be introduced into the Houses of Parliament directly after Easter so that the views of the Legislature might be obtained. Among other important matters dealt with in the address was the petition presented in favour of admitting women to the College examinations. Sir J. Russell Reynolds expressed a strong hope that the Fellows would continue to uphold the old traditions of the College and withhold their consent to such an innovation. In conclusion, he explained that his present state of health compelled him to request the Fellows not to vote for him as President again on that day. He had suffered three times from influenza and the depressing effects of that malady were still upon him.

Dr. POLLOCK proposed a resolution expressing the thanks of the College to the retiring President for his address and hoping that he might shortly completely recover his usual health and strength. This was seconded by Dr. PYE-SMITH and carried with acclamation.

Sir WILLIAM BROADBENT in a few remarks drew attention to the lectures which had been delivered before the College during the past year and announced that the University of Edinburgh were about to confer on Sir J. Russell Reynolds the degree of LL.D.

The election of President was then proceeded with in the usual manner. The first ballot resulted as follows:—Dr. Wilks, 76 votes; Sir William Broadbent, 20; Dr. Dickinson, 9; Dr. Ogle, 9; Sir William Roberts, 7; Dr. Church, 6; Dr. Pollock, 6; Sir William Priestley, 3; Dr. Douglas Powell, Sir Dyce Duckworth, and Dr. Clifford Allbutt, 1 vote each. One voting paper was blank.

As Dr. Wilks did not obtain the necessary majority of two-thirds of the votes, a second ballot was taken between him and Sir William Broadbent, when the numbers were announced to be—Dr. Wilks, 114; Sir William Broadbent, 22. Dr. Wilks was therefore declared as having been elected President, the oath being administered by the Senior Censor.

Dr. WILKS, in a few well-chosen words, thanked the College for the honour they had done him in electing him as President. He had never sought for such a prize, but now that he had won it, although he had already exceeded the years allotted to man, he should devote whatever force remained to him to the service of the College.

The College seal was then set to a lease to the Surveyors' Institution of certain rooms at the Examination Hall.

The following communications addressed to the College were received: (1) from the Royal College of Surgeons of England reporting certain proceedings of the Council on Feb. 13th and March 12th; (2) from the Mayor of Dôle, France; and (3) from Sir James Dick, K.C.B., R.N.

The President then dissolved the Comitia.

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THE LANCET.

LONDON: SATURDAY, APRIL 4, 1896.

THE Bill introduced by the Lord Chancellor on March 20th, and read a second time, is a measure which proposes to check the liberty of publication of evidence of indecent matter given in the High Court. As the law at present stands there are two methods by which the publication of indecent matter can be checked, but the limit of action in either case is so restricted that it cannot be doubted that additional powers are desirable. In the first place the court may sit *in camerâ*, but according to the Lord Chancellor this only obtains in the following cases: (1) in lunacy inquiries; (2) in Chancery investigations in the matter of its wards; (3) where the object of the action might be absolutely destroyed by hearing it in public; and (4) in hearing at petty sessions. In the former two the general rule is not broken "because in the ordinary sense the administration of justice is not concerned." It will be seen that the safeguard under consideration is very partially applied, and, moreover, the nature of the exceptions narrated can obviously only touch the fringe of the alleged evil. The other check on the publication of indecent matter divulged in the courts is the Press Act, but this is rarely put in force in the cases under consideration on account of the general terms as to who should prosecute and the expense incidental to litigation. The Bill brought in by the Lord Chancellor proposes to impose on the judges of the High Court the responsibility of ordering what evidence shall not be published, and to inflict punishment on offenders by making them guilty of contempt of court. It will be remembered that a few years since a similar Bill was introduced, but in this those who contravened the order were to be liable to a criminal indictment for misdemeanour. We are not surprised to learn that the Lord Chief Justice, the Master of the Rolls, and the majority of the judges are strongly opposed to adding to offences already within the category of contempt of court. It is impossible not to recognise the extent and weight of this opinion. However, this is a detail and can be remedied in committee.

It is astonishing to find such a wide divergence in the views held on the one hand by the Lord Chancellor, Lord JAMES, and the Marquess of SALISBURY, and on the other by the Lord Chief Justice, Lord HERSCHELL, and Lord ROSEBERY as to the advisability of curtailing the freedom of publication by the press of the evidence given before our tribunals. We feel constrained to subscribe to the arguments of the former speakers that further means are wanting to shield public morality. Can anyone jealous of the purity of English homes contend for one moment that matters obscene and indecent, however guardedly reported, are not almost daily recorded in the newspapers? The very care exercised by the most reputable journals is at once a stimulus to the imagination of the prurient. Youth is the age in which idealisation is exhibited in fulsome glow and strength and in which receptivity is most acute. Given the keynotes of stories abounding with the history of the animal passions and those whom it is specially desired to preserve from contamination will not only readily fill in the blanks but add fancied embellishments to tales already inimical to the maintenance and growth of virtue.

The Bill as it stands confines the power of censorship to the judges of the High Court, and there seems to be almost a unanimity of legal opinion that it would be dangerous to extend it to petty sessional magistrates. The scope of its influence is thus greatly minimised, so much so in fact that it is questionable if the possible evil of abuse of the power would not be more than counterbalanced by the probable gain from its wider distribution.

Thus far we have sketched the general terms of the Bill and the arguments which have been advanced by the Lords for and against its acceptance. There is, however, one question of paramount importance to our profession and that is that no exception is made in favour of the medical journals which are not addressed to the public. To prohibit the publication of evidence which has a direct scientific application in organs the primary and special function of which it is to digest such evidence and furnish products that work for the physical and moral well-being of the community seems to us a short-sighted policy. It will be granted that no section of the press is more careful to exclude obnoxious matter from its reports. Moreover, where it is necessary to discuss questions relating to delicate subjects it is done in highly technical terms so that perusal of the text by the general public is little likely to lead to information harmful to public morals. It is obvious that the medical press must be exempted from the repressive measure we are generally advocating, and some means consequently will have to be devised to decide what are and what are not purely medical journals. The Legislature could not undertake this discrimination, nor could it be left to the discretionary power of the judges. We would suggest that the selection be left to the General Medical Council, and that that body should be asked to supply a schedule containing the names of those publications which it considers to to be strictly "medical journals." The General Medical Council should also be empowered to add to such list the names of new medical publications should occasion arise.

THE Registrar-General's Annual Summary, giving particulars of the deaths registered in London and other large English towns in the year 1895, has just been published. Although issued in the form of a mere pamphlet, this return, as will presently appear, is really of considerable importance. The earlier annual summaries, compiled by Dr. FARR some twenty-five years since, were little more than aggregations of the facts for the respective years which had been already published in the weekly bills of mortality. Since that date the successive annual issues have been gradually improved and the area and population dealt with have been extended. For the reason that these summaries are condensed from the weekly returns

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of the local Registrars they can be published much earlier in the year than the more elaborate annual reports of the Registrar-General can possibly be completed, because the tabular matter of the latter is classified from the certified copies of the death registers by skilled experts in the statistical branch at Somerset House. For this very reason, however, the latter series of reports are much more trustworthy in point of detail than the former. Nevertheless, for the practical purposes for which they are intended the data contained in the annual summary are perhaps sufficiently precise to furnish useful provisional rates of mortality.

With the improvements and additions which it has received quite recently, the Registrar-General's annual summary will probably be regarded by sanitarians as the most useful of all the statistical publications of Somerset House. It now furnishes, with commendable promptness, carefully tabulated returns of births, deaths, and causes of death, with corresponding birth- and death-rates for each of the 100 chief towns of England and Wales, which, taken together, contain about one-third of the total population of the country. The rates of mortality for these towns, which constitute so many separate sanitary areas, are available for comparison, and having been duly corrected at the central office are almost indispensable to the medical advisers of the local sanitary authorities, both in London and in the provinces, for the preparation of their annual reports. The average mortality last year n the thirty-three great towns of England and Wales was equal to a rate of 20·7 per 1000 of the population, and was, therefore, higher than the extremely low rate of 1894 by 1·1 per 1000. Among these towns the rate ranged from the lowest, 14·5 in Croydon and 19·9 in London to 25·7 in Salford and 28·8 in Liverpool. These are the uncorrected rates; but, as is usefully shown in the summary, if the rates be corrected for age and sex differences of population they will be considerably modified, especially in the larger manufacturing towns, where correction invariably means increase in the mortality. Instead of expressing corrected local mortality in the ordinary way—i.e., as so many deaths in a thousand of population—it is easy by the help of a table here published to express it as follows:—The same number of lives that in the year 1895 gave 1000 deaths in England and Wales, gave 1193 in the thirty-three great towns, and whilst it gave only 806 deaths in Croydon, it gave as many as 1130 in London, 1541 in Salford, and 1707 in Liverpool. Infantile mortality in the great towns corresponded to a rate of 182 per 1000 births, and was higher than that recorded in these towns during any year of the preceding decade. The mortality from diphtheria and diarrhœa showed an increase last year, whilst that from small-pox, measles, scarlet fever, whooping-cough, and fever was below the average. In the metropolis the deaths registered last year were below the average, they corresponded to a rate of 19·8 per 1000, which is reduced to 19·4 per 1000 by excluding the deaths in public institutions of persons known to have been strangers. Of the total deaths in London last year nearly 27 per cent. took place in public institutions. About one in every seven deaths occurred in a workhouse or workhouse infirmary, one in every fifty-three in a metropolitan asylum hospital, one in every eleven in some other hospital, and one in every fifty in a public lunatic or imbecile asylum. Infantile mortality in London, as in the other great towns, was above the average: it was equal to 166 per 1000 births. The rate was lowest in the northern group of sanitary areas and highest in the central group. The net gain in life saved in London during 1895 is represented by 1263 lives; in other words, if the mean death-rate prevailing in the previous decade had continued throughout 1895 not fewer than 1263 lives would have been sacrificed in addition to those actually lost by death.

On the other hand, however, excessive mortality occurred last year from diseases which for many previous years had shown exceptional fatality. There was, for example, an excess under the heads of influenza, diphtheria, and cancer, as compared with the corrected average. Influenza caused not fewer than 2156 deaths in the metropolis in the year 1895, of which as many as 1570 occurred between the middle of February and the end of March. In 12 of the 43 metropolitan sanitary areas the deaths from influenza exceeded the number recorded in any year of the preceding five. Compared with the average in those years, the excess in 1895 was least in the eastern group of areas and greatest, amounting to 65 per cent., in the southern group. Amongst other common zymotic diseases measles and diarrhœa were unusually fatal last year in London, whilst small-pox, scarlet fever, and whooping-cough were less fatal than is usual. The incidence of mortality in the various sanitary areas is seriously affected by the deaths in hospitals and other public institutions. With the object of affording means of comparison between the sanitary districts or groups of districts a table has been inserted in the annual summaries since 1885 in which the deaths at institutions are distributed to the sanitary areas from which the deceased had originally been admitted. A second table is also added in which the deaths from various causes in groups of sanitary districts are reduced to rates per 1000 of the population, and these results are further placed in comparison with the average rates in the previous decade. According to the 1895 tables small-pox does not appear to have been notably prevalent in any group of sanitary districts. Measles was exceptionally fatal in the central and eastern groups, and scarlet fever, diphtheria, and diarrhœa in the eastern group. The corrected death-rate from phthisis, which was given in these summaries for the first time in 1894, still seems to affect exceptionally the central group of districts. In the sixty-seven English towns of secondary importance the death-rate in 1895 was equal to 18·6 per 1000, exceeding by 2·6 the unusually low rate of the previous year; the proportions ranged from 10·1 in Hornsey to 25·7 in Merthyr Tydfil and 26·0 in Longton. Infant mortality averaged 176 in these towns, and ranged from 121 in Hastings to 240 in Longton. The mortality from the principal zymotic diseases averaged a rate of 2·40 per 1000, and ranged from 0·62 in Bath to 4·79 in Warrington and 5·85 in Barnsley. From returns submitted by the authorities of thirty-nine of the principal foreign and colonial cities, with an aggregate population of 23,500,000, it appears that the mean death-rate last year was equal to 23·6 per 1000 of the population. As had been the case in previous years, the rate last year varied

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enormously in those cities; for whilst it did not exceed 13 per 1000 in Sydney and 14 in Brisbane, it was as high as 36 in Moscow, 38 in Madras, and 48 in Cairo.

THE choice of a man to fill the post which qualifies its holder for official recognition as the head of our profession in this country can never be without great interest to us all, but the result of the recent election to the Presidential chair of the Royal College of Physicians of London had been so universally forecast that the excitement to be derived from suspense or from rival appraisement of different claims did not enhance that interest. From the moment it was known to be Sir J. RUSSELL REYNOLDS'S intention to request his colleagues not to re-elect him to the chair which his dignity and courtesy have so well graced for the past two years, the eyes of the profession were turned upon the distinguished physician who was marked out by the place that he occupied in the poll of 1893 as an urgent claimant for the reversion of the honours. Sir J. RUSSELL REYNOLDS obtained the presidency in 1893 by the narrow majority of three votes over Dr. SAMUEL WILKS—the opinion of the profession being very clearly registered that between them there was not much to choose—and when the regretted information that the former would retire became known to the profession it was widely felt that upon the latter the new choice would fall. The claims of Dr. WILKS to such recognition from his fellow physicians are, indeed, of high order. Through a long and honourable career he has invariably upheld the highest and purest standard of professional morality and ethics; he is esteemed far beyond the great medical school with which his name is linked; his contributions to pathological science are recognised all the world over; while his connexion with the University of London may be of no small advantage to the College in any further proceedings for the reconstitution of that University. On many grounds Dr. WILKS has well earned the right to the "blue riband" of the profession, while his election will be well received by the profession at large for it is men of his stamp whom it is a delight to honour. We wrote of Dr. WILKS in almost these identical words after the result of the election of 1893 had been announced, and in repeating them we beg to congratulate him upon the official stamp that was set last Monday upon the sentiments therein contained. We have also to offer a few words of cordial adieu to the retiring President, for whose tenure of office no one has anything but words of warm praise. The deliberations over which he has presided have taken from him a quiet and business-like tone that has greatly facilitated official labour; he has not spared himself, but for others the wheels have always run smoothly. We note with great pleasure that Sir WILLIAM BROADBENT, the Senior Censor of the College, was asked to state to the last Comitia that Sir J. RUSSELL REYNOLDS'S state of health has much improved and was still improving. The profession knows well what the terrible prostration of recurrent attacks of influenza means and will join us in heartly congratulating Sir J. RUSSELL REYNOLDS on his recovery therefrom and in wishing for him many full years wherein to devote the freedom from official toils that he has felt it right to seek to the welfare of the sick and the advancement of medical knowledge.

Annotations.

"Ne quid nimis."

KITSON v. PLAYFAIR.

THE trial of the above cause, before Mr. Justice Hawkins in the Queen's Bench Division of the High Court, was brought to a conclusion on Friday, March 27th, when the special jury returned a verdict for the plaintiff, the damages being assessed at £12,000. Leave has been given to appeal, and consequently we are precluded from discussing at the present juncture the merits of this remarkable case. We will, therefore, content ourselves with a short historical *résumé* of the facts. Mrs. Kitson—one of the plaintiffs—after some years' residence in Australia came to this country, her husband staying abroad. Some sixteen months subsequently to her arrival in England she had occasion to consult Dr. R. M. Williams for metrorrhagia. With Mrs. Kitson's consent Dr. Playfair was called in. A month later, as the hæmorrhage had not ceased, it was decided to make a further examination under an anæsthetic. On this occasion a substance was removed from the uterus which, in Dr. Playfair's opinion, was the result of a recent pregnancy. He informed Mrs. Kitson of the conclusion he had formed. It may be remarked parenthetically that Mrs. Playfair was a sister of Mrs. Kitson's husband and also of Sir James Kitson. The latter gentleman, in conjunction with another brother, had up to this period made Mrs. Kitson a yearly allowance. The gist of a lengthened correspondence between Dr. Playfair and Mrs. Kitson had regard to the termination of social and family relations between their respective families unless Mrs. Kitson could give Dr. Playfair a satisfactory explanation of her recent condition. In the end Dr. Playfair confided his conclusions to Mrs. Playfair and also to Sir J. Kitson. Mrs. Kitson and her husband brought an action for slander against Dr. and Mrs. Playfair. The pleas put on the record by the defendants were two: (1) that they had not published the slander; and (2) that the communication made to Sir J. Kitson was privileged. No plea of justification was entered and consequently the judge would not allow the merits of the case as bearing on the duration of the pregnancy to be gone into, or, in other words, he ruled that it was not competent for Dr. Playfair to attempt to prove the truth of the conclusions he had formed. From a medical point of view the case is one of surpassing interest, whether we consider its bearing on the question of retained products of conception or its graver reference to professional etiquette. Concerning this latter phase we take occasion to recognise the generally gratifying tone of the organs of public opinion in their comments on the discharge by the great body of the medical profession of the delicate duties incidental to its vocation. The agreed terms upon which the appeal should be made to the higher court were not disclosed by counsel. It is open to contend (1) that the communication made by Dr. Playfair to Sir J. Kitson was privileged; (2) that there was misdirection by the judge who tried the case; (3) that the verdict was against the weight of evidence; and (4) that the damages were excessive. There is no need, however, to anticipate the course of procedure. When the litigation has terminated it will be our duty to offer a general criticism of the case in so far as it affects the interests of our profession and of the public.

THE ILL-REGULATED SALE OF POISONS.

IN THE LANCET of March 28th we directed attention to the case of a child who died suddenly from the effects of a

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home-made concoction of laudanum administered as a cough mixture. Our excuse for again alluding to it is not that such accidents — if so they should be described — are very uncommon. Most practitioners have unfortunately had experience of them. To us the circumstances of the case referred to are suggestive of other defects than mere parental indiscretion. The very fact that an opiate should be readily obtainable by any casual purchaser is an anomaly which assuredly cannot tend to strengthen belief in the adequacy of the Sale of Poisons Act. It is true that laudanum is saleable only under certain restrictions, and in particular that it must be labeled "poison." But, on the other hand, there is practically no limitation as to the amount that may be purchased. The unaided discretion of a trained dispenser and the poison label sum up the total of restrictions in the case of opiates. A number of drugs little, if at all, less potent are as easily obtainable. Many more, the strong acids and alkalis among them, are freely obtainable without mark or sign, even without the guarantee of a duly qualified salesman. It has been contended that in the case of these latter some freedom should be permitted when the article sold is required for ordinary use in the household, in the arts, or in agriculture, and there is some force in the contention. Yet when we examine the matter more closely the objection does not seem to be insuperable. There need be nothing to prevent a purchaser from obtaining whatever drugs of this class he requires under suitable precautions at the nearest druggist's, or in rural districts from the holder of a special licence. Undoubtedly some skill will be required in the adaptation of practice to theory before we can hope to come at a final settlement of this question, and perhaps an absolute settlement may not be practicable. Nevertheless, it is clear, in the light of such unfortunate occurrences as that we have mentioned, that much more strenuous efforts are called for than have yet been made to adapt the machinery of the law to its professed purpose of regulating the sale of poisons. Any legislative effort, moreover, must, of course, take account as heretofore, but with even more particular care, not only of single drugs, but of the same in their combinations. The effect of a preparation does not depend on any pharmacopœial expression. An irritant or narcotic nostrum, however tastefully prepared, may be as truly a poison as any accredited compound of strychnia or aconite, and this is a point which ought to be more clearly recognised in practice than it is.

THE LABOUR COLONY SYSTEM.

THE last volume of the *Proceedings of the Philosophical Society of Glasgow* contains a carefully reasoned and suggestive article by Professor R. Patrick Wright pleading for the institution of "farm colonies" as a means of solving the difficult problems connected with the unemployed. Under the Scotch Poor Law it is illegal for relief from the rates to be given to able-bodied persons, and even though parochial authorities may interpret the statute with some leniency it is unquestionable that no organisation exists for the assistance even of the industrious poor who may be, through no fault of their own, suddenly thrown out of work and brought to the verge of starvation. Professor Wright argues that the labour colony system can deal humanely and effectually, not only with these cases, but also with discharged prisoners, habitual idlers, and confirmed vagrants. In Germany there are twenty-six such colonies, and in England the Salvation Army has one at Hadleigh in Essex. Turning to the financial side of the question, he mentions that during seventy-four days in the winter of 1892–93 the Glasgow magistrates provided work for the unemployed in stone-breaking, trenching, and digging, subsistence wages only being paid. The whole cost incurred was £3103, and the value of the work done was estimated at £1402, so that the municipality incurred a loss of £1701. As the average number of men at work was 467 the outlay per man per annum, calculated on this deficit, was £17 19*s.*, or one-third more than the average cost per head on the farm colonies, without any of their incentives to industry and thrift. It is satisfactory to learn that a philanthropic association in Glasgow may, perhaps, put some of these doctrines to the test of actual practice during the present year.

ROENTGEN RAYS AT THE CLINICAL SOCIETY OF LONDON.

PROFESSOR SILVANUS THOMPSON gave a demonstration before a special meeting of the Clinical Society of London on March 30th of the method of production and the practical use of the Roentgen Rays. He exhibited the gradual changes which the character of the electrical current undergoes as the air is exhausted within a tube and demonstrated the differences between the kathode and the "x" rays. He stated that in producing the photographs he had found the ordinary dry plates to be quite as good as the extra rapid ones, and he also dwelt on the advantages of a screen coated with platinocyanide of potassium when using the cryptoscope. He added that he believed a great development in the photographs would shortly take place in the direction of the recognition of the relative depth from the surface of the various shadows in the picture by taking photographs of objects at two different angles and then mounting them in a binocular stereoscopic apparatus. The demonstration was attended by nearly 400 of the members, and the hearty applause at its close showed how keen had been their interest and how great their appreciation of the efforts of the lecturer.

TUBERCLE AFFECTING THE EYE.

IN the *Archiv für Augenheilkunde*, Band xxxi., Heft 4, p. 359, Dr. Rudolf Denig publishes the results of investigations which he has made in order to ascertain the frequency of primary tubercle of the eye and the number of cases in which it occurs in patients suffering from tuberculous affections of other organs. In order to carry out his purpose Dr. Denig went carefully through the literature of recorded cases and also examined 200 patients suffering from tuberculosis of the lungs, bones, or lymph glands. His results are as follows. Out of 72 cases of tubercle of the conjunctiva, in 52 no other deposits of tubercle could be detected in any organs of the body; in 14 the signs of further disease were indefinite; in 7 only of the cases was there undoubted tuberculous disease in other organs; and in 3 there were evidences of old tuberculous trouble. Out of 86 cases of tubercle of the iris and ciliary body, in 67 no further deposits could be found at the time of examination; 27 of these, however, were anæmic, emaciated patients in whom tuberculous trouble was suspected but could not be definitely detected; the other 40 were perfectly healthy except for the eye trouble; in 4 cases there were signs of old disease. Out of 31 cases of tubercle of the choroid, in 16 no other evidences of tuberculous trouble could be established. Of the 200 patients suffering from tuberculosis whom Dr. Denig himself examined, in only 5 did he find the disease affecting the eye. He therefore came to the conclusion that as local tuberculous disease of the lungs and bones are fully recognised, so we must accept local tuberculous disease of the eye in the sense of that organ being primarily affected. Another form of tubercle of the eye, which he maintains is much rarer, is a metastatic deposit from some other deposit, either in the lungs or elsewhere.

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With regard to prognosis, he bases this upon the form which presents itself. If the disease is primarily in the eye the prognosis is generally favourable, but care must be taken to distinguish between the appearance of granulations and the irregular form which has been described by Leber as "abgeschwächte Tuberkulose." The existence of granulations points to a metastatic deposit and the prognosis is then unfavourable.

THE REMUNERATION OF POOR-LAW MEDICAL OFFICERS.

"A COUNTRY PARISH DOCTOR," whose letter was published in our issue of last week, has our entire sympathy in the disadvantageous position in which he finds himself by reason of his inadequate remuneration, his age in relation to superannuation, and the questionable return which is to be made to him as a result of his further reduced salary should the Poor-law Officers' Superannuation Bill become law. We have long felt that the medical profession is degraded by the paltry pittances doled out to its members who have taken Poor-law appointments in many districts. A superannuation allowance in prospect is not a great inducement to a medical man if the salary on which it is to be based, and that too after certain deductions have been made annually, is of the miserable amount which pertains to only too many such appointments. It will doubtless always happen, moreover, that a measure designed to benefit the many, as in the case of this Bill, will work harshly as regards a few, and while there are certain to be others in the position of our correspondent it is a subject for serious consideration whether the present Bill should be imperilled by striving to amend its provisions so as to meet individual needs. One point, however, we should like to see altered—namely, the age at which superannuation may be claimed. We certainly think that officers should be entitled to retire on a pension at the age of sixty years if they be so minded. And this would, we imagine, remove one cause of our correspondent's complaint.

THE PLAGUE IN HONG-KONG IN 1894: A STORY OF CHINESE ANTIPATHIES.

THE annual report of Sir William Robinson, the governor of Hong-Kong, for 1894 to the Colonial Office is one of much interest, by reason particularly of its references to the plague which that year attacked the settlement. It was early in April that the plague was heard of in Hong-Kong as raging on the mainland near Canton, and not for some little time did the island become affected. But in the middle of May Hong-Kong was itself invaded by the dread disease, and that, too, at a season when, by reason of drought and a rising temperature, the malady was not long in severely attacking the native population. The cases gradually rose from 20 to 30 per diem, and then to from 60 to 70 daily, and even to upwards of 90, and on one day to 109, inclusive of dead bodies picked up in the streets. The report speaks of the discovery of the plague bacillus and directs attention to the strange and unfortunate antipathies which the natives manifested towards the European medical staff in their efforts to curtail the spread of the epidemic. The hospital hulk *Hygeia* was moored near the shore, and every care was taken to make it replete with conveniences and staff for the proper treatment of the sick. Sir William Robinson says, however, that—

"From the first the Chinese strongly objected to the removal of their sick to hospitals under European management. Educated to insanitary habits, and accustomed from infancy to herd together, they were unable to grasp the necessity of segregation; they were quite content to die like sheep, spreading disease around them, so long as they were left undisturbed, and they preferred to see their sick friends and relations suffering unspeakable miseries rather than be parties to their removal to European hospitals, where every comfort was provided. These feelings, no doubt the result of blind prejudice and superstition, naturally prompted concealment, which eventually necessitated the organisation of search parties and a system of house-to-house visitation."

Harrowing tales were told of the devices to which the natives resorted to try to conceal their sick from the search parties sent out day by day. This action on the part of the natives made any speedy curtailment of the infectious malady the more difficult, and, indeed, in great degree rendered the efforts of the cleansing and disinfecting volunteer staff nugatory. The epidemic caused 2550 deaths before it ceased in early September, and the necessity of burying the dead in common graves was a great shock to the feelings of the people, whose chief form of religion consists in the rites and ceremonies of burial and in the annual worship of their dead. The feelings thus roused led the people to open rebellion, and concessions, such as the presence of Chinese medical attendants in the European hospital and the removal of those patients who were fit for the journey to Canton, had to be granted. The demand was made that plague-stricken people should be allowed to leave the colony of their own free will. This preposterous demand being refused the people left the settlement to the number of 100,000 of all ranks. Of the patients only 18 per cent. of those of Eastern extraction recovered, whilst 82 per cent. of the cases among European residents ended in recovery, a result sufficiently and indeed strikingly indicative of the difference of treatment accepted by the two classes. Trade was deplorably interfered with, and just as hopes of better things were anticipated on the subsidence of the plague the bursting out of the war storm once again rendered matters terribly unsettled. But taking the year throughout the trade of the colony showed a very creditable aggregate so far as the mainland ports were concerned.

EPILEPTIC MELANCHOLIA.

DR. J. M. FINKER, assistant superintendent of Rockwood Hospital, Kingston, Ontario, reports an interesting case of epileptic melancholia[1] in which after death foreign bodies were found in the heart and lung. The patient was a labourer's wife aged thirty-two. She had had several attacks of insanity for four years previous to her admission to the asylum. Her mother and grandmother were insane; the latter was also subject to epileptic seizures. The patient had made several attempts on her own life, on one of these occasions opening two large veins in her arm with a piece of broken bottle and a pair of scissors. When she was under the suicidal impulse she used to say that "she would be better out of this world, that no one cared for her." At times she was fairly well and occupied herself in sewing or knitting. Whilst in the asylum her whole history was one of suicidal attempts which were shown by the scars on her arms and forearms. Trephining was performed, a portion of the brain convolution being removed corresponding to the nervous supply of part of the local origin of convulsions. She made an excellent recovery from the operation. She was greatly relieved of her distressing mental symptoms, but pulmonary tuberculosis supervened and ran a rapid and fatal course. At the necropsy the heart was found to weigh nine ounces, and on examining the left auricle something sharp was felt near its appendix, which proved to be a needle. On exposing this it was found embedded in the wall of the left ventricle, close to the anterior interventricular groove. The needle pointed upwards, leaving the left ventricular wall just anterior to the aortic valve. Then it penetrated the

[1] Canadian Practitioner, February, 1896.

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wall of the left auricle at the margin of the appendix auriculæ. The pointed portion of the needle then extended across the opening into the appendix. The point was just touching the opposite wall of the auricle, where a little papilla of vegetations was set up by the irritation of the point of the needle. In the ventricle the needle penetrated the heart muscle immediately behind the coronary artery on its way to the anterior interventricular groove. The needle was firmly embedded in the tissue, so that it could not be pulled out without using considerable force. It was one and five-eighths of an inch long. It was black in colour and its surface quite smooth. The left pleura was firmly adherent throughout. The superior lobe of the left lung was a mass of tuberculous nodules and some small cavities. The inferior lobe presented another feature of interest in the presence of a broken knitting needle. There was an old cicatrix in the skin to the left margin of the sternum. The needle, pointing downwards, entered the lung at the anterior border of the inferior lobe about two inches from the lower margin, passing downwards, backwards, and slightly outwards, reaching the outer surface of the lung at a point about four inches from its posterior border and two inches above the circumference of the base. The needle was four and five-eighths of an inch long, the broken end being slightly bent and the other end pointed and sharp. The needle was completely encysted. Neither point emerged before the manipulation of the lung in its removal. It was quite black and was not in any way corroded.

THE QUESTION OF MEDICAL DEFENCE.

THE points raised in Dr. Drage's letter on our article[1] on the report of the Medical Defence Union are well worthy of the attention of the profession. All the same, we entirely dissent from his conclusions. We have consistently discouraged the multiplicity of societies having the same object, and so have advocated the union of the two protection societies. But we fail to see that one good strong society for the one purpose of defence of members of the profession against unreasonable or malicious charges is too much for the work. It is very doubtful, indeed, whether the British Medical Association would add to its strength by attempting the work done now so well by the Medical Defence Union and its sister society. It certainly could not do the defence work better than it is done. And if this work came to be added to the work of the Association, already multifarious enough, the chances are it would be worse done. The disposition of one big body to absorb and appropriate the function of other bodies less than itself, but not less efficient, has many illustrations, and is not to be encouraged. Still more doubtful would be the policy of relieving the corporations from their ethical functions by one huge corporation representative of the whole profession. The bodies that give diplomas cannot be relieved of the disciplinary duties attaching to their authority. The association of such duties with that of examining and admitting to the profession is as old as the oldest qualifying body, and no conceivable Parliament is likely to alter the fact. We entirely agree with Dr. Drage that such bodies should recognise the corporate rights of their members without delay, and that they would strengthen themselves by doing so. But if the British Medical Association is not likely to have handed over to it as a voluntary association the ethical powers of the corporations it has enormous powers as a voluntary association. And it is only fair to say that it has no more used its full powers as a voluntary association than the corporations have used their full legal powers to repress the evils of the profession. There can be no doubt that if ten years ago the British Medical Association had resolved that no one should enjoy its membership who took office in a medical aid association, or any other association which was proved to employ touters and to sweat its medical officers, it would have done much to prevent the evils which are now so seriously degrading the profession? The Association has powers as a voluntary association which it could not have acting under the sanction of Parliament, and it will best serve the profession by retaining its freedom and using those powers well.

[1] THE LANCET, March 21st, 1896, p. 794.

THE VACANCY ON THE SENATE OF THE UNIVERSITY OF LONDON.

SIR JOSEPH LISTER, B.A., M.B., has consented to be put in nomination as a candidate to fill the vacancy on the Senate of the University of London caused by the resignation of Mr. Hutton. Mr. Walter Rivington, B.A., M.B., M.S., has also been invited to become a candidate for the vacant seat. The vacancy is filled by the Crown from a list of three persons submitted by Convocation, and on the present occasion the choice falls on a graduate in medicine or science.

THE PORTSMOUTH CORONER ON DANGEROUS LAMPS.

AT an inquest at Portsmouth on March 23rd Mr. T. A. Bramsdon, the borough coroner, had something to say about cheap lamps. A woman aged fifty had been left in bed with a lamp which two years ago had been bought for one penny. She was afterwards found terribly burned—indeed, in flames—but gave no intelligible explanation of the occurrence. Mr. Bramsdon in his summing up said such lamps were as dangerous as it was possible to conceive and could be termed nothing else but death-traps. Cheap lamps were deplorable, awful things, and their seriousness could hardly be realised. He referred to the continual reports of deaths occurring from the use of such articles all over England and expressed his opinion that the sooner legislation put a stop to their use the better it would be.

THE LATE GIUSEPPE FIORELLI.

MEDICINE owes a debt of gratitude to the distinguished archæologist above named, for he it was who not only enriched the treasure-trove of ancient surgical instruments, but also preserved for the comparative anatomist a vast number of skeletons eighteen centuries old which otherwise would have been lost to history and science. These services he rendered in his capacity of superintendent of the excavations at Pompeii. For twelve years he was the life and soul of the operations by which that buried city has been restored to something like its former self in outline and in detail. Before 1860, the year in which the Bourbon Government was replaced in the Two Sicilies by that of the House of Savoy, excavation was conducted at Pompeii on unscientific lines, more attention being given to whatever objects of artistic or negotiable value could be unearthed than to the determination of the plan of the city, its buildings public and private, its occupations, its *vie intime*. Every visitor to the National Museum of Naples must have profited by the richly represented and beautifully arranged relics of Campanian life placed *en évidence* before him, and supplementing so fully and so vividly a walk through the silent streets and tenantless houses of the once animated "Rome-super-Mare"—the "gay and guilty Brighton of the first century." All that memorable experience was made possible for him between the years 1860 and 1872 by Fiorelli—an epoch in archæology which has been continued under the inspiration of its directing mind to the present day. During those twelve years some 600 skeletons and fragments of human bodies were excavated, all the individuals to whom these skeletons belonged having, with one exception, died in great agony. Suffocated by the dense

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showers of dust which descended from Vesuvius and which by the heavy rainfall that ensued became so much liquid mud, their bodies were covered by this last as by an envelope, which, on hardening, became "a closely fitting mould" stereotyping every feature of the dead. Gradually the soft parts disappeared while the bones remained within the mould; and so "when the hollows were come upon by the excavators the happy idea occurred to Professor Fiorelli to pour in some liquid plaster of Paris and allow it to harden." The mud, perfectly dry, was with the utmost care peeled from the plaster and in this way a perfect cast was obtained—in the language of Mr. Neville Rolfe, H.B.M. Consul at Naples, "a cast consisting of the bones of the deceased Roman citizen, clad no longer in flesh, but in plaster of Paris, which had assumed the exact shape, not only of his face and body, but of every fold of his clothes." A precious addition has thus been made to the resources of what may be called "historical osteology," and interesting comparisons have been instituted between the bony framework of the Italian as he existed eighteen centuries ago and the Italian of the present generation. These "confronti" strengthen the conclusion come to by Professor Mosso of Turin, who, having found a number of skeletons in a sub-Alpine cave and proved them by accessory evidence to have been those of Roman soldiers of the late Republic, compared them with the skeletons of Italian soldiers recently dead, and placed it beyond doubt that the difference between the two types of men was small and not to the advantage of the more ancient. So that Julius Cæsar's famous Tenth Legion, that could go everywhere and do anything, owed its success as much to consummate discipline and generalship as to any exceptional advantages of physical development. Professor Fiorelli died on Jan. 29th at Naples in his seventy-third year, but for the last decade of his life, with failing eyesight which latterly ended in total blindness, was content to rest on the laurels he had so honourably won.

THROMBOSIS IN CEREBRAL SINUSES.

IN the third volume of the *Edinburgh Hospital Reports* Dr. George A. Gibson and Dr. Purves Stewart report a case of somewhat unusual character and of more than usual interest. The patient was a young woman aged twenty-five years, who was admitted to hospital in a state of unconsciousness. She was said to have suffered from indigestion for a long time and from occipital headache for a fortnight. Four days before admission the headache became much more severe and she began to have attacks of vomiting. She became more and more dazed and stupid and finally unconscious. The family history revealed nothing of significance except that her father had died two years previously from "inflammation of the brain." The patient on admission was found to be well nourished and well developed. The temperature was 102° F. and the pulse and respiration were rapid. She lay on her back, with flushed face, occasionally grinding her teeth, and tossing her limbs in an aimless, restless, uneasy fashion. It was impossible to rouse her. The eyes were almost closed, the pupils semi-contracted but reacting to light, and the appearances of the optic discs and fundi were normal. There was no albumin in the urine, of which a specimen was obtained by means of the catheter. During the night there were recurrent convulsions characterised by extension of the arms and legs, clenching of the teeth, and distinct opisthotonos. The breathing during the fits became loud and stertorous, the face flushed, the pupils contracted, and the eyes directed downwards and to the left. There was no material change in the condition until about 10.30 the next morning, when the respiration suddenly stopped and the patient became deeply cyanosed. Bleeding and artificial respiration brought about distinct but only temporary improvement, but the artificial respiration had to be kept up, and the patient gradually sank and died about three and a half hours after the natural respiration had ceased. At the necropsy the inner surface of the dura mater was everywhere considerably injected and the superior longitudinal sinus and the lateral sinus were occupied by a mixed blood-clot, chiefly dark red in colour, with a slight admixture of scattered white flakes. The convolutions were flattened and the surface of the brain was dry and sticky. The arteries at the base were healthy and free from thrombi. No tubercles were described. There was no morbid condition of the cranial bones. On section the grey matter appeared fairly healthy and so did the white, but the puncta cruenta were unusually distinct. On exposing the lateral ventricles each choroid plexus was found to be occupied by a thrombus, which also occupied the veins of Galen and extended into the straight sinus. The basal ganglia also were found to be extensively altered, being to a great extent replaced by a tissue of dark brownish red colour and of soft and friable consistence. Subsequent microscopic examination showed this to be a result of hæmorrhagic infiltration, doubtless secondary to the thrombosis, especially of the veins of Galen. The internal capsules were unaltered. The other organs showed little change and none of any significance except that in the medulla, among the cells of the right vagus nucleus, there was a small hæmorrhage the result of a ruptured vessel, and this lesion the writers connect, reasonably enough, with the cessation of respiration some hours before death. The case is, as we have said, both interesting and important, and on account of the completeness of the examinations, both clinical and pathological, and the admirable manner in which it is reported it forms a valuable contribution to our knowledge of an obscure and probably not very common form of disease.

SANITARY BURIAL.

AT a meeting of the Church Burial, Funeral, and Mourning Reform Association, held last week at the Chapter House, St. Paul's-churchyard, the Archdeacon of London in the chair, papers were contributed by Sir F. Seymour Haden and Dr. Poore on the Earth-to-Earth mode of burial. The former stated that for the last ten years he had been burying animals, large and small, in the park attached to his house. By digging them up and examining them at intervals varying from one to five years he found that buried at the depth of four and a half feet—the depth required by the Government for the burial of human bodies—an interval of from three to four years was necessary for complete resolution; buried at the depth of one foot a year and a half had proved sufficient for the larger and a year or less for the smaller animals. On the other hand, a body not buried at all, but simply laid upon the ground with a covering of earth a foot thick over it, had completely disappeared (the bones excepted) in a year, the mound of covering earth, which had been sufficient to prevent all smell, retaining its shape, but when it was pressed with the foot proving to be hollow. The body had thus returned to the atmosphere in the shape of oxygen, hydrogen, carbon, and other perfectly harmless products necessary for the nourishment and growth of plants. He (Sir F. Seymour Haden) was amazed at the folly, not to say impiety, of any attempt to beat this provision of nature. Dr. Poore in his paper contended that if a body were buried in such a manner as to further in every way its complete dissolution the land would be ready after due interval of time to receive a second body, and that if the cemetery were systematically and sufficiently planted the earth would be purified and the air around freshened by the green leaves of a flourishing vegetation. The power which scientific burial gave of using the same ground repeatedly after due intervals of about ten years abolished the fear which had

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been expressed with regard to the amount of ground allotted for burial purposes. An acre of land would prove an ample area for a burial ground in perpetuity for a population of ten thousand persons. Such a burial ground would prove a decided benefit to the living, as supplying in the midst of human habitations a breathing place which is so essential to the general well-being. It was resolved, upon the motion of General Lowry, seconded by the Rev. Septimus Buss, B.D., to ask the Government to formulate into a Bill the recommendations of the Committee of Inquiry on Death Certification appointed by the late Home Secretary at the request of this association; also to ask the Government to institute an inquiry into the effect upon the air above, the earth around, and the water below, of earth-to-earth burial, and other modes of interment.

FLOATING SANATORIA FOR TUBERCULOUS PATIENTS.

IT is some years since M. O. Motschoutkovsky first advocated the provision of floating sanatoria for people threatened with tuberculous disease or suffering from incipient forms thereof, but quite lately he has returned to the subject with renewed enthusiasm. In the opinion of this zealous hygienist the scheme he has theoretically organised down to the minutest detail is certain sooner or later to prove a triumphant success. According to his plan the isolation of a dangerous class can be effectively carried out with the least possible amount of discomfort to its members; and he likewise maintains that by a judicious timing of moves it will be easy to afford the sufferers an excellent chance of recovery under the very best and most favourable climatic conditions. The various anchorages on the list have one and all their special seasons when the meteorological conditions are all that can be desired, and inasmuch as these seasons by no means correspond with each other chronologically it will be practicable for a speedy vessel to transport her passengers from one to the other and thus enable them, as it were, to skim the cream of the collection. As soon as there is any likelihood of a change of weather at any given place the order will be given to go to whatever spot has been proved by experience to be the most appropriate at that particular time of the year. It goes without saying that the ships destined for this service should be specially constructed in accordance with all the most approved rules. For eight or nine months in each year they might be in constant employment, but during three months at least out of the twelve they should go into dock in order to be thoroughly cleansed and disinfected. M. Motschoutkovsky is quite convinced that no stationary hotel or sanatorium in the world could possibly surpass his floating palaces in either comfort or salubrity; while as regards constant variety and change of scene there can of course be no comparison. All that is required is a company with the necessary amount of capital, and at last there seems to be a prospect that such may be forthcoming. That well-known ship-owning association the Austrian Lloyds has placed an order for the construction of a large steamer which is to be specially adapted and fitted for the accommodation of invalids in need of fresh air and a favourable climate. The anchorages that so far have been selected are at Corfu, Alexandria, Palermo, Messina, Naples, Tunis, and Malta.

DEATH CAUSED BY BROMIDE OF POTASSIUM.

THE coroner for mid-Essex held an inquest on March 26th on the body of a man whose death appears to have been due to excessive indulgence in what is usually considered to be a comparatively safe drug—namely, bromide of potassium. Suffering from neuralgia, he had been in the habit of taking this salt in doses of from two to three drachms. The drug does not appear to have produced any of the usual symptoms of bromism, but may have caused the palpitation of the heart of which the deceased had frequently complained. During the night of March 23rd he felt very cold, gave two deep gasps, and almost immediately expired. The medical practitioner who was sent for stated at the inquest that he found the deceased quite dead, his mouth wide open, the eyes half closed, and the pupils somewhat dilated. A bottle containing the drug was on the table and examination showed that it was pure bromide of potassium. The witness attributed death to failure of the heart's action caused by taking the bromide. This case is interesting for several reasons. It proves in a marked manner the danger of taking any drug, however harmless it may be reputed to be, in large and repeated doses without the advice of a medical man. No doubt in this instance a medical attendant would have recognised the depressant action the salt was exerting upon the heart and would have discontinued its use. Even in the most modern works on therapeutics this danger is not mentioned, yet it is well known that all potassium salts cause "depression, shown by diminished energy of contraction of the cardiac muscle, with final stoppage in diastole" (T. Lauder Brunton). As this bromide is constantly administered in large and repeated doses the action of its basic constituent should always be borne in mind, and if signs of its depressant effect are observed its use should be abandoned, the bromide of some other base being selected if in other respects the action is beneficial. Many secret remedies for "fits" contain this drug in large quantities and it is evidently desirable that the public should be warned that their use is not unattended with danger.

SÆVÆ NOVERCÆ.

THE traditional stepmother has not apparently become quite extinct as a species if one may judge from two horrible cases reported this week from Hastings and Epsom respectively. At an inquest at the seaside town on an infant named Batt two witnesses alleged that the deceased's stepmother had said she wished "the little —— was dead," and a third said she saw her throw it up in the air and catch it with the remark, "Die, you little ——, and I will have your insurance money," a paltry forty or fifty shillings. The coroner said he had never seen a child with so many bruises, and the jury in the absence of direct evidence returned an open verdict, death having been the result of an injury to the head. They added their opinion that the woman's conduct had been inhuman and cruel and such as demanded some punishment which it was not in their power to give. The termination of the other case was a great deal more satisfactory. A woman named Mary Frost was charged, at the instance of the National Society for the Prevention of Cruelty to Children, with cruelty to her two step-children—a boy and girl of eight and nine years respectively. They were beaten severely with a stick while in bed, and after their father had gone to work, for "stealing" sugar. Then the woman put a poker in the fire, and when the poor children came down to breakfast they were made to stand up and put out their tongues. The woman then put the red-hot poker so close that the children put up their hands to save themselves and were severely burned. The woman pleaded that this was a recipe of her own to cure lying. This reads so unpleasantly that it is a relief to turn to the remarks of the chairman. He characterised the punishment as excessive and the threats as atrocious. A fine the magistrates considered would be no punishment, for her husband would pay it; the woman would have to go to prison for a month. Stepmothers, he added, must be taught to treat children properly.

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INTRADURAL PUNCTURE OF THE SPINAL CORD.

IN a recent number of the *New York Medical Journal* Dr. Killiani records a case of some interest. A patient, forty-five years of age, fell on his back from a height of twenty feet. On admission to hospital an hour later he was still suffering from shock, and there was complete paralysis of both lower extremities and of the rectum and bladder. The anæsthesia reached to an imaginary line drawn through the third lumbar vertebra and a point about two centimetres below the umbilicus. There was a spot of extreme tenderness at the bend of the third lumbar vertebra, but no deformity or crepitus. There was slight ecchymosis here. The knee-jerks were lost. There was no change in the patient's condition in the next five days except that he had an attack of profuse and almost uncontrollable diarrhœa. On the fifth day after the accident the patient was rolled on his left side; a strong needle was inserted in the vertebral canal between the third and fourth lumbar vertebræ about 1½ centimetres from the middle line. Eight cubic centimetres of thick tar-coloured blood were removed. After this there was evident some restriction in the anæsthetic areas and a slight return of voluntary power in the extensors of the left thigh. The sphincters remained paralysed and the patient died suddenly four days after the puncture. An examination at the point of puncture showed that the needle had penetrated the subdural space, but had not wounded the cauda equina in any way. Dr. Killiani is of opinion that this simple procedure should be used in such cases with the object of relieving the spinal cord from the pressure of the effused blood.

THE EDWARD JENNER CENTENARY AT GLOUCESTER.

IT is extraordinary to note how at Gloucester, a town in which Edward Jenner resided for years, this centenary year of the discovery of vaccination is being kept. First, we find a board of guardians in fair weather when there was no small-pox about declaring themselves boastingly to be opposed to vaccination; then, frightened at their own mischievous default first recommending vaccination to the public by means of circulars and later, when still more frightened, actually turning right about face on all their former boasts and resolves and deciding to enforce the compulsory clauses of the Vaccination Acts. Secondly, we find that their experience—just 100 years too late—has been most bitterly bought, for, according to last week's papers, out of 90 deaths from small-pox in the hospital (there have been 118 in all in the city) 74 were in unvaccinated persons. Thirdly, we find that amongst this community which has been so long misled by the guardians there have within a few weeks been some 700 cases of small-pox, and that in the absence of any controlling vaccination the disease has seized that part of the town where the sanitary conditions are by no means worst, but where there was an undue proportion of unfortunate children who were unvaccinated. Fourthly, we find some thousands of pounds being spent in an attempt to check small-pox by hospitals, quarantining, and disinfection, but all in vain, for the disease goes on multiplying just the same; indeed, there were no less than 172 fresh cases last week. And, fifthly, we find that even some of those most responsible for the terrible loss of life among the unvaccinated are hurrying to get protection by vaccination for themselves. We leave those who have been so grievously injured by disease, maiming, and death, to apportion the blame. Here we only note with regret and shame that any British city, and above all Gloucester, should be in the state in which that city finds itself in the centenary year of Edward Jenner.

THE REGISTER OF MEDICAL STUDENTS.

NEXT in significance to the register of medical practitioners for any given year is the number of persons who have registered as medical students. The Medical Students' Register for 1895 has just been published, and shows that in that year no less than 1838 persons were so registered. Large as this number is—larger by three times than it was in the year 1865 when the registration of students commenced—it has often been exceeded. In the year 1879 for some reason or other, the number of registered medical students went up from 1699 to 2009. In 1891 the register contained the prodigious number of 2405, probably to be explained by the fact that the General Medical Council had decreed that students registering after Jan. 1st, 1892, should undergo a curriculum of five years' duration. The table at page 12 of the Students' Register shows that in twelve of the last seventeen years the number of medical students registering has been greater than in the last year. Still there is a great leap in the numbers of 1895 compared with the three preceding years. It is remarkable that, with the profession so crowded, the curriculum so expensive, and the examinations so numerous and difficult, so many students should still commence the study of the profession, though, of course, many whose names appear upon the register never really enter the profession itself. The percentage of registrations in the three divisions of the kingdom respectively for thirty years is as follows: in England, 49·96 per cent.; in Scotland, 30·34 per cent.; and in Ireland, 19·70 per cent. Of the 1838 who registered last year 955 registered in England, 575 in Scotland, and 308 in Ireland. It would seem that the increased severities of preliminary examination for medical graduates in the Scottish universities have not reduced the number of successful candidates.

AMONG the list of members of the Order of the Hospital of St. John of Jerusalem in England which, by the gracious sanction of Her Majesty the Queen, Sovereign Head, and Patron of the Order, appears in the *London Gazette* of Friday, March 27th, are the following names of members of the medical profession:—*Knights of Grace:* Surgeon-General W. G. N. Manley, C.B., V.C., Sir Edward Henry Sieveking, M.D., Mr. Thomas William Evans, M.D., Mr. Robert Brudenell Carter, F.R.C.S. Eng., Surgeon-Major-General Sir W. A. Mackinnon, K.C.B. (Director-General Army Medical Department), Inspector-General Sir James N. Dick, M.D., R.N., K.C.B. (Director-General of the Medical Department of the Navy), Surgeon-General Sir William Guyer Hunter, M.D., K.C.M.G., Sir Dyce Duckworth, M.D., LL.D., Mr. Thomas Wakley, F.R.C.S. Eng., Mr. William Collingridge, M.D., Surgeon-Major Lees Hall, A.M.S., Mr. William Bezly Thorne, M.D., Mr. Charles E. Milnes Hey, M.R.C.S. Eng., Sir William O. Priestley, M.D., LL.D., Deputy-Inspector-General Belgrave Ninnis, M.D., R.N., Inspector-General Henry Frederick Norbury, M.D., C.B., R.N., His Excellency Harry M. Crookshank Pacha, F.R.C.S. Edin., and Mr. Harry Pennington Hallows, M.D. *Esquire:* Mr. R. Vandeleur Kelly, F.R.C.S. Edin.

THE Duke and Duchess of York have arranged to be present at a grand *fête* which will be held in the building and grounds of the Middlesex Hospital, on July 1st, to commemorate the completion of the 150th year of the existence of the hospital and for the benefit of its new convalescent home at Clacton-on-Sea.

AT the instance of the Royal Commission upon Vaccination, which has been sitting for the last six years, and is now engaged in concluding its report, Dr. Sidney Coupland of the Middlesex Hospital has been instructed to inquire into, and report upon, the outbreak of small-pox in Gloucester.

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AN influential committee has been formed to present Mr. George Knottesford Fortescue, the late superintendent of the reading-room of the British Museum, with an illuminated address expressive of the readers' hearty appreciation of the ability and courtesy which he ever manifested in the performance of the duties of his office. The committee would be very glad if any of the readers who are disposed to contribute a small sum towards this purpose, not exceeding 2*s.* 6*d.*, would kindly send such contribution to the treasurer, Dr. Samuel Rawson Gardiner, or to the honorary secretary, the Rev. Dr. Samuel Kinns, at his private address, 182, Haverstock-hill, Hampstead. There must be many of our readers who will be glad to learn of the opportunity that is thus offered to them.

MR. RICHARD BRAYN, L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Superintendent of the State Criminal Lunatic Asylum, Broadmoor, in succession to Dr. Nicolson, appointed a Lord Chancellor's Visitor in Lunacy. Mr. Brayn was a distinguished student and scholar at King's College. He has done much good work in Her Majesty's prison service, having been medical officer to Parkhurst and Pentonville prisons, assistant surgeon to Portsmouth and Millbank prisons, and governor and medical officer to Her Majesty's Female Convict Prisons, Woking and Aylesbury.

THE Metropolitan Asylums Board has just issued its expected report on the results from the use of antitoxin in diphtheria cases under treatment in the hospitals under their control. The report, which is full of elaborate tables, reflects great credit upon the medical superintendents of the six hospitals by whom it is signed, for the statistics are well arranged and the conclusions arrived at are judiciously moderate in tone and are free from any attempt to overstate the case in favour of antitoxin.

MR. S. OSBORN, F.R.C.S., has put on the agenda paper for the next meeting of the Metropolitan Asylums Board, to be held on April 11th, the following motion: "That a vote of thanks be given to the medical superintendents of the metropolitan fever hospitals of the Board for their excellent report upon the use of Antitoxic Serum in the treatment of Diphtheria, which adds so materially to the history of treatment in this disease as to be beneficial to the whole medical profession."

AT a sessional meeting of the Sanitary Institute, to be held at the Parkes Museum on Wednesday, April 15th, a discussion will be opened by Dr. J. F. J. Sykes, medical officer of health for St. Pancras, on the Factory and Workshops Acts and the Powers and Duties of Sanitary Authorities with regard to Workshops.

THE President of the Local Government Board has appointed Dr. Frederick St. George Mivart to the temporary medical inspectorship in his department which became vacant by the promotion of Dr. Wheaton to permanent office.

Pharmacology and Therapeutics.

ERODIUM CICUTARIUM IN HÆMORRHAGE.

DR. KOMOROVICH, writing in the *Vrach* of Feb. 29th, states that he has made considerable use of "Hemlock stork's bill," erodium cicutarium, in uterine hæmorrhage with excellent results, often after better known drugs, such as ergot and hydrastis canadensis, had failed. He believes that the effect of the erodium is to increase the elasticity of the muscular fibres and thus to favour their contraction. In one case where a polypus was the cause of the hæmorrhage, after a fortnight's treatment the tumour was extruded into the vagina, which had never occurred with other drugs previously tried. Twenty of the cases where erodium succeeded after the failure of ergot and hydrastis were due to metritis, but others were dependent on myoma and abortion. The preparation used was an infusion made with 12 parts of water to 1 of the plants, to which a few drops of peppermint were added to improve the taste. Of this a tablespoonful was prescribed every two hours. In no case were any unpleasant by-effects produced, though sometimes the medicine was continued for some weeks. The active principles of the plant are stated to be "an ethereal oil, a bitter principle called geramin, and tannic acid. It has been used as an astringent diuretic in dropsy."[1]

DRIED THYREOIDIN IN CORPULENCE.

Dr. Jevzykowski reports in the *Noviny Lekarski* ten cases of corpulence which he treated with the dried thyreoidin manufactured by Merk with excellent results. This preparation was given in doses of from 5 to 8 grains per diem, 10 grains of it being the equivalent of a thyroid gland from a medium-sized calf. It did not give rise to any unpleasant by-effects such as have been noticed by some observers. In one case, however, that of a patient with fatty degeneration of the heart suffering from occasional attacks of an anginal character, after some 300 5-grain doses had been taken, which had reduced the weight about 25 lb., a considerable amount of dilatation of the left auricle was diagnosed and the heart's action was weakened; this state of things lasted for about a fortnight, but afterwards the patient completely recovered and lost all tendency to anginal attacks. Speaking generally, Dr. Jevzykowski found that a very considerable decrease of weight was produced by the treatment, at all events where the patients were willing to give up their previous habits of over-eating and over-drinking. In one case more than 40 lbs. were lost in two months, and in another 30 lb. in three months. Dr. Jevzykowski also tried the dried thyreoidin in a case of inveterate ichthyosis, the skin regaining its ordinary character after five weeks' treatment. When the thyreoidin was left off, however, the disease began to reappear; another course of the remedy in increased doses again improved it, and when the patient was last seen there were no signs of any recurrence.

SALICYLATE OF METHYL ADMINISTERED BY CUTANEOUS ABSORPTION.

The facility with which the skin can absorb guaiacol has been shown to be very considerable, so that after painting the surface with this substance no less than forty-five grains of it have been recovered from the urine, a much larger dose than could have been introduced into the system by means of the stomach. This fact led MM. Linossier and Lannois of Lyons to try the effect of administering an anti-rheumatic drug—salicylate of methyl, the substance which forms nine-tenths of the ordinary Wintergeen oil—in a similar manner. It becomes transformed into salicylate of soda in the blood and is eliminated by the urine in the form of salicylic acid. It can also be detected in considerable quantity in the fæces. The daily elimination takes place in a regular manner during the course of treatment and no effect is produced on the skin by the applications. When sixty grains were painted on the surface of the thigh as much as twenty grains of salicylic acid were recovered from the urine within twenty-four hours. Like guaiacol, salicylate of methyl is absorbed by the cutaneous surface in a state of vapour, as can be readily shown by surrounding the limb with a cylinder of wire gauze. The method of application is very simple: the liquid is spread on the limb by means of a brush with or without the aid of a medicine dropper; the part is then covered with a layer of oiled silk or other impermeable tissue, over which cotton wool is fastened, and the whole left undisturbed for four-and-twenty hours. Sixty grains can be readily applied in this way, but if a larger dose is desired some lint is rolled round the limb, which becomes saturated with it. The absorption appears to be retarded by mixing lard or vaseline with the salicylate of methyl. The great advantage of administering medicines by the skin is that there is less risk of disordering the stomach than is the case when they are introduced into that organ, but it is only possible to employ this method in the case of drugs that are of a decidedly volatile nature.

[1] Sydenham Society's Lexicon.

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THOMAS WAKLEY,

THE FOUNDER OF "THE LANCET."

A BIOGRAPHY.[1]

CHAPTER XIV.

Wakley's Two Crusades.—Their Personal or Impersonal Nature.—The Procuring of Hospital Reports.—Specimens of this Department in Early Numbers of THE LANCET.—*The Scope of these Reports.*

As has been indicated, Wakley now found himself with two avowed objects of attack—the administration of the metropolitan hospitals and the constitution of the Royal College of Surgeons of England—and against each he waged a relentless war. In the columns of THE LANCET he poured scorn upon the educational system by which the students were compelled to pay large fees to support hospital surgeons who were unwilling or unable to teach them; and upon the platforms at certain public meetings he held up to ridicule a learned corporation which withheld from its members all the benefits it had been created to bestow.

The personal or impersonal character of his attacks must be recognised because it was identical in either crusade. It would seem, on the one hand, that the College, being a corporation, was open to censure that was not personal, and that no grave want of taste could be discovered in the designation of its constitution and behaviour as corrupt, inept, and impertinent. The officers of the College had a charter whereby they were guided in the administration of its affairs, and while they conformed to their charter the hardest things that were said about the institution reflected in no way upon them personally. It would seem, on the other hand, that attacks upon hospital administration were compelled to be of a highly personal nature, inasmuch as they were bound to resolve themselves into reflections upon the surgical skill or intellectual grasp and verbal felicity of the gentlemen who operated or lectured as members of the various staffs. Wakley desired to treat both sets of abuses in the same way, clearly perceiving that they had a common origin in the want of unity and general apathy of the body of the medical profession. This body he desired to arouse to the two facts that their teachers failed in duty towards them, and that the College of which the majority of them were members mulcted them in fees but withheld from them all their rightful privileges. No one glancing over the columns of THE LANCET during its first decade will have a moment's hesitation in deciding that Wakley, having to frame a method of indictment suitable to both sets of abuses, deliberately, even wantonly, chose the personal one always. Such an opinion would be wrong. His writings teemed with personalities, his speeches derived much of their point from the same element, but he tried in every way to preserve a middle course in his indictments of the Royal College of Surgeons and of hospital officials. Into his criticism of the corporation he certainly introduced much that almost amounted to personal abuse of individuals, while it would have been possible for him to deal with the legitimate complaints of the members of the College in a more abstract manner. But his reflections upon the administration in the hospitals were whenever feasible directed against systems, and although names were constantly introduced, and although personal remarks formed the basis of much of his fault-finding, yet it was the administration rather than the administrators that he designed to attack. Wakley, in fact, compromised, which means much, for he was the firm foe of compromise. He directed his reflections upon the College in many instances against the authorities by name, whilst more naturally he should have called the charter to account. He saw that to animadvert against the constitution of the College would not appeal to the minds of his audience sufficiently. Abuse of men was readily understood, but the drift of reproachful criticisms of a legal instrument was not so easy to follow. If his uncomplimentary speeches had only been aimed at the charter of the College no widespread agitation against the existent state of affairs would ever have sprung from them. But so personal a turn was not necessarily given to his reflections upon the administration of the metropolitan hospitals, for his readers could thoroughly appreciate what constituted good hospital management, and no point and piquancy were given to his strictures by the unnecessary introduction of names.

It will be understood that Wakley's two separate campaigns were conducted simultaneously in THE LANCET. For the purposes of this narrative his unrelenting criticism of the metropolitan hospitals is considered first, while his actions towards reform in the College of Surgeons will be described later, but it should be remembered that he was engaged in a double war all the time, for the feeling that he had foes on either side accounted for the fierceness of some of his onslaughts, and his perpetual air of watchfulness.

The Hospital Reports which it was announced in the preface of the second volume of THE LANCET would give a true and unbiased record from week to week of the practice within the walls of the various metropolitan institutions were watched with apprehension by all concerned in the administration of the institutions. Repeatedly denying that there could be any other reason for desiring to preclude him from reporting the cases that came under treatment in the hospitals save fear—fear lest malpraxis should be exposed or mismanagement and nepotism be revealed—he persevered steadily in his announced intention. Week after week there appeared in THE LANCET elaborate accounts of operations, abstracts of clinical lectures and outspoken reflections upon administrative details, every hospital in the metropolis receiving these unsolicited attentions, each being treated in exactly the same spirit—unceremoniously. Hospitals, said Wakley, are public places, supported by the piety and wealth of members of the public for the cure of their poorer brethren. And as public places they shall have publicity.

Wakley had some difficulty at first in obtaining these reports. He was himself a regular attendant at the Borough Hospitals and the author of many of the early reports of operative procedures at their theatres, but he was most careful to make his survey of London practice from week to week a comprehensive one, so that he had to employ reporters to work for him. His difficulty in doing this was twofold. It was necessary that the man who reported for him should be thoroughly competent and privileged to go in and out of the wards at will. It was necessary also that he should be able to keep his identity unrevealed in view of the great opposition that had been manifested by many of the hospital surgeons to the publicity threatened for their work. Mr. Travers, for instance, had frankly told the students of the Borough Hospitals that he would urge the expulsion from the united classes of any student detected in supplying THE LANCET with reports of lectures or of operative proceedings, while Mr. Abernethy had expressed the sentiments of himself and his colleagues at St. Bartholomew's Hospital by terming the paid reporter of THE LANCET "a hireling," and bidding him stand forth to receive back his fees, which the medical school declined to keep having regard to their tainted source. But as against these facts the students recognised in THE LANCET a strong friend to their cause, so that Wakley obtained many offers of assistance

[1] Chapters I., II., III., IV., V., VI., VII., VIII., IX., X., XI., XII., and XIII. were published in THE LANCET, Jan. 4th, 11th, 18th, and 25th, Feb. 1st, 8th, 15th, 22nd, and 29th, March 7th, 14th, 21st, and 28th respectively.

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and had from the beginning many would-be contributors to choose from. It was his practice to employ and pay highly a senior student at each hospital to make regular reports for him, while he himself or some trusted member of the staff would make a round of the various operating theatres, dropping in now on this and now on that institution that he might judge for himself of the accuracy of his reporter's work.

All who possess or have access to the back numbers of THE LANCET can read for themselves the way in which these reports were done; and if they can subdue the innate savagery of man so far as to pass over the scathing accounts of some luckless surgeon's error to peruse the approving records of successful operations and well-directed innovations for the good of patient or student, they will certainly agree that from a journalistic point of view this department of THE LANCET formed a remarkable journalistic feat. Shorthand had not, under Taylor's system, reached its present pitch of excellence; telegraphy was unknown; London possessed no remarkable facilities for progression from place to place; no papers, medical or lay, gave information in the form of a diary, from which could be learned the day and hour at which in the interests of science a reporter ought to be in a given place—but in spite of all these drawbacks, and with the additional disability upon him that if his agents were discovered all obstacles would be officially placed in their way, Wakley produced week by week a record of doings within the jealously guarded walls of the metropolitan hospitals.

It will be well here to give the results of a brief perusal of the reports up to the year 1828. In this way an estimate of their value can be arrived at, for we shall be able to appreciate the amount of good that such a system of regular criticism must have worked, and the amount of indignation and vexation that such a violation of their privacy must have aroused in the officials.

In March, 1825, a man was admitted into St. George's Hospital suffering from pneumonia. He was bled in the arm by the dresser and during the little operation the brachial artery was wounded. The man was placed under one of the surgeons, who, on consultation with the physician, considered that the pulmonary trouble was too severe to warrant him in disturbing the patient by tying the brachial artery—obviously the only safe course to pursue under the unfortunate circumstances. A tight bandage was applied to the arm above the wound instead of a ligature being placed upon the vessel. The bandage remained three days untouched, when, the circulation having been occluded, mortification set in and the patient died. A coroner's jury brought in a verdict that the man died from the accidental opening of an artery in the arm *and from the want of proper attention*. Four months later a still worse case of malpraxis occurred at the same hospital. A man was admitted to the accident ward whose right knee was cut with a broken bottle. The house surgeon thought that an artery was severed and applied a tight bandage. This patient was under the care of the same surgeon, who did not, as it afterwards transpired, examine the knee himself, but left the bandages undisturbed, despite the fact that the leg was much swollen *above* the bandage. The bandage was not removed for five days, and when it was the limb was in a terrible condition. The man died and an inquest was held, at which it was elicited that the surgeon had trusted entirely to his house-surgeon, and that the younger gentleman's statements were not to be relied upon. A juror, in spite of the warnings of the coroner that he might be proceeded against for libel, persisted that there had been gross neglect in the treatment of the unfortunate man. The coroner pressed for a verdict without comment, but ultimately the jury returned that "the deceased received a cut on the knee by accident and from the effects of improper surgical treatment and neglect his death was produced."

Upon these cases THE LANCET made exceedingly severe comments and used freely the names of all concerned, holding their owners up to the contempt of the profession. Almost at the same time a man died in the Middlesex Hospital after an operation for strangulated hernia, and the writer of THE LANCET report of the case definitely accused the senior surgeon of the hospital of having, as a first count, neglected the case, so that the unfortunate man's plight was hopeless when the operation was undertaken, and having, as a second count, performed the operation in an exceedingly unskilful manner. The writer of the report finished by leaving discussion of the particular instance to say of the operative proceedings at Middlesex Hospital generally that it was the regular practice at Middlesex for the surgeon to wait before operating until all chance of recovery was gone, and that not more than one patient had recovered from an operation to relieve a strangulated hernia in the hospital for two years!

Several examples of malpraxis at Guy's Hospital and St. Thomas's Hospital were detailed at length. Two similar cases of compound fracture of the bones of the leg were admitted, one to the wards of Guy's Hospital and the other to the wards of St. Thomas's Hospital, in April, 1826, the treatment of the last of which was made the subject of severe comment. In the former the surgeon was stated to have delayed operating until too late and then to have amputated in a clumsy manner. In the latter he is taken to task roundly for having omitted to notice that the patient was going downhill fast owing to an extensive abscess having formed, unsuspected by everybody, on the back of his thigh. All the names are given in full, and the editorial comments are of the freest and bitterest.

The comments show the personal way in which Wakley dared to deal with these matters, and anyone who chanced to read them might be tempted to judge that he had no other way. As a matter of fact, however, his treatment of hospital administration was much more judicious than would be gathered from the perusal of the denunciatory articles.

"Nothing is more easy than to show," said Wakley, "that our hospital system is fundamentally wrong, from the surgeon to the surgery man and from the physician to the apothecary's apprentice. The manner in which the appointments are managed is the most nefarious and in utter violation of every principle of justice and common sense. For example, an advertisement announces the resignation of a medical officer of some hospital (which, by-the-bye, too seldom happens), and how do the rival candidates arm themselves for the contest? Not by trying to outvie each other at a public disputation, nor even at an examination in a committee-room, but by beating up the quarters of their brewers, their bakers, their tailors, and their other tradesmen, and in proportion as the candidates or their friends have influence with this class of persons, or, in other words, have a good *city connexion*, so are they according to the usual doctrine of chances secure of the vacant post. Now, then, men who can know nothing of the real qualifications of the candidates are the real electors of physicians and surgeons to public hospitals; and what is the consequence? What we too often see—that ignorant pretenders exclude men of sound talent, to the great injury of science and the great sacrifice of human life."

All of this Wakley set himself to demonstrate. The fact that the wrong men were chosen as medical officers to the hospitals could only be proved to demonstration by reporting examples of their failures. This he did regularly and in the unsparing manner of which examples are given above. But this only formed part of the work that he designed to carry out by the publication of the Hospital Reports. The general failings of the institutions as educational and administrative establishments also received uncomplimentary attention. That surgeon's pupils were

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idle and abused the privileges that they had purchased; that dressers, having no proper supervision, very usually neglected their duties; that the house-surgeons being chosen from these gentlemen were frequently ignorant; that the nursing was often bad, and that no proper attention was paid to the diet of the patients; that the buildings of the hospitals were sometimes uncleanly and insanitary,—these and other unpleasant facts he brought to light by his elaborate system of reporting and treated with proper out-speaking. Can it be wondered at that within the walls of the hospitals, by all save the students for whom he fought, his name was a synonym for mischief-maker and agitator?

(To be continued.)

THE NEW PHOTOGRAPHY.

DIRECT VISION BY MEANS OF THE ROENTGEN RAYS.

BY J. MACINTYRE, M.B., C.M. GLASG., F.R.S. EDIN.

Shadows obtained of the Extremities and Trunk.

SINCE my last communication I have had several screens of calcium tungstate prepared, and as a number of experimenters have asked for information about the preparation of the crystalline form, the following notes may be useful. The last preparation I mentioned in THE LANCET was made for me by Messrs. Barrs and Sallock, but Mr. J. Frank Bottomley has kindly given me a larger quantity of the crystals and he prepares it after Manross's method.[1] It consists in fusing together the anhydrous sodium tungstate and calcium chloride, the latter in excess. The sodium chloride and excess of calcium chloride are dissolved out and crystalline calcium tungstate is left behind to be filtered off and dried. The crystals are a mixture of needles and octahedra, but the latter can only be seen with the microscope. This makes an excellent screen, but I still find the potassium platino-cyanide the best. The following cases for diagnosis have come under my observation since last week. In one, a suspected case of unreduced dislocation of the phalanx, Dr. Renton and Dr. Somerville saw distinctly (without photographs) that the parts were in proper position. In another I showed to several medical men an old fracture of the forearm with the fragments of the bones in an altered position. Following up my former experiments, I may say that not only do I find it extremely important to prepare the screen properly, but the distance of the Crookes's tube from the object must receive the most careful attention. By regulating the distance one can get very distinct shadows, but of course the further off the source of the "x" rays (i. e., the Crookes's tube) the less do we get fluorescence. I have now seen all the bones of the two extremities, and with such definition as to be quite practical for many surgical purposes. What is still more important to note, I have seen distinct shadows of the vertebral column and ribs. The sternum is also seen if the Crookes's tube be placed behind instead of in front. In the latter case I could see the shadows of the buttons on the clothes as well through the body. It is an easy matter to penetrate the head, but, as I mentioned in the last article, we still need further improvement in the source of the rays. A little more power from the tube is what we now require. One of the most beautiful results I have got was shown to several of my friends during the week when the different movements at the elbow were seen. These could be distinctly made out and the movements of extension and flexion were extremely plainly demonstrated.

Mr. George Heaton, F.R.C.S. Eng., surgeon to the General Hospital, Birmingham, sends us the following account of a case where a foreign body in the wrist was localised and successfully removed by the aid of Roentgen's method of photography.

"A man aged thirty-two years, whilst at work on March 18th was struck by a piece of metal on the ulnar side of the left wrist, which made a small wound which bled freely. He was removed to the General Hospital, Birmingham and the wound examined carefully by the house surgeon on duty. No foreign body could be detected either by palpation or with the probe. The wound was dressed antiseptically and the arm kept at rest in a splint. On March 25th a photograph (which I enclose) was taken by Mr. Hall Edwards, exposure of one minute and forty-five seconds being given. The foreign body can be seen distinctly lying in the palmar aspect of the semilunar bone. Even after localisation by Roentgen's method the foreign body could not be felt through the unbroken skin. The same day an anæsthetic was administered and a small incision made in the situation, as shown in the photograph. The foreign body, a sharp thin piece of steel, was found at once lying deeply amongst the flexor tendons of the wrist over the semilunar bone. The wound was closed and has since healed."

*** We do not reproduce the photograph, as it presents no features differing from numerous other photographs that have appeared in our pages and elsewhere. The foreign body is, however, very well shown in it."—ED. L.

[1] Liebig's Annalen, vols. lxxxi. and lxxxii.

EXPERIMENTAL RESEARCHES OF THE ROYAL COMMISSION ON TUBERCULOSIS.

II.—MILK.[1]

THE danger to public health arising from the consumption of tuberculous milk has been generally, and probably correctly, estimated to be considerably greater than that which arises from tuberculous meat. Whether the danger is confined to milk from cows with tuberculous udder disease or exists also in milk from tuberculous cows with normal udders is a matter which has given rise to considerable discussion. Some cases have been reported by Professor Bang and others where a tuberculous cow with an apparently healthy udder gave demonstrably infective milk. A large number of such cases would doubtless be conclusive on this point, but so far very few have been recorded, and the possibility that in these cases the bacilli owed their existence in the milk to undetected tuberculous deposits in the mammary glands must not be overlooked. The experimental researches of the Royal Commission on Tuberculosis tend to show that tuberculous udder disease must be established before the milk becomes infective. In Part III. of his inquiry, Dr. Sidney Martin gives particulars of experiments with milk of eight cows, one with "mild," five with "moderate," and two with "advanced and generalised" tuberculosis—all shown to be free from udder disease post mortem. The milk of two cows was distinctly abnormal: one with "advanced and generalised" tuberculosis gave a yellow milk with considerable excess of fats and deficiency in lactose; another with "moderate" tuberculosis, gave milk with a large excess of albumin and a corresponding deficiency in casein. Milk of the remaining six cows was in no case markedly abnormal to chemical and physical tests. Tubercle bacilli were not to be found in the milk of any of the eight cows. The milk of each was tested by inoculating experimental animals; of a total of twenty-eight guinea-pigs and rabbits thus inoculated none developed tuberculosis. It was also used to feed a number of guinea-pigs, each guinea-pig receiving about a litre of milk. In addition, milk of each of five of these cows was given as food to pigs, which are peculiarly apt to contract tuberculosis from feeding. The smallest amount of milk consumed by any one pig was seven and a half litres, while as much as fifty-six litres (and this from a cow with "advanced and generalised" tuberculosis) was given to another. None of the pigs or guinea-pigs thus fed became tuberculous.

Two other tuberculous cows had been purchased in the belief that they had tuberculous udder disease, but examination of the udder post mortem showed that the affection was a non-tuberculous interstitial mastitis. The milk of these cows similarly tested proved to be uniformly non-infective. Milk of cows with tuberculous udders, on the other hand, was found to be extremely virulent. Five such cows were obtained, twenty-one animals were inoculated with milk from one or other of them, and all became tuberculous. In three cows the virulence of the milk proved as great in the

[1] No. I. (Meat) was published in THE LANCET of Feb. 29th, 1896.

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feeding experiments, for in each case all the animals fed became tuberculous. Tubercle bacilli were found in the milk of each of these three animals. Of the remaining two, the milk of one was infective to three out of the nine guinea-pigs and to the one pig fed with it, while the milk of the other was consumed by two guinea-pigs only, both of which remained healthy. Bacilli had not been found in the milk of either of the last two cows, although in each case the infectivity of the milk had been demonstrated by inoculation. The disease produced in the test animals was in every case a rapid form of tuberculosis.

"The milk of cows with tuberculosis of the udder possesses a virulence which can only be described as extraordinary. All the animals inoculated showed tuberculosis in its most rapid form, such as it is seen after inoculation with a recent tubercular lesion, and this was the case even with Cows 8 and 24, the milk of which gave irregular results with feeding, so that in one case (Cow No. 8) it was possible to diagnose as tuberculous a local lesion produced by milk injection, even though the guinea-pig lived only nine days, tubercle bacilli being found in the thickened tissues at the seat of injection."

Dr. Martin found no diminution in virulence to test animals when this milk was diluted to four times its bulk with healthy milk; indeed, a dose of even 0·05 to 0·1 c.c. diluted with healthy milk was sufficient to produce tuberculosis. He also experimented with skimmed milk, buttermilk, and butter prepared from tuberculous milk. Each of these products produced well-marked tuberculosis both by feeding and by inoculation in all the animals experimented on, and it is important to note that the virulence of skimmed milk, butter milk, and butter was not notably decreased by a previous addition of healthy milk to the tuberculous milk employed in their manufacture.

We do not get much information from these inquiries as to the physical characters of the tuberculous udder. Dr. Martin observes:—

"Tuberculosis of the udder is a slow, painless growth. A disease of the udder which is slow in development, taking weeks or months to affect a large portion of the udder, and occurring in a tuberculous animal, is in all probability tuberculosis. Anything more definite than this cannot be said."

Absence of tenderness in the growth and enlargement of the supra-mammary glands are neither diagnostic of the nature of the enlargement. As regards the milk itself, diminution in its quantity, although common in tuberculosis of the udder, frequently occurs in other morbid conditions of the cow; chemical analysis in certain cases can demonstrate some abnormality, but does not in any case indicate that the abnormality is due to tuberculous udder. Examination of the milk for bacilli might have been expected to demonstrate the existence of the disease in all cases, yet in the two cows already referred to repeated examination for bacilli, with and without the aid of the centrifugal machine, was made without result, the milk from both cows being none the less infective to test animals. In fact, Dr. Martin shows, if tubercle bacilli are not found the only trustworthy test is the inoculation of experimental animals with the suspected milk. Obviously this test is not one which can be readily applied by the farmer or veterinary surgeon to cases of suspected disease of the udder. Dr. Martin recommends, therefore, that a cow affected by any form of disease of the udder should be excluded from the dairy farm, not only where there is an obvious enlargement (of whatever nature) in any part of the udder, but also when the milk from one or more quarters is observed to fail either in quantity or quality. The diseased cow thus set apart can then be thoroughly examined by a person competent to apply the necessary tests. But, in reality, the question is a wider one, for any tuberculous cow, no matter what the stage of its tuberculosis, is liable to have its udder affected. As pointed out in these inquiries, the onset of udder tuberculosis is insidious and may be very difficult of detection. Nothing short of a knowledge of all the tuberculous cows of a dairy, their separation from other cows, and a frequent inspection by competent observers would serve to minimise the risk of the milk they supply—if, indeed, the milk of any tuberculous cow is allowed to be consumed at all.

The effect of heat on tuberculous milk forms the subject of an elaborate research by Dr. Sims Woodhead (Inquiry III., Parts 8 and 9). He used for experiment both milk from cows with tuberculous udders and milk rendered tuberculous artificially by intimate admixture of tuberculous sputum or of portions of tuberculous organs very finely divided. He found that of the two the natural tuberculous milk in the raw state proved to be more uniformly infective. Dilution with healthy milk appeared in some instances to reduce, and in others to make no difference to, the infectivity of tuberculous milk. Dr. Woodhead accepts as proved that raising milk to 100° C. even for a single instant will completely kill tubercle bacilli contained in it; and he adopts the explanation of Hodenpyl and Prudden and others that "tubercles" produced in animals by inoculation of boiled tuberculous milk are the result of necrosis round the bodies of dead bacilli and do not contain the living microbe. In his own experiments he kept tuberculous milk (natural or artificial) in a water-bath specially contrived for the purpose for given periods of time at each of a long series of temperatures from 50° to 90° C. He then tested the milk so treated in each instance by inoculating and by feeding test animals with it. The results of intra-peritoneal injection of guinea-pigs are instructive. Here the effect of heating the milk to a temperature short of 100° C. was manifested in two ways. In the first place such partial heating rendered the milk capable of infecting only a small proportion of the test animals, whereas the raw milk had rendered every animal experimented on tuberculous. The proportion of animals attacked was smaller as the temperature to which the milk was raised was greater; it was also smaller as the time at which the milk had been kept at a particular temperature was longer. In the second place the test animals attacked under these conditions suffered from a slowly progressing and limited tuberculosis, the slowest progress and the most marked localisation of lesions being obtained with milk heated to the highest temperature and for the longest time short of altogether destroying its infectivity. Dr. Woodhead found evidence of attenuation of virulence in the way indicated when the milk had been kept for some time at even as low a temperature as 50° C.

Although the character of the disease produced was perhaps modified, and although in some cases the proportion of test animals affected was small, tuberculosis was nevertheless produced in guinea-pigs by intra-peritoneal injection of milk which—to instance a few of Dr. Woodhead's results—had been heated momentarily to 90° C., heated for twenty-two minutes to 75° C., for half an hour at 70° C., three hours at 65° C., or twelve hours at 50° C. After heating for a longer time at each of these temperatures the milk appeared innocuous to guinea-pigs. It was found, however, that the results of feeding pigs with tuberculous milk afforded a still more delicate test of infectivity than inoculating guinea-pigs. The results of feeding pigs are noteworthy and may be gathered from Dr. Woodhead's table (lxxv).

Feeding Experiments with Pigs, using Artificial Tuberculous Material heated to Different Temperatures for Various Times.

Temperature.	5 min.	2½ min.	10 min.	15 min.	20 min.	30 min.	40 min.	45 min.	1 hour.
60° C.						+			+
65° C.					+		+		
70° C.		+		+		-		+	
75° C.	+		+	+					
80° C.	+		+						

+ = Where experiments gave positive results.
- = Where experiments gave negative results.
Where spaces are left blank no experiments were made.

From this table it will be observed that artificial tuberculous milk kept at 80° for ten minutes or for a quarter of an hour at 75° still remained infective when given to pigs as food. For any indications to the contrary furnished by these experiments, the infectivity to pigs may still exist in milk raised to higher temperatures and heated for longer periods. This is all the more important as the analogy between the manifestations of the modified tuberculosis produced in the pig by this imperfectly heated milk and the "strumous" glands and other chronic tuberculous lesions of children and adults is an exceptionally close one—a point fully insisted upon by Dr. Woodhead. His experiments suggest doubts of the ability of several processes applied to milk under the name of "sterilisation" or "Pasteurising" to destroy the infectivity of tuberculous milk to man.

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KINGSBURY v. HART.

THE Fylde Medical Society, of which Dr. Kingsbury is the Hon. Secretary, held a special meeting in Blackpool on March 20th, 1896, to hear an explanation from him of the charges against him in the *British Medical Journal* of Jan. 18th, 1896, deeming it more satisfactory that his conduct should either be vindicated or condemned by members of his own profession than that the verdict of a lay jury, already given in his favour at the Manchester Assizes, should be accepted as final.

Dr. Kingsbury dealt fully with the anonymous accusations of "Ethics," and the comments thereon by the editor of the *British Medical Journal*, and gave a detailed account of his long connexion with both the hydropathic establishments of Blackpool, and answered all the questions submitted to him by the members of the society.

Mr. Day proposed: "That, having heard the explanation given by Dr. Kingsbury, the Fylde Medical Society hereby unreservedly accepts the same as satisfactory." Mr. Eason seconded the proposition and expressed his perfect confidence in the hon. secretary, who had always taken the keenest interest in maintaining the ethics of the profession. The resolution, having been supported by Dr. Brown, Dr. Blundell, Mr. Dunderdale, Mr. Lenihan, and Mr. Calvert, was carried unanimously.

Dr. Stott then proposed: "That, in the opinion of this society, the attack of 'Ethics' upon Dr. Kingsbury and the method adopted by 'Ethics' in making such attack are to be strongly condemned." Dr. McIntosh, having seconded this resolution, it was also carried unanimously.

Dr. Kingsbury then read a letter dated March 14th, 1896, which he had addressed to the editor of the *British Medical Journal* the moment that gentleman had publicly stated that he accepted the Manchester jury's verdict as a just one. To this letter an answer was received from the assistant editor, under date March 19th, 1896, saying: "Your letter of March 14th, addressed to the editor of the *British Medical Journal*, has been very carefully considered, but it has appeared to be on the whole undesirable to publish it in the *British Medical Journal*. In compliance with your request the letter is herewith returned."

A resolution was then proposed by Mr. Richardson, seconded by Mr. Lenihan, and unanimously carried, condemning the action of the *British Medical Journal* in refusing to publish Dr. Kingsbury's letter of March 14th, 1896.

At the conclusion of the meeting Dr. Kingsbury received the warmest congratulations of his medical brethren.

THE ANGLO-EGYPTIAN NILE EXPEDITION.

No time is being lost in vigorously prosecuting this expedition. The passage of troops and war material up the Nile continues to be actively carried on. It is expected that the whole of the force composing the Dongola column will be concentrated at Sarras, thirty-five miles beyond Wady Halfa, within a month. The railway to Akasheh is being pushed on and troops and provisions are being rapidly transported to the front. Those of our readers who are acquainted with the way in which the Egyptian authorities pack their troops on board steamers and barges will readily understand the large numbers that can be transported under such circumstances compared with those of British soldiers. So far as the present expedition has gone, the organisation and transport arrangements have been working extremely well. Assouan has been, and still is, a scene of great activity, and a large camp exists at this station. Sir H. Kitchener, the Sirdar of the Egyptian Army, is organising the expeditionary force at Wady Halfa, where a British regiment should have arrived by this time. A body of Dervish cavalry recently reconnoitred in the vicinity of Akasheh, but retired on being fired upon by the Egyptian troops. The news of the advance is said to have caused great excitement at Dongola. There are now three battalions of Soudanese infantry, with several squadrons of cavalry, a battery of artillery, and a camelry corps at Akasheh, and additions to the force at this station are being rapidly made. The health of the troops is stated to be very good so far. The heat is only great at midday, but the hot wind from the south-west—the khamsun—is due at this season and the temperature and discomfort, and probably the inefficiency from sickness, may be expected to increase on its appearance. Large quantities of medical and other stores for the hospital service have been forwarded with the expeditionary force, and with the number of medical officers already in Egypt and those arriving there from this country it is believed that the expedition will be well provided in these respects. The military authorities in Egypt have had a good deal of experience of military expeditions up the Nile and are practically acquainted with their requirements. The major portion of the force, consisting of Soudanese and Egyptian troops, are accustomed to and stand the climate well; but this cannot, of course, be said of the British troops, although the results of our previous expeditions have shown that with proper care and hygienic precautions our soldiers withstand the climate much better than might be anticipated. Everything connected with field service arrangements in these respects is much better understood, and much greater care is taken nowadays in regard to health and sanitation, than was formerly the case. Still, as everybody knows, the heat in these regions is very great during the approaching season, and a certain amount of disease must inevitably follow.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Crewe Urban District.—Mr. Herbert Jones, the medical officer of health of this important district, which has now a population of some 37,000, is given by the sanitary authority somewhat difficult tasks to perform. To cope with an epidemic of scarlet fever, or, indeed, of any other disease, without the means of isolation, or even the assistance of the Notification Act, is a thankless and hopeless labour from which we should ask to be excused. Yet this was the task which Mr. Jones was left to carry out in 1895. School closure had to be resorted to in order to check the spread of the disease, but, as Mr. Jones observes, this step really took away from him the only source of information as to the distribution of the disease which in the absence of notification he possessed. It is obviously impossible for the many points which suggest or contra-indicate school closure in any given epidemic to be ascertained without notification, and we suspect that much injustice is done to elementary education by what must, in the absence of notification, be more or less a step in the dark. The exact distribution of cases in a district is one of the essential pieces of information with regard to any intelligent application of the powers vested in the medical officer of health as to school closure. In the matter of isolation accommodation we are glad to be able to record that the town council has now obtained the consent of the Local Government Board to borrow the necessary funds, and that there is every prospect of the town being shortly provided both with a hospital for small-pox and one for other infectious diseases. The matter of notification still seems to hang fire, in spite of the fact that Mr. Jones has urged on the sanitary committee upon numerous occasions the necessity for the adoption of the Act. The committee seem to think that it will be well to delay notification until after the erection of the fever hospital; in other words, they advocate in principle the plan of building stables before the number of horses which they will be called upon to provide for is known.

Kingston-upon-Thames Urban District.—Mr. Beale Collins reports that the most important event of the year 1895 was the severe frost which brought home to the community of his district the disabilities under which they labour in not possessing the control of their own water-supply. Mr. Collins states that during the stoppage of the water by frost he measured the depth of the main in a certain road and found it to be but eight inches from the surface, and in no place in the road in question did the pipes when uncovered appear to be at a greater depth than eighteen inches. In the matter of isolation accommodation the sanitary authority has purchased a site, and Mr. Collins urgently impresses

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upon the corporation the necessity for the erection of a hospital; he suggests that arrangements should be made with adjoining authorities for the provision of joint accommodation for small-pox. In order to diminish the risks of infection through the agency of books from the public library, it has been arranged that the inspector of nuisances shall forward to the librarian the names of all cases of infectious disease notified. When the patient recovers the books are returned after disinfection to the librarian. One case of typhoid fever in Kingston was attributed to the consumption of oysters.

Kensington Sanitary District.—In his last monthly report Dr. Dudfield draws attention to an allegation which has been made in some quarters that the district of Kensington is suffering from "over-inspection." In order to refute this extravagant statement he has drawn up a short report showing the average number of persons to each inspector in the several metropolitan sanitary districts. He shows that in three districts there is one inspector to less than every 10,000 persons; in eleven districts there are between 10,000 and 15,000 persons to each inspector; in eleven other districts between 15,000 and 20,000; in twelve districts between 20,000 and 25,000; in three districts between 25,000 and 30,000; and in the remaining two districts there are more than 30,000 persons to each inspector. Kensington has one inspector to every 24,224 persons.

Ampthill Rural District.—Mr. C. M. Fegen reports two outbreaks in his district, one of scarlet fever and the other of measles, which diseases he regards as having been introduced by "holiday children," and he advises that some steps be taken to guard against these annual visitors acting as introducers of infectious disease. He thinks that children should not be allowed to be sent from houses where infectious disease has been present during the previous six weeks, but this seems to us a little impracticable. Mr. Fegen in discussing questions of water-supply refers to the risks that are run in cases of draw-wells from the use of pails which are not kept solely for the purpose. He advocates the use of pumps, or where these are not possible the provision of a permanently fixed pail for each well.

Maldon Rural District.—Dr. Thresh, in his annual report for 1895, draws attention to the menace which exists to the public health in this district from the presence in it of the "Peculiar People," whose faith in supernatural agencies leads them to neglect the assistance of natural laws as expressed in the practice of the physician, and as a consequence the disregard of the provisions of the Notification Act. Dr. Thresh records an instance in which two children died suddenly under conditions strongly suggestive of diphtheria. No medical man was called in, and the coroner, after causing inquiries to be made, held no inquest in either case. One case was registered as "due to influenza and sore-throat," the other to "tubercular disease since birth." We would certainly deal gently with most questions involving the conscientious scruples of any sect; but a matter like this, which in numerous ways threatens the public health—to say nothing of the gross injustice to individual children,—cannot be lightly treated, and we should be glad to see an example made of some of these Essex "Peculiars." Dr. Thresh adds that as trouble has arisen in other parts of Essex from the failure of these misguided people to call in a medical man he proposes to deal with the subject fully in his reports on this county.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6611 births and 3099 deaths were registered during the week ending March 28th. The annual rate of mortality in these towns, which had declined in the three preceding weeks from 20·7 to 19·2 per 1000, further fell last week to 18·8. In London the rate was 17·9 per 1000, while it averaged 19·3 in the thirty-two provincial towns. The lowest rates in these towns were 11·7 in Brighton, 12·2 in West Ham, 13·2 in Burnley, 13·6 in Nottingham, and 13·7 in Swansea; the highest rates were 23·7 in Liverpool, 24·3 in Birkenhead, 25·6 in Preston, and 26·1 in Manchester. The 3909 deaths included 631 which were referred to the principal zymotic diseases, against 636 and 578 in the two preceding weeks; of these, 267 resulted from measles, 177 from whooping-cough, 87 from diphtheria, 41 from scarlet fever, 31 from diarrhœa, 27 from "fever" (principally enteric), and 1 from small-pox. No fatal case of any of these diseases was recorded in Brighton; in the other towns they caused the lowest death-rates in Portsmouth, Blackburn, Nottingham, and Preston, and the highest rates in Birmingham, Salford, Oldham, Sunderland, and Birkenhead. The greatest mortality from measles occurred in Bristol, Manchester, Salford, Sunderland, Oldham, and Birkenhead; from scarlet fever in Bolton; and from whooping-cough in Cardiff, Derby, Leicester, Salford, and Sheffield. The mortality from "fever" showed no marked excess in any of the large towns. The 87 deaths from diphtheria included 51 in London, 5 in Birmingham, and 3 each in West Ham, Bristol, Liverpool, Manchester, Leeds, and Hull. One fatal case of small-pox was registered in Bradford, but not one in London or in any other of the thirty-three large towns. There were 33 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, March 28th, against 52, 42, and 43 at the end of the three preceding weeks; 2 new cases were admitted during the week, against 13, 4, and 9 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2744, against 2857, 2764, and 2773 on the three preceding Saturdays: 224 new cases were admitted during the week, against 244, 217, and 277 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had declined in the three preceding weeks from 433 to 345, further fell to 285 last week, and were 166 below the corrected average. The causes of 48, or 1·2 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Salford, Bradford, Leeds, Newcastle-upon-Tyne, and in nine other smaller towns; the largest proportions of uncertified deaths were registered in Wolverhampton, Birmingham, Birkenhead, and Preston.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·6 per 1000 in each of the two preceding weeks, declined again to 18·9 during the week ending March 28th, and almost corresponded with the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·8 in Dundee and 16·8 in Greenock to 20·8 in Glasgow and 25·6 in Perth. The 552 deaths in these towns included 21 which were referred to whooping-cough, 14 to diarrhœa, 6 to scarlet fever, 6 to measles, 4 to "fever," 1 to diphtheria, but not one to small-pox. In all, 52 deaths resulted from these principal zymotic diseases, against 72 and 70 in the two preceding weeks. These 52 deaths were equal to an annual rate of 1·8 per 1000, which was 1·2 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 35 and 29 in the two preceding weeks, further declined to 21 last week, of which 13 occurred in Glasgow and 4 in Aberdeen. The 14 deaths from diarrhœa corresponded with the number in the preceding week, and included 8 in Glasgow. The fatal cases of scarlet fever, which had been 6, 7, and 4 in the three preceding weeks, rose again to 6 last week, all of which were recorded in Glasgow. The fatal cases of measles, which had increased from 6 to 13 in the three preceding weeks, declined again to 6 last week, and were all registered in Glasgow. The 4 deaths referred to different forms of "fever" showed a decline from those returned in recent weeks, and included 2 in Glasgow. The deaths from diseases of the respiratory organs in these towns, which had been 116 and 115 in the two preceding weeks, declined to 107 last week, and were 92 below the number in the corresponding week of last year. The causes of 23, or more than 4 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 28·3 and 25·4 per 1000 in the two preceding weeks, further declined to 24·8 during the week ending March 28th. During the thirteen weeks of the quarter ending on Saturday last the death-rate in the city averaged 25·3 per 1000, the rate during the same period being 19·5 in London and 17·7 in Edinburgh. The 166 deaths registered in Dublin during the

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week under notice were within 4 of the number in the preceding week, and included 7 which were referred to the principal zymotic diseases, against 10 and 7 in the two preceding weeks; of these, 3 resulted from diarrhœa, 2 from scarlet fever, 1 from diphtheria, 1 from "fever," but not one either from small-pox, measles, or whooping-cough. These 7 deaths were equal to an annual rate of 1·0 per 1000, the zymotic death-rate during the same period being 3·6 in London and 0·6 in Edinburgh. The 3 fatal cases of diarrhœa exceeded the number recorded in any recent week. The deaths referred to scarlet fever, which had been 4 and 1 in the two preceding weeks, rose again to 2 last week. The 166 deaths in Dublin last week included 21 of infants under one year of age, and 40 of persons aged upwards of sixty years; the deaths of infants slightly exceeded the number in the preceding week, while those of elderly persons showed a decline. Five inquest cases and 3 deaths from violence were registered; and 61, or more than a third, of the deaths occurred in public institutions. The causes of 10, or rather more than 6 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN CATHCART GARNER, M.B., is seconded for service with the Egyptian Government.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Colonel A. F. Churchill, A.M.S., is brought on the Administrative Medical Staff of the Army, vice Surgeon-Colonel T. Maunsell, appointed Principal Medical Officer, Malta. Surgeon-Major John Anderson becomes Joint Civil Surgeon, Simla, when Surgeon-Major Cunningham vacates that appointment this month. The latter officer goes to Patiala in place of Surgeon-Major Owen, who goes home on leave. The services of Surgeon-Captain W. C. Sprague, M.D. (Bombay), are placed temporarily at the disposal of the Government of Bombay. The services of Surgeon-Captain P. C. Gabbett (Madras), are placed at the disposal of the Government of Madras. Surgeon-Captain A. A. Sutton, A.M.S., has been transferred from the Poona district to the Aden district.

NAVAL MEDICAL SERVICE.

The following appointment is announced:—Surgeon P. B. Handyside to the *Fox*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain James Denholm, M.B., having resigned his Volunteer appointment, ceases to be an officer of the Army Medical Reserve of Officers.

THE ARMY MEDICAL SERVICE.

The following memorial from the Medical Faculty of Queen's College, Belfast, as been sent to the Marquis of Lansdowne, Secretary of State for War:—

"MY LORD,—The Medical Faculty of the Queen's College, Belfast, respectfully submit for your Lordship's consideration their views on the Army Medical Service, and beg to submit certain changes in this service advocated by the members of the deputations from Trinity College, Dublin, and the Royal College of Surgeons of Ireland, which had the honour of a personal interview with your Lordship on March 9th. The causes that have led to the very marked decrease in the number of candidates from Ireland have engaged our serious attention, more especially as formerly a large number of the students who received their education in the Queen's Colleges entered the Army Medical Service; indeed, fully one-third of the present medical officers in the army holding Irish degrees or diplomas were educated in the Queen's Colleges of Ireland. Our experience regarding the causes that have given rise to the diminution in the numbers of our students now seeking entrance into the Army Medical Department is similar to that stated by the deputations already mentioned. The most important cause of the present unpopularity of this service is undoubtedly the position which the army medical officers hold relative to the other branches of the army, and we would support most strongly the establishment of a Royal Medical Corps. The conditions in the Royal Medical Department are, as a rule, very unfavourable to scientific work by the army medical officers, more especially in the case of those stationed abroad, and we consider that every encouragement and assistance ought to be given, so far as is consistent with the public service, to officers anxious to engage in original research or to keep themselves abreast of the constant advances in medical science. The claims of Ireland and Scotland to representation on the board of examiners for the army medical examinations are so evident and were so ably and fully stated by the deputations from Dublin that it is unnecessary for us to enlarge upon this important reform. Nothing could be more calculated to encourage our best students to enter for the army than the conviction that the board of examiners was thoroughly representative of the various medical institutions in the three Kingdoms, and that it was both unnecessary and useless to spend extra time and money in cramming the special methods or views of any particular school. We believe that the adoption of these changes would remove the serious discontent which at present exists amongst the army medical officers, and would restore the former popularity of the Army Medical Department amongst our students.

Signed on behalf of the medical faculty, by

JOHNSON SYMINGTON, M.D., F.R.C.S. Edin.,
Professor of Anatomy, and Secretary to the Medical Faculty, Queen's College, Belfast.

THE ASHANTI HONOURS.

We subjoin a list of promotions ordered by Her Majesty the Queen as a recognition of the services during the recent Ashanti campaign of the medical officers named:—Surgeon-Colonel William Taylor, M.D., to be Surgeon-Major-General; Surgeon-Major William Owen Wolseley to be Surgeon-Lieutenant-Colonel; Surgeon-Captain Walter Calverley Beevor, M.B., to be Surgeon-Major; and Surgeon-Captain James Maher to be Surgeon-Major. In view of the fact that Her Majesty recently sent a very gracious and gratifying message of thanks to those medical officers who rendered service to His Royal Highness Prince Henry of Battenberg during his illness, and having regard to the successful issue of the campaign from a medical as well as from a military point of view, we should have liked to have seen some honorary rewards also conferred on some of the medical officers. For the success of the undertaking the country is greatly indebted to the Army Medical Service for the wisdom and foresight with which the hygienic and hospital requirements were designed and to the medical officers of the expedition for their very successful arrangements and the great zeal and care with which they fulfilled their duties. The very unhealthy nature of the climate and the disastrous effects on the health of the troops which might have taken place had those arrangements been defective or bad is universally admitted, and it was fitting, therefore, that the excellent services rendered by the Army Medical Staff on this occasion should be recognised. We have to congratulate the above officers on their well-earned promotion.

Correspondence.

"Audi alteram partem."

"THE OBJECTS AND LIMITS OF OPERATION FOR CANCER."

To the Editors of THE LANCET.

SIRS,—Without commenting upon the tone or nature of Mr. Watson Cheyne's letter in THE LANCET of March 28th I would first hasten to assure him that it was only lack of opportunity and not disrespect or want of interest that prevented me from attending the Lettsomian Lectures at the Medical Society of London. I am flattered to think he should have noticed my absence from a large and representative audience. I have read Mr. Cheyne's lectures with that close attention which they well merit and which is needful for one who is still a student in these matters to understand what he has written upon a very complicated subject. Differences of opinion are allowable regarding such matters as the "cure" of cancer, and I am glad to know that I do not stand alone in the opinions I expressed. These lectures mark an important period in the surgery of malignant disease. They are valuable as much from their source as from the labour expended in collecting large masses of statistical details for future reference. I still think they would have lost none of their value and interest among those members of the profession who, even at the risk of being called "sententious," are not afraid to think and speak for themselves, if the term "cure" had been used in the more restricted sense indicated.

I am, Sirs, yours truly,

March 30th, 1896. A. MARMADUKE SHEILD.

THE CLINICAL EXAMINATION OF THE BLOOD.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of March 28th I notice a leading article dealing with the clinical examination of the blood. The subject is one of considerable importance in practical medicine, as it not infrequently happens that most valuable

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assistance in arriving at a definite diagnosis and in estimating the effect of treatment on the course of certain diseases can be afforded by periodical and systematic examinations of the blood. Till quite recently, however, but little attention has been directed, especially in this country, to this line of investigation, and you have done, therefore, a good service to clinical medicine by calling attention to the trustworthiness or the reverse of the methods commonly employed for such purpose. The remarks as to the unsatisfactory nature of the results obtained in estimating the amount of hæmaglobin in a specimen of blood by means of the hæmaglobinometer I can fully endorse, as doubtless can all who have had much occasion to make use of this instrument or others of a somewhat similar nature. The main difficulties that one has to contend with are ably set out in your leading article, and it was with the hope of obviating some, at any rate, of the possible fallacies there referred to that I wished a few years ago to make trial in work on the blood of Lovibond's tintometer, an instrument then recently introduced for the estimation of colour in various trade processes. The apparatus was kindly placed at my disposal by the inventor, and in conjunction with him I carried out a large number of experiments on blood in health and disease, the results of which convinced me that we have in this instrument an exceedingly accurate means of estimating even minute variations in the hæmaglobin power of the blood. This is so even though the blood be more or less opaque, as is liable to be the case in leucocythæmia, for instance—a condition of things which would render estimations carried out with the hæmaglobinometer altogether valueless. I demonstrated the use of the tintometer for hæmoglobin estimation in the pathological section of the British Medical Association at the Birmingham meeting (in 1891, I believe) and have since then constantly used the instrument for this purpose, and have put on record certain of the results obtained with it. A week or two ago Dr. Oliver showed, at a meeting of the Physiological Society, a simplified form of the instrument which Mr. Lovibond and he had devised, and which will doubtless come into extensive use for clinical work as soon as its superiority over the hæmaglobinometer becomes more fully appreciated. For extremely accurate work, however, and especially if the blood be at all opaque, the original and more bulky instrument is essential, and should, I venture to think, find a place in every physiological laboratory.

I am, Sirs, yours truly,

S. MONOKTON COPEMAN.

Cromwell-crescent, S.W., March 31st, 1896.

PROTEST AGAINST THE INJUSTICE OF THE MEDICAL AUTHORITIES."

To the Editors of THE LANCET.

SIRS,—I shall not regret that you have published the notice-card of mine which was sent you if it serves to reopen a question which will not be allowed to drop again until it is settled once and for all. At the same time I may be permitted to express my surprise that in the comments you were good enough to make on the card in question you should not have felt it necessary to connect it with the general scheme and design of which it was the outcome—a scheme which was contained in a series of interviews on the "Degradation of the Medical Profession," published in the *Paddington Mercury*, and copies of which were duly sent you; for without such connexion and commentary the notice—divorced, as it were, from its context—is calculated to lay me open to misapprehension, while the tone of your comment to those who do not know the circumstances is calculated to do me serious injury. But as you are unwilling to allow me space for the discussion of the various points raised on the interviews I must ask you to allow me to make the necessary personal explanation. The card, as its wording implies, was at once a protest against the injustice of the medical authorities in permitting the touting from door to door of club agents for the benefit of particular medical men and a practical solution to a state of affairs which has become well-nigh intolerable, and arose out of a question of the editor as to whether some scale of fees could not be devised which would be at once within the means of working-class people and at the same time would give the medical man "a living wage." To this I replied that I believed such a tariff was possible, and expressed my willingness to adopt it if other medical men could be found to support me in it. Meanwhile the General Medical Council had refused even its "moral disapprobation" of the club system, and had even gone so far as to say that it existed, not for the protection of the profession against the public, but for the protection of the public against medical men. We were plainly told that we were not to expect any help from them in our battle with the clubs and were left to fight the matter out as best we may. The cards accordingly were issued after consultation with, and by the approval of, a number of other local practitioners not connected with the clubs, as an experiment to see how far the battle with the clubs could be successfully fought in this particular locality by a scale of fees such as I propose, I, as the oldest practitioner, undertaking to issue the cards in my own name and on my own responsibility. As regards my own *bona fides* in the matter, I may say that the cards were sent beforehand to the different medical journals, together with copies of the interviews in the *Paddington Mercury*, inviting comments on my scheme, and intimating that I would report progress as to the results of the experiment. That it was from no jealousy of the club medical men that I issued the cards is evident from this, that not only had I the first refusal of the leading clubs when they started here some years ago, but within the last few weeks I have had again the offer of one of the largest of them, and have again refused on the ground stated in the interviews, viz., that it is impossible to do justice either to oneself or the patient unless the club rate is *doubled*—that is to say, is made 2*d*. a week instead of 1*d*., as at present. And, lastly, as I was by my new tariff to receive in future only one-half of what I had been receiving from all the old patients who fell within the wage limit laid down by me the experiment, as, indeed, it has so far proved, was a very doubtful one so far as any increase of my own income is concerned. It is too soon of course for a final judgment, but my own feeling from all I have learned is that the clubs are so deeply intrenched that nothing can prevail against them except a scale of fees on which it is quite impossible to live.

I am, Sirs, yours faithfully,

JOHN BEATTIE CROZIER.

Elgin-avenue, W., March 24th, 1896.

"THE QUESTION OF MEDICAL DEFENCE."

To the Editors of THE LANCET.

SIRS,—In reply to Mr. Horsley's letter which appeared in THE LANCET of March 28th we beg leave to say that we have nothing to add to what we have already stated on this subject, and we must decline to be drawn into the discussion of any such irrelevant matters as the alleged interference of solicitors. This is, so far as we are concerned, our last remark on this subject. Thanking you for your courtesy,

We are, Sirs, yours faithfully,

G. A. HERON,
W. BRUCE CLARKE, } Delegates of the London and Counties Medical Protection Society.

March 31st, 1896.

To the Editors of THE LANCET.

SIRS,—Your article on the report of the Medical Defence Union, Limited, raises an important point—namely, the expediency of the absorption of the Union by the British Medical Association. This absorption appears to me to be desirable solely on the ground of economy. Multiplicity of organisations—if they are to serve any useful purpose at all—implies waste of money and waste of energy, and one powerful organisation will produce far better results than any number of smaller ones. Then another point arises: Is it not probable that, if there ever is established a powerful representative authority, the present inordinate number of individual cases with which defence associations are concerned will very materially lessen. The great evils which at present are with us owe their origin in a great measure to the want of representative institutions. The corporations aim at keeping the great mass of the profession in *statu pupillari* from the cradle to the grave: so far they have had their success. However much we look back with pleasure on our school and college life, very few of us would wish to have the schoolmaster or the college don in perpetual dominion over us. That condition is, however, to a very large extent that which obtains in our profession. Lecture-room methods are very well in their proper place, but when introduced into everyday life are not likely to promote general harmony. Unless

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the majority of the members of the profession now combine to make the British Medical Association the great and powerful representative authority which it should be I see no chance of the profession exerting its full force either in the way of maintaining internal discipline or as a political factor.

The corporations have quite failed to recognise the fact that circumstances have changed and with a tenacity worthy of a better cause they cling to methods quite a century old. Under these circumstances the best policy before the profession will be found to be to say to the corporations, "by all means keep to your old world methods; we will make a corporation in which the meanest of its members will have a voice and an interest." Your article raises a second point, that of the position of a member of the General Medical Council with reference to his membership of such an association. Surely at the present time it has been shown pretty conclusively that corporation representatives sit on that Council, not to consider the interests of the profession as a whole, but the interests of the particular corporation which they represent. Why then should not members belonging to a representative body sit on such a Council? Your remarks on this head—if proof were needed at all—prove the necessity of the profession being considered as a whole and not as a mere collection of cliques, each one arrogating to itself superiority. If the corporations did not refuse corporate existence to the bulk of those who are connected with them the matter would be upon a different footing. As it is, absolutely unrepresentative of the profession as a whole or even a part, these bodies in every way promote disunion, which a united representative authority would discourage.

I am, Sirs, your obedient servant,

Hatfield, March 22nd, 1896. LOVELL DRAGE.

ACCIDENTAL RASHES IN TYPHOID FEVER.

To the Editors of THE LANCET.

SIRS,—The cases of accidental rashes occurring in typhoid fever simulating scarlet fever, published in THE LANCET of March 21st, are of considerable interest, especially, I take it, in connexion with the question of isolation. Scarlatiniform rashes during typhoid fever have come under my notice twice during two epidemics, but the following case of erythema scarlatiniform occurring during varicella appears to me unusual.

The case was that of a child aged three years who had been ailing six days; the patient had varicella eruption in various stages on the scalp, face, neck, chest, and abdomen; the symptoms were very slight. Two other children in the house were also suffering from it. On the seventh day a punctiform scarlet erythematous rash appeared over the whole of both upper and lower extremities, the temperature rose to 101° F., and the pulse to 140, the throat was normal and the tongue clean; there was conjunctivitis of the right eye. On the eighth day the rash was the same, the tongue was slightly coated with white fur, the temperature was 98·6°, the pulse 130, and the throat normal. On the ninth day the rash had quite faded, but fresh vesicles appeared on the abdomen. On the tenth day the tongue was quite clean, the conjunctivitis cleared up, and the patient was apparently well. At no time was there any albumin in the urine. No desquamation followed; the patient was under strict supervision for three weeks after. There was no scarlet fever in the neighbourhood at the time. Erythema in its many varieties is not uncommon in the district. No cause could be connected with the case with regard to medicine or diet. I have no doubt many practitioners have observed similar cases, and know how careful they had to be not to give a too hurried diagnosis.

I remain, Sirs, yours faithfully,

Newark-on-Trent, March 25th, 1896. ERNEST RINGROSE.

THE ADMINISTRATION OF PENTAL.

To the Editors of THE LANCET.

SIRS,—I trust that I may have misinterpreted Dr. Prince Stallard's paper and the subsequent discussion as reported in the syllabus of the proceedings of the Society of Anæsthetists in THE LANCET of March 14th. Dr. Stallard reported 150 cases of the administration of pental with one death; Dr. Dudley Buxton compared the reported cases of Gurlt (600, with three deaths) and Snow (238, with two deaths); in all, 988 cases with six deaths. Unless I have misread these figures we have the appalling mortality of one person out of every 164 to whom, in the practice of these anæsthetists, pental was administered to save a minute's pain. (The average duration of unconsciousness was in Dr. Stallard's cases seventy-six seconds.) The president is reported to have said that he was delighted to see members of the society pursuing their investigations into various drugs likely to become good anæsthetics. It is surely time that some old-fashioned practitioner like myself, who believes that the first object of a medical man is to preserve life, should protest against the use of so dangerous an anæsthetic, the advantages of which are stated to be: (1) that the patients recover quickly (if they recover at all); (2) no coughing, struggling, or dislike to the drug; (3) small amount required; (4) absence of after effects; (5) longer anæsthesia than nitrous oxide gas; and (6) simple apparatus. Besides five other stated disadvantages we have the fact that it is at least 100 times more fatal than other anæsthetics. I have practised surgery for more than thirty years and during that time have either myself administered or been responsible for the administration of anæsthetics in several thousand cases, and, happily, I have only seen one death (from chloroform in a prolonged abdominal operation). I cannot but compare my own experience and that of others in the use of the more ordinary anæsthetics with these reported cases of the results obtained from pental, and once more, although no specialist on the subject, protest emphatically against any further sacrifice of life from its use.

I am, Sirs, yours faithfully,

March 27th, 1896. THOMAS JAMES WALKER, M.D. Lond.

MIDWIVES' REGISTRATION BILL.

To the Editors of THE LANCET.

SIRS,—The second reading of the Midwives Bill is fixed for May 6th. In the meantime we wish to urge that the following action be taken immediately by each practitioner: 1. He should at once write to his Member of Parliament asking him to strongly oppose the second reading of the Bill, enclosing a copy of the "Reasons" against registration which may be obtained on application to the honorary secretary at the undermentioned address. 2. He should call at his earliest on the local political secretary of his Parliamentary division and ask him to communicate with his Member of Parliament his own feeling and that of local practitioners. 3. He should join at his earliest his local political association or club and ask its secretary and leading workers to write to his Member of Parliament, giving him copies of the "Reasons." 4. He should call a meeting of local practitioners, pass a resolution against the Bill, send a copy to their Members of Parliament, and ask them if they will receive a deputation of local practitioners. The same meeting should appoint a deputation and provide for the payment of travelling expenses. The local political secretary would arrange for it with their Members of Parliament.

We do not place much faith in the passing of mere abstract and academic resolutions or the signing of petitions. If the majority of practitioners in each Parliamentary division will write at once to their Members of Parliament asking them to oppose the Bill, sending them a copy of the "Reasons" signed by local practitioners, obtain the help of their local political secretary and of their local political and lay friends, these practical methods will give the best results. A list of Members of Parliament will be found in *Whitaker's Almanac*, pp. 135-145, and the address "House of Commons, London," will find them. As it is necessary that all opposition be organised in London, will practitioners please let the honorary secretary know the replies from their Members of Parliament? Funds are required to successfully oppose the Bill; we therefore propose that a "Midwives Bill Opposition Fund" be now formed. Copies of the "Reasons," pamphlets, and other information may be obtained from the honorary secretary.

We are, Sirs, yours faithfully,

C. CAMPBELL, W. W. HUGHES,
L. DRAGE, L. KIDD,
J. M. DOLAN, LAWSON TAIT,
G. C. SHUTTLEWORTH, R. R. RENTOUL (Hon. Sec.).

78, Hartington-road, Liverpool, March 28th, 1896.

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"DEATH UNDER CHLOROFORM AT A DENTIST'S ROOMS."

To the Editors of THE LANCET.

SIRS,—Mr. Wardill's letter upon this subject in THE LANCET of March 21st raises many important questions, upon one or two of which I should like to be permitted to make a few remarks. I quite agree with those who think that nitrous oxide should be the main anæsthetising agent in all tooth-extraction work—nitrous oxide alone in the majority of instances and etherised nitrous oxide in cases of multiple extractions. The extent to which these agents will suffice for dental work is capable of numerical proof. For example, I have records in my own private note books for the past year of seventy-nine cases in which from four to six teeth were extracted, and of thirteen in which seven teeth and upwards were removed, including one case of fourteen extractions, one of thirteen, two of ten, and two of eleven. These figures refer, of course, to single sittings; no hospital cases are included in these records; and in all nitrous oxide was the main anæsthetising agent. With such figures as these before one it is difficult to say that chloroform should be preferred in any case. For surgical reasons I am always inclined myself to doubt whether it is judicious to advise the extraction of large numbers of teeth at a single sitting. But assuming that such a proceeding is absolutely imperative in some circumstances I would urge that these cases should be treated, not so much as tooth extractions pure and simple, but rather as operations about the mouth, and I would submit that for operations about the mouth the "dentist's rooms" are certainly not the proper place. Such operations should be performed either at the patient's home or in some institution where proper nursing is available, and, in fact, the ordinary operative routine, as distinguished from the routine of simple tooth extraction, should be adopted in every instance. Until this plan is adopted I fear that we shall continue to hear of accidents such as have been recently reported. I believe that I am right in saying that those who are responsible for the teaching of anæsthetics in our medical schools are absolutely unanimous in condemning the administration of chloroform in the dental chair; in fact, some go so far as to teach that the proceeding is not justifiable under any circumstances. If the matter were put to the patient in this way it would be seldom, I think, that he would hesitate to adopt the more cautious plan of two or three sittings, or that he would grudge the slight extra expense which might be involved.—I am, Sirs, yours faithfully,

J. F. W. SILK,
Anæsthetist and Instructor in Anæsthetics at King's College Hospital; Anæsthetist to Guy's Hospital Dental School.
Weymouth-street, W.

"THE DUTIES OF DIVISIONAL SURGEONS IN CASES OF INFECTIOUS DISEASES."

To the Editors of THE LANCET.

SIRS,—In reply to the letter published in THE LANCET of March 21st by Dr. Thyne, as I am the divisional surgeon referred to in that letter I consider it only right to give you my explanation. The charges made I admit are quite correct as stated in his letter, but that gentleman omits to tell you that he has frequently within the last year done exactly the same to patients of mine; and that he takes every opportunity he gets to make the duties of divisional surgeon as disagreeable as he can. I have been in practice in Barnet twenty years; during the whole of that time the families of the police were attended privately by me and the other medical men resident in the town until within the last three years, when Dr. Thyne offered his services at the following rates: woman and child, 1½*d.* per week; a whole family, no matter how many children, 2½*d.* per week. For this sum he contracted to attend all illnesses, including fractures, dislocations, operations, and infectious diseases, and for this splendid remuneration were included the families of divisional inspectors, inspectors, station sergeants, sergeants, and constables, whose weekly wages are £4, £3, £2 15*s.*, £2 8*s.*, £1 14*s.*, £1 12*s.*, £1 10*s.*, and £1 7*s.* In this town there is only one other society, the Mutual Aid Society, who provide medical attendance for the families of the working class. They pay their medical officer, Dr. Mercer, 6*d.* per week for a whole family, or 2*s.* per month, against Dr. Thyne's 9*d.* per month. I ask you, Sirs, is he acting fairly towards his brother practitioners? Is it not degrading to the profession of medicine? Perhaps your Commissioner will include this case in his essays on the "Battle of the Clubs."

I am, Sirs, yours faithfully,

W. J. HARNETT, F.R.C.P. Edin.,
Divisional Surgeon, Barnet.
Belvedere House, Barnet, March 24th, 1896.

"THE SCHOTT TREATMENT OF HEART DISEASE."

To the Editors of THE LANCET.

SIRS,—Dr. Leith's paper, published in THE LANCET of March 21st and 28th, is one of the few serious attempts to place Schott's system on a scientific basis, and as such deserves critical study. With most of Dr. Leith's conclusions I entirely agree, but there are some important points which he appears to me to miss, and a few of these I propose to briefly touch upon. 1. Dr. Leith admits that the respiratory movements are amplified by both the baths and exercises; but he does not think that this amplification governs the circulation, arguing that the accelerating influence of the deep inspirations is counterbalanced by the retarding effect of the expirations. It must, however, be remembered that it is only when expiration is forcible, or when it proceeds beyond the ordinary limit, when, in fact, it is "extraordinary," that it appreciably retards the circulation; and in the case before us it is doubtful whether it is either forcible or extraordinary, it being essentially a passive recoil from a state of amplified inspiration. 2. I would suggest that the retraction of the abdomen and ascent of the diaphragm which take place in the bath are only in part, if they are at all, due to the pressure of the super-incumbent water. The effect of cold when applied to the body is to cause expansion of the bony thorax and to excite costal respirations. Witness the effect of dashing cold water on the back—a deep sigh results, and a sigh is essentially effected by means of a costal respiration. This costal expansion, together with the contraction of the abdominal muscles which results from the cold, causes the flattening of the abdomen observed in the bath. 3. The effect of this latter is to increase the intra-abdominal tension, and the inferior cava and splanchnic veins being thus compressed the return of blood to the right heart is impeded, so that this chamber has an opportunity of disgorging itself of any excess of blood it may contain, a process that is favoured by the deepened inspirations. 4. I have said that cold tends to increase the tonic contraction of the muscles. One is conscious of a widespread semi-voluntary contraction of the muscles when cold is applied to the body, the individual bracing himself up, as it were, to resist the cold. Now the effect of this increased muscular tone is to attract blood to the muscular system and to hinder the venous outflow from it; and this further tends to diminish the input of the right heart. 5. Resisted movements have a similar effect. Dr. Leith quotes an opinion of Dr. J. F. H. Broadbent—one he himself is inclined to share—to the effect that the resisted movements "press upon the veins and favour the return of the venous blood to the heart." This is the very thing I believe they do not do. Writers on the Schott treatment have entirely lost sight of the important fact that a resisted movement implies a widespread tonic contraction of the muscles. When such a movement is made, not only are the muscles especially engaged in it tonically contracted, but there is an increased tonic contraction of numerous others in order to preserve the equilibrium (for be it observed these movements are nearly always performed while the patient is standing). In short, almost the whole muscular system is thrown into a state of tonic contraction. The effect of this, like that of cold, is to attract blood to the muscles and at the same time to diminish the venous outflow from them, the flaccid veins being *continually* compressed; intra-abdominal tension is, moreover, raised by the tonic contraction of the abdominal muscles, and the flow in the splanchnic veins and inferior cava thus impeded. 6. The baths increase the mean arterial resistance and thus tend to limit the arterial output, and I am not sure that widespread tonic contractions have not the same effect. Be this as it may, I am convinced that the Schott system does not benefit, as many suppose, by diminishing peripheral resistance, but rather by increasing it. There can be no doubt, as Sir William Broadbent has so ably

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insisted, that a great deal of heart disease is causally associated with prolonged high tension, and that a high peripheral resistance is an essential factor in initiating dilatation of the left ventricle. Nevertheless, it is only in a limited number of cases of heart failure that we are called upon to reduce peripheral resistance, and then only as a temporary measure. In the worst cases radial tension is generally low, and the meagre stream of blood escapes all too readily into the already overgorged veins. In such cases we seek to increase rather than to diminish resistance, and the good effects of digitalis are in no small measure referable to its constricting influence on the arterioles. Sometimes, indeed, vaso-motor constriction occurs as part of the general scheme of compensation, as happens more particularly in mitral obstruction and in obstruction originating in the pulmonary circuit. 7. I have argued that the baths and resisted movements tend to limit the flow into the right heart; but how, it may be asked, can this conclusion be reconciled with the undoubted fact that the entire circulation is accelerated by their means? The answer is that the flow into the right heart is only relatively diminished — i.e., when considered in relation to the increased cardiac activity. There is no doubt that both the baths and movements stimulate the right heart (how we need not stop to consider), so that, while on the one hand blood is prevented from flowing too readily out of the arterial system, the supply to the veins being thereby limited, and while on the other hand the flow from the veins into the right side of the heart is impeded, this organ is incited to aspirate and urge on the blood with increased force, while at the same time the deepened inspirations favour the pulmonary flow. And here, Sirs, I must end, though I have only been able to touch upon the fringe of this important subject. In conclusion I beg to express my deep obligation to Dr. Leith for his valuable paper. I am, Sirs, faithfully yours,

Devonshire-street, W., March 28th, 1896. HARRY CAMPBELL.

"AN INQUIRY INTO THE PHYSIOLOGY OF THE ACTION OF THERMAL SALINE BATHS AND RESISTANCE EXERCISES IN THE TREATMENT OF CHRONIC HEART DISEASE."

To the Editors of THE LANCET.

SIRS,—The following references have appeared since the date of delivery of this paper and while it was in the hands of your printers:—

53. Herschell: Critical Remarks upon the Nauheim Treatment of Heart Disease, THE LANCET, Feb. 15th, 1896, p. 413. He failed to get any favourable results in his cases and entirely condemns the system. 54. Brown (Ralph): The Nauheim Treatment of Heart Disease (a letter). THE LANCET, Feb. 29th, 1896, p. 585. He emphasises the influence of CO_2 and its absorption by the lungs. 55. Bezly Thorne: Notes on Certain Changes in the Cardio-vascular System which are Induced by Treatment according to the Schott Methods, Brit. Med. Jour., March 14th, 1896, p. 653. He distinguishes an oval, bipartite, and conoid form of dilated heart as made out by auscultatory percussion, a method which is, in my opinion, quite untrustworthy, and has given him illusory results. 56. Kingscote: Fifteen Months' Practice of the Schott Methods for the Treatment of Chronic Affections of the Heart, THE LANCET, March 21st, 1896, p. 761. He gives seven cases, but we fail to follow him in his *rationale*. 57. Bezly Thorne: Self-poisoning in Heart Disease and its Relation to the Schott Method of Treatment, THE LANCET, March 21st, 1896, p. 755. 58. Bowles: The Nauheim and Schott Treatment of Diseases of the Heart, a paper read before the Harveian Society of London, March 19th, 1896. He supported the methods *in toto* and gave four corroborative cases.

I am, Sirs, yours faithfully,

Edinburgh, March 24th, 1896. R. F. C. LEITH.

"RUPTURE OF THE TERMINAL EXPANSION OF THE EXTENSOR COMMUNIS DIGITORUM."

To the Editors of the THE LANCET.

SIRS,—Dr. F. G. Wallace's case of rupture of the terminal expansion of the extensor communis digitorum[1] reminded me of a similar case which came under my care on July 16th, 1895. The patient, a man aged fifty-five years, of a delicate constitution, while trying to lift a pillow weighing about 500 drachms, felt something give way with a snap in his left ring finger, but felt no pain. On looking at it he was startled to see the third phalanx flexed almost at right angles to the second. I saw him immediately after. The phalanx could be easily pushed straight, but would soon drop to its former position if left alone. On the lower third of the dorsum of the second phalanx a small, tender swelling could be seen, which was undoubtedly the point where the ruptured end of the tendon had been drawn. The groove corresponding to the second phalangeal joint could be felt more distinctly in this finger than in the others, especially when the third phalanx was held in a position of semi-flexion, owing to the rupture of the expansion of the tendon which forms the posterior ligament of the joint. I soon put the whole finger, completely distended, in plaster of Paris, in order to put the joint in a sure state of complete rest. In two weeks the plaster was removed and the joint was found to be better; some movement could be seen in it. I put it again in plaster for fifteen days more, at the end of which I found the joint quite movable, but not easily and freely, the swelling at the dorsum of the second phalanx was smaller and the tenderness had by this time disappeared. For fear of having the tendon ruptured again I put it for fifteen days more in plaster, and when this was removed the joint was seen to be strongly and freely movable, the swelling almost gone, and the man is now as well as ever.

I am, Sirs, yours truly,

Alexandria, March 10th, 1896. S. F. SHAMOUN, M.D.

[1] THE LANCET, Feb. 29th, 1896.

CONFIDANT OR INFORMER?

To the Editors of THE LANCET.

SIRS,—In a recent libel case Sir John Williams is reported to have said that "a medical man is obliged to inform the Public Prosecutor of any crime which has been committed or is intended to be committed." I do not know what significance Sir John Williams attaches to the term crime, but I take it that he uses it not in the literal sense of a matter for inquiry, but in the conventional sense of a violation of the law. Attempted suicide is "a crime under the law," to employ an expression used by Mr. Justice Hawkins, and I should like to ask if it is held that a medical man who is called on to attend a patient who has taken poison admittedly for suicidal purposes and who recovers is bound to communicate with the police. Speaking from personal experience, I may say that I have attended many patients under these circumstances and that I have never given information. If the patient dies there is an inquest and the matter settles itself, but to go away from the patient's bedside after saving his life and denounce him to the police seems to me to be a hateful taste and to be contrary to all principles of morality. Rather than do so I would take my chance of being charged as accessory after the fact, for I am sure no jury would convict under the circumstances. In spite of the respect which, as an old pupil, I naturally entertain for the high position of Sir John Williams, I am bound to say that I do not appreciate this new code of ethics, and I am sure that it will be a bad day for the profession when the public cease to believe that their secrets are held inviolate by their medical advisers.

I am, Sirs, yours faithfully,

WILLIAM MURRELL.

Welbeck-street, Cavendish-square, W., March 27th, 1896.

THE TWELFTH INTERNATIONAL MEDICAL CONGRESS AT MOSCOW.

To the Editors of THE LANCET.

SIRS,—I have received a further letter from Professor Crisman, the general secretary of the next International Congress, in which he tells me that the question of languages is to be reconsidered by the executive committee, and that in all probability the English language will be admitted to equal rights with German, Russian and French. The letter continues: "This will be done because it has become clear that the exclusion of the English language would not be well received by our English colleagues, and the committee do not consider themselves justified in insisting on their first decision if the general opinion of our English colleagues is clearly against it. You may rest assured that the committee, in discussing this question and coming to their first decision, were guided solely by considerations of what would be of

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advantage to the Congress, and were far from having in view the national aspect of the matter."

I am, Sirs, yours faithfully,
YOUR ST. PETERSBURG CORRESPONDENT.

"ASSISTANTS."

To the Editors of THE LANCET.

SIRS,—I have read the letter in THE LANCET of March 21st signed a "Sorely-tried Principal," and with your permission I will state my opinion of principals in general, backed by an experience extending over three years as assistant in various practices. The average general practitioner holding club appointments, and, therefore, requiring a qualified assistant, is lamentably ignorant, not only in the use of drugs, but in all recent hospital work, and as a rule treats his assistant little better than a horse, endeavouring to get as much work out of him as possible and at the same time paying him a small salary which many shop-boys would despise. We assistants as a class are in a disgraceful position, being merely paid servants of our employers, and it is quite time that we should endeavour to combine and better our status. Whenever I read in the "Battle of the Clubs" medical aid societies sweating their medical officer it occurs to me that the principal sweats his assistant ten times worse. The public in general are disposed to blame an assistant if he leaves his principal, but in my experience life frequently with the latter is little short of a mild hell, and that is saying a good deal. I am sorry to say that assistants are a necessary evil as long as club practice exists. We have the remedy in our own hands—that is, proper combination for our own mutual interests. Apologising for trespassing on your valuable space,

I am, Sirs, yours truly,
March 24th, 1896. A SORELY-TRIED ASSISTANT.

THE BATTLE OF THE CLUBS.—XXVI.[1]

(FROM OUR SPECIAL COMMISSIONER.)

(Continued from p. 805.)

NOTTINGHAM: THE LONDON AND MANCHESTER INDUSTRIAL ASSURANCE COMPANY, LIMITED.—THE PUBLIC-HOUSE MEDICAL AID CLUBS.

ALTHOUGH there are a great many organisations for providing medical aid in Nottingham it is principally against the London and Manchester Industrial Assurance Company, Limited, that the members of the profession in this town have taken up arms. Judging from the experience acquired in other towns this special feature of the struggle at Nottingham seems to me somewhat surprising. I am anxious not to dogmatise; I do not pretend to know more than what has come under my personal observation; I simply record facts as they happen to present themselves to me. Now it may be a mere coincidence—perhaps in other towns I may collect evidence of an opposite character—but I feel bound to record as a matter of fact that till the day I reached Nottingham I never came across any practitioner who complained of the action of what is familiarly called the "London and Manchester." On the contrary, many a practitioner has, while complaining bitterly of different medical aid associations, ended by saying that the London and Manchester Company was "all right." The system, doubtless, was "all wrong," but in actual practice there was nothing particular to complain about so far as the London and Manchester Company was concerned. Perhaps in Nottingham the agents of this company have not displayed their usual tact. The trouble, I am told, began in the following manner. A well-known practitioner was attending a patient whose annual bill amounted to a sum of £10. The patient, however, joined the London and Manchester, and then the practitioner discovered that henceforth he could only hope to receive 4*s.* where he had formerly been paid £10. Seeing that the patient was a man of means, it was very natural that his medical attendant should feel somewhat wrathful and he communicated his resentment to the Nottingham Medico-Chirurgical Society. The matter was taken up and this was the commencement of the discussions that have led to the formation of a medical union, as already fully described. It was now found that the agents of the London and Manchester Industrial Assurance Company, Limited, were distributing all over the town a circular bearing the name and address of twenty Nottingham practitioners, several of whom are men who hold the highest position in the town. On one side of this handbill or circular it is stated that the company was established in 1869, is incorporated under Act of Parliament, with authorised capital of £100,000. Then there are tables divided into seven columns, each column relating to seven different rates of payment, which vary from 2½*d.* to 7½*d.* per week. Thus, in the first column, one reads that a person who will be eleven years old on his next birth-day can insure his life for the amount of £10, and also receive medical attendance and medicine during illness, for the payment of 2½*d.* weekly. Each year the sum insured is smaller. At twenty years of age it is £8 5*s.*; at thirty years, £6; at from sixty-five to seventy years only £1. As the danger of death increases the amount insured is decreased: no difference, however, is made as the danger of illness increases. At most the medical officer receives a penny a week, whether the subscriber be young or old, healthy or feeble. It is even expressly stated on the circular that no medical examination is required if the sum insured is under £20, unless the subscriber is more than fifty years old. Then there is a second table dealing with the infantile department. Here are set forth the sums payable at death in exchange for a subscription of 2½*d.* per week, which includes medical attendance and medicine during illness. Thus if a child under one year old is insured and dies after three calendar months, £1 10*s.* is paid; if after one year, £2 15*s.*; and after ten years, £10. On the other side of the circular is the following announcement:—

"The distinguishing feature of this company is, that it not only enables persons to assure for a sum payable at death, but also to secure in case of illness the best medical attendance (at their own homes whenever necessary), medicine, and advice, the two benefits being combined for the small sum of 2½*d.* per week. Over 1000 duly qualified medical gentlemen are attached to the company throughout the country, and members are transferred from one district to another free of charge. Members are allowed to choose any doctor on the company's staff, no pressure being put upon them to have any particular one. There are no entrance fees, fines, or levies of any description."

Then examples are given of the working of the insurance, and in each case stress is laid on the advantage of the medical aid. Thus in the margin of the circular is printed:—

"Example.—A person forty years of age next birthday at time of entry can secure the best medical attendance and medicine in illness and £4 payable at death for a premium of 2½*d.* weekly. If a premium of 3½*d.* weekly be paid the sum payable at death is £9."

Then we are informed that no better proof of the success of the company can be given than the fact that 141,135 new policies were issued during the past financial year. Following on the purely business statements that are printed on this little circular or handbill—which can be distributed anywhere, slipped under doors, or dropped into letter-boxes—are the names, addresses, and qualifications of twenty Nottingham practitioners. The same circular is used in other towns, the names and addresses of the medical officers alone being altered. It is this advertising of medical men that has especially vexed the profession at Nottingham, and several of the medical officers in the service of this company are most anxious to have their names erased from this circular, but rightly conceive

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Aug. 24th, 1895, Brussels; (2) Aug. 31st, 1895, Brussels; (3) Sept. 21st, 1895, Portsmouth; (4) Sept. 28th, 1895, Portsmouth; (5) Oct. 5th, 1895, Eastbourne; (6) Oct. 12th, 1895, Lincoln; (7) Oct. 26th, 1895, Lincoln; (8) Nov. 2nd, 1895, Grimsby; (9) Nov. 9th, 1895, Bexhill-on-Sea; (10) Nov. 16th, 1895, Hull; (11) Nov. 23rd, 1895, Hull; (12) Dec. 7th, 1895, York; (13) Dec. 14th, 1895, Northampton; (14) Dec. 21st, 1895, Fermanagh Medico-Ethical Association; (15) Dec. 28th, 1895, Northampton; (16) Jan. 4th, 1896, Birmingham; (17) Jan. 18th, 1896, Birmingham; (18) Jan. 25th, 1896, Club Practices in Rural and Mining Districts; (19) Feb. 1st, 1896, The Formation of a Provident Medical Association at Folkestone; (20) Feb. 8th, 1896, The Manchester Medical Guild and Medical Aid Associations; (21) Feb. 15th, 1896, The Leicester and Leicestershire Provident Dispensary; (22) Feb. 22nd, 1896, The Organisation of the Profession at Leicester; (23) March 7th, 1896, Loughborough: Local Efforts Defeated by Consultants from Neighbouring Towns; (24) March 14th, 1896, Medical Aid Societies in Small Heath; Medical Clubs at Stockport; (25) March 21st, 1896, General Meeting of the Profession and the Formation of a Union at Nottingham.

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that more good will be done by organising first and then resigning collectively.

Apart from this question of advertising medical men, which is not peculiar to the London and Manchester Company but is practised by all insurance companies, I was anxious to ascertain what were the special complaints against this particular company. After some search I discovered a practitioner who very kindly gave me a full account of his experiences. Several years ago he established himself in a growing district on the outskirts of Nottingham. Houses were then in the course of construction, many streets being barely laid out and as yet possessing no houses. When he had been here a little more than a year and had already acquired some popularity among the neighbours he was approached by an agent of the London and Manchester Company, who wanted to engage his services as one of the medical officers of the company. Having acquired some experience of this sort of work in another town the medical man in question at first refused this offer. The agent of the company urged that it would make him known, but my informant shrewdly suspected that the boot was on the other foot; that he was known and the company was not known, and that the insurance agent was anxious to avail himself of the popularity which the practitioner had acquired. However, the agent went on to explain that the insurance company did business with very poor working people and persons who had large families. When ill these people would certainly send for my informant; he would have to attend to them, but he would not be paid for his services. He might send in his bill, but this class of patients were too poor to pay. On the other hand they might be persuaded to pay a small insurance premium, and that would be better than nothing. This, in any case, was a well-founded argument, for with a certain class of persons the only prospect of payment is by weekly instalments. Thereupon the medical practitioner in question consented to become one of the medical officers of the London and Manchester Company, it being understood that the agent would only enrol a small number of subscribers and these were to be recruited from among the class of very poor people who could not be expected to pay in any other way. To my informant's surprise he soon found that the number of patients went up by leaps and bounds. The agent was most active. He even persuaded out-patients of the hospitals to join. This naturally increased the proportion of patients who were subscribers and unduly augmented the practitioner's work, for, as stated above, there is no medical examination for persons who insure for less than £20.

In a little while it became apparent that where there was a family of several children it was always the unhealthy child whose life was insured, while the healthy children were not insured, thus entailing on the medical officer the maximum amount of work for the minimum amount of pay. On one occasion a woman who was in a dying condition was allowed to insure. The medical officer protested, but the agent answered that it did not matter as the woman would surely die before she had paid enough to be in full benefit. The medical officer thereupon retorted he would send in his bill for full medical fees to the company as they had called him in. If they intended to shirk their responsibilities he would do so also. The result was that the company on the death of the patient paid a much larger sum than they would otherwise have done. It will be seen that no thought is given as to the medical officer's interests. It does not matter how much work he has to do or money to spend in the providing of drugs. Soon it became evident that the agent was not working exclusively among the poor who could not be expected to pay medical fees. On the contrary, he had enrolled well-to-do tradesmen and solicitors' clerks, and was beginning to neglect the streets where the poor people lived. When the medical officer complained the agent replied, "Oh, we can get better people in than that." Looking at the matter from the money-making insurance point of view, the agent failed to realise that he had by that one sentence aptly described the irreconcilable character of the interests of his company and those of the medical profession. The agent was proud of the fact that he could afford to neglect the poorer people, forgetting that the medical officer had consented to serve on the condition that he should be called upon to attend only the poor, and that it was essential the "better people" should not be insured against sickness at rates only applicable to the very poor. Finally my informant found that the agent followed him about and noted the address of his private patients, called upon them, and persuaded them to insure their lives. They would then be attended by their own medical man just as formerly, but would only have to pay a penny per week instead of 2*s*. 6*d*. or more per visit. Many persons were thus persuaded to join the insurance company, and the medical officer lost several of his paying patients. This brought matters to a climax and my informant wanted to resign, but the other medical practitioners of the neighbourhood persuaded him not to do so, on the ground that the company would surely bring down a new practitioner and that there were already medical men enough in the town. He then said that instead of having 600 to 700 subscribers to the London and Manchester Company on his books he would only take 200, so as to have only the poor. But this did not work well and my informant finally resigned. Thereupon the superintendent of the company came down to see if he could not arrange matters. He confessed that the company would lose a good deal if the medical officer persisted in resigning, and at a recent meeting the directors of the company had stated that, thanks to the work done by the medical men, they were able to declare a good dividend. This very clearly shows that medical men are utilised by financial companies for speculative purposes and that it is all a matter of business and not a question of philanthropy.

My informant, in spite of all the persuasion brought to bear, persisted in resigning, and the company consequently wrote him a letter to the effect that they must make arrangements "to take over the practice." This sentence will be duly appreciated. After successfully pursuing an expensive course of studies a medical man establishes himself in a district, he not only creates for himself a good practice, but he enables an insurance company to effect a great many insurances; and then, when he no longer cares to work for this company, they coolly write and inform him that they must make arrangements to take over his practice. Nor is this an empty threat; it is too often very effectively carried out. In the present instance the company, it is true, were not very successful. They brought a medical man down, and it was thought that he would settle in the district, but it did not seem to suit him and he has gone away. Then they persuaded two young medical men who live in Nottingham and at some distance to open small surgeries in the district in question, where they attend now and then. But this is not very successful, and my informant is now getting back many of the patients he had lost.

There are a number of other insurance companies in Nottingham and many clubs and friendly societies. The usual complaints are made about these institutions. They enrol many comparatively wealthy people, and one of the mayors of Nottingham was a member of a friendly society and did not scruple to claim medical aid at club rates, notwithstanding the high position he occupied. But the worst feature is the existence at Nottingham, as at Grimsby, of public-house slate clubs. The only difference is that they have adopted a better title. The call themselves "sick and annual clubs." This certainly sounds a little better, but it is not flattering to see hung up over a public-house bar an announcement that "A Sick and Annual is held here," followed by the name and address of the medical man whose services have been secured. Some publichouses go to the extent of having the announcement engraved on a brass plate; perhaps this is thought more professional. The system is the same, the subscription usually being 6*d*. per week. A sick allowance of 5*s*. for six weeks is often made, and in all cases medical attendance and medicines are provided. Whatever money remains in hand at Christmas is evenly divided among the subscribers by the publican. The payment made by the publican to the medical man seems, however, somewhat higher than at Grimsby. Not long ago a publican asked a Nottingham practitioner how much he would take to attend the club which the publican was about to establish. The price mentioned was 4*s*. The publican subsequently called on another practitioner, who, hearing that 4*s*. had been demanded, offered to take the club for 3*s*. 6*d*. The publican then called on a third medical man, with whom he closed the bargain for 3*s*. 4½*d*. While medical men thus undersell each other for the honour of being medical officers to a public-house club, it is rather difficult to uphold the honour and dignity of the profession. A well-known Nottingham practitioner related to me that he had very recently been asked to become medical officer of one of these public-house clubs. The publican explained that he had enrolled 60 members and wanted them to be admitted without medical examination. This might be considered as

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a sort of privilege given to the founders of the association, but he had 120 more persons who would in all probability join, and these might be medically examined before admission. The publican urged that it would be a very good club, that all the neighbouring shopkeepers had joined, and that if the medical man did not accept the position he would lose many of his patients. Indeed, as these public-house clubs are more expensive—at least 6*d*. a week—they recruit a number of small tradesmen and better-paid artisans, a class of men who to a very great extent can afford to pay medical fees and should not belong to medical aid associations. It is sincerely to be hoped that now a medical union has been formed at Nottingham a determined effort will be made to put an end to this degrading exploitation of medical men by publicans.

UNITED ACTION AT LINCOLN.

AT a meeting of the medical practitioners in Lincoln, held at the Lincoln General Dispensary on March 30th, the following resolutions were unanimously adopted and signed by *all* the medical men practising in Lincoln. The signatures include those of the four medical officers to the two medical institutes in Lincoln. A guarantee fund has been started, and considerably over £100 is already promised.

Resolution.—We, the undersigned medical practitioners in the city of Lincoln, have agreed that the following rules and scale of fees ought to be adopted in all medical clubs under the Friendly Societies Acts and in all medical aid associations:—

1. That no one shall be entitled to medical attendance whose income from all sources shall exceed £2 per week, nor shall anyone be so entitled whose rental shall exceed £20 per annum.
2. Members whose income exceeds £1 per week shall pay for medical attendance on themselves at the rate of 4*s*. 4*d*. per annum, for attendance on their wives 5*s*. per annum, and for attendance on each child 4*s*. 4*d*. per annum, but only four children shall be charged for in any one family.
3. Members whose income does not exceed £1 per week shall pay for medical attendance on themselves at the rate of 4*s*. 4*d*. per annum, for attendance on their wives 4*s*. per annum, and for attendance on their children 4*s*. per annum.
4. Members of juvenile clubs shall pay for medical attendance on themselves at the rate of 4*s*. 4*d*. per annum.
5. That extra fees shall be charged as follows: Dislocations, fractures, and major operations as allowed for by the Local Government Board. Minor operations, 5*s*. Extraction of teeth, 1*s*. Confinements, 10*s*. 6*d*.; operative midwifery, 15*s*. Vaccination, 1*s*. 6*d*.; with calf lymph, 2*s*. 6*d*. Consultations with another practitioner, 5*s*. Examination previous to admission: adults, 2*s*. 6*d*; juveniles, 1*s*. Certificate required by members for other clubs, 1*s*. each certificate.
6. That the medical officers shall receive the whole of the above fees after the deduction of the legitimate expenses.
7. That three months' notice on either side shall be required to terminate the engagement of any medical officer.
8. It is strongly recommended that the medical officers of these societies should be *ex-officio* members of the committee of management.

We further agree and declare that we will not accept office or continue in office as medical officer to any friendly society or medical aid association which does not adopt these principles. We also agree and declare that we will not meet in consultation or otherwise any medical practitioner who accepts office to any of these institutions which have not adopted these principles. In the event of the dismissal of any medical officer on account of his acting in agreement with these decisions we undertake to use our best endeavours to get such officer reinstated, or failing that to do all in our power to secure for him another appointment.

Signed—

E. MANSEL SYMPSON.
GODFREY LOWE.
EDWIN C. PALMER.
C. H. HOSKYNS ABRAHALL.
F. BASTOW COOPER.
FRED. S. GENNEY.
L. BEW TODD.
D. J. G. WATKINS.
C. M. DAVIDSON.
A. P. RUSSELL.
C. HARRISON.
JOHN T. COLLIER.
B. MCFARLAND.
G. H. MOUNSEY.
F. J. MASON.
F. C. P. HOWES.
W. H. B. BROOK.
DAVID JOHNSTON.
FRED S. LAMBERT.
G. M. LOWE.
P. W. YOUNG.
H. EAST.
A. DEAN ROBERTS.
E. WHITWELL.
WM. JNO. MCDADE.
W. J. CANT.
GEO. HUTCHINSON.
J. STILL THOMSON.
T. H. WHITE.
WM. O'NEILL.
C. BROOK.
ALBERT LOUIS PEACOCK.
F. H. ATKINSON.
W. A. CARLINE.

THE ASHANTI EXPEDITION.

(FROM OUR SPECIAL WAR CORRESPONDENT.)

I.

Home Preparations for the Expedition with an account of the Hospital Ship "Coromandel."

WE now commence the six articles dealing exhaustively with the late Ashanti Expedition, which we promised to place before our readers at an early date. In connexion with the description of the *Coromandel* we refer our readers to a paper by Dr. Murray Braidwood, which appears on p. 914.

With the occupation of Kumasi, the arrest of King Prempeh and his entire suite, the surrender of Ashantiland, and the return to England of our forces, another British military undertaking has, without bloodshed happily, been brought to a most successful termination. It perhaps will be as well if a retrospect of the past be taken in order to ascertain how important a factor our English military medical service and its organisation have proved in securing their own measures of success during this short but brilliantly conducted West African campaign. Be it remembered it was surmised from the first that this undertaking would turn out to be a "Doctors' War." Undoubtedly, it has throughout proved to be so. With only two or three exceptions the physician's rather than the surgeon's skill has been largely requisitioned to combat the disastrous effects of this West African malaria, a terrible kind of remittent fever which has not only cost the nation the lives of some distinguished, well-beloved, commissioned officers, and of some 12 non-commissioned officers and men, but has in addition prostrated in sickness a large number of those who, in the pride of life and best of health, went out from England only some three months back to take part in this campaign. In the columns of THE LANCET[1] published a few days before the bulk of the expedition was fairly *en route* certain facts were noticed regarding the peculiar features of the climate likely to be experienced by our countrymen when they reached West Africa, and a few suggestions were at the same time put forward by way of precaution, by the adoption of which it was hoped that some of the climatic evils certain to be encountered might be lessened in their effects if it were not possible to escape them altogether. First of all it was pointed out that malarial remittent fever of a serious type, dysentery, and heat apoplexy were the diseases most likely to be met with by our European troops to be employed on this service. Secondly, it was remarked that the heat, although somewhat great at times during the middle of the day, was not nearly so much to be dreaded as a rapid fall in the temperature at night time, as well as the presence of fogs in these malarious districts which, coming on just after sunset and remaining till perhaps ten or eleven o'clock the following day, would envelop everything in a dense, white, damp mantle. Thirdly, it was urged that the greatest care would have to be exercised in the selection of water intended for drinking or culinary purposes, all reports having proved that water in Africa should be considered and treated as suspicious, polluted as it is, more or less, with animal and vegetable matter, rendering it a potent source of disease, especially as one of the principal causes in producing dysentery, a complaint occupying a premier position amongst the many dangerous ailments in that unhealthy climate. Not only previously to starting but also during the passage out to Cape Coast Castle the medical staff were busily engaged in putting their practical precautions into shape, and by incorporating them in the general list of orders issued to all officers in charge of bodies of troops they left no stone unturned in the way of early warning. The medical orders were as succinct as they were unmistakable, hence no error in their interpretation or meaning could be made by those commanding nor could any excuse have been allowed for disaster arising out of wilful negligence by the careless non-observance of them.

With regard to the general orders, it may first be noted that the men were to have a cup of tea or coffee immediately on rising. Breakfast was to be partaken of in the middle of a march, or about two hours after rising. Secondly, helmets

[1] THE LANCET, Nov. 23rd, 1895.

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were to be worn from sunrise to sunset. If any coats were taken off during the march they were to be put on again during the halts. Chills were very likely to occur and ought to be guarded against; also wet, perspiration-soaked shirts were to be taken off at midday and hung up to dry, the body at the same time being rubbed with a coarse towel. Cholera belts were also to be worn. Thirdly, men were to restrict themselves to the food as supplied per ration scale, no individual purchases being permitted. They were, moreover, warned against drinking locally-made aerated waters. Fourthly, quinine was issued daily to each man on parade, just after their early cup of coffee. Fifthly, fever and dysentery being the principal diseases to be feared great care was to be used in the selecting, boiling, and filtering of water prior to use. Sixthly, under the heading of Sanitation great stress was laid on camp cleanliness, and any water-supply was to be carefully guarded against pollution by natives bathing or washing therein. Seventhly, bathing was also recommended under certain restrictions.

With reference to the preparations at home it was felt by all who knew the West Coast of Africa well and were concerned in the organisation of the expedition that it would be a risky affair as far as health was concerned even under the most favourable conditions of atmosphere and weather, as well as imprudent and useless, to send out too young or tropically unseasoned men on this expedition. Hence, although offers from individual volunteers for this service were numerous enough—far more, in fact, than the executive could entertain—the authorities wisely contented themselves with selecting only those officers and men whose physique and stamina after careful medical inspection could be relied on. The Composite Service Battalion, a body of picked men from various regiments, was the result of careful choice and wise determination. If any one thing more than another could have demonstrated the wisdom of this new departure in military formation by the Commander-in-Chief it certainly would be found in the way in which the well-chosen units of this composite formation have marched, worked, and borne the climate of Western Africa, for not only have they established a reputation for physical endurance, but they have, in addition, by comparison fairly beaten the coloured West African troops out of the field. Following closely on the heels of the Composite Service Battalion, as far as European troops are concerned, come the West Yorkshire men. They, too, have done very well, but their residence abroad appears in no way to have helped them to withstand the ravages of this climate; on the contrary, it seems to have rendered them more susceptible to its poisonous influence. But be they "Composites," West Yorkshire, West Indian, or Haussas, they one and all have worked manfully and brought to a successful issue a dangerous and very risky campaign the results of which, when compared with those of other nations' attempts in similarly dangerous climates, we ought to be very proud.

Prior to their embarkation the men's kits evidently seem to have been carefully supervised and extremely well attended to. Amongst the various articles introduced flannels and woollen underclothing were much in evidence, and greatly needed they were, too, in such a damp atmosphere as was afterwards experienced. A certain amount of indecision, however, seems to have existed in the minds of the head-quarter staff regarding the outer clothing to be worn by the troops, for several officers and not a few of the privates started on the voyage wearing light karki suits with white helmets. Before arrival at Cape Coast Castle the authorities, for obvious and very prudent reasons, decided on a change of costume, and the Indian dress was discarded in favour of the old and much more comfortable red tunic, while the colour of the helmets was altered from white to light brown. Tommy Atkins, with the ingenuity which usually characterises that individual, soon accommodated himself to the change of tone; one or two applications of a solution obtained from the bottom of his coffee-pot supplied the required colour, and although the tint was not quite so definite in all cases, or so evenly laid on as a true artist could appreciate still it answered its purpose quite well enough, and the aforesaid helmets being subsequently adorned round their bases with red, blue, or yellow bands easily denoted the special branch of the service to which the wearers belonged. But what shall I say concerning those disconsolate young officers who, being warned before leaving that their kit must be reduced to a minimum consistent with propriety, had considerately left their "Sunday-go" reds at home and were not in a position to fall in with the new instructions that were issued? Well, they had, of course, to don their patrols, and keep them on as long as they were under observation; but there were occasions when these thick blue coats proved too oppressive, and then these superfluous belongings were thrown aside *en route*, permitting our fellows to march much better and work considerably harder under their shirt sleeves. I am afraid some of the easy, go-as-you-please style of dress that was frequently observed out there would have shocked the nerves of some old martinets; but, happily for the comfort and health of our men, their day has gone by never to return let me hope; for if the officers who commanded this last expedition so judiciously had worked upon the lines of former days and screwed the men up to full regulation pitch there is no saying what might have happened; but of one thing I feel certain: that if the staff had been less considerate than they have been we should have been brought face to face with a much longer death- and sick-roll than has had to be recorded. All persons do not stand the effects of heat alike. An amount of clothes which one individual can wear in the tropics without any distress whatever will be intolerable to another equally healthy person. This fact was doubtless recognised by those who controlled affairs.

Another feature in the preparations at home has been the fitting out of the hospital ship *Coromandel* for service on the West Coast of Africa, a very important move in the right direction for supplying extra comforts and good medical attendance, with the best of nursing, to the sick and injured at the seat of war. This vessel, which came into the Royal Albert Docks on Feb. 26th from Cape Coast Castle, has been employed by the Government and expensively fitted up for the services required of her. She belongs to, and was chartered from, the Peninsular and Oriental Steam Navigation Company, having been used by them as a passenger steamer for some years past. She was built by Messrs. Caird and Co. of Greenock and is a ship of 4651·58 gross and 2783·6 nett tons register, her length being 400·3 ft., with a beam of 45·3 ft. and a depth of 29·25 ft. The engines are on the triple expansion principle—4200 indicated horse power—and can propel the vessel under favourable circumstances at a fraction over 14 knots per hour. Such a rate of speed, however, cannot always be maintained, for on her passage home, through some foulness of her bottom, caused by lying so long at anchor, a speed of only 12 knots could be got out of her. She is certainly a very handsome-looking craft viewed from without, and possesses a lower, main, and upper or hurricane deck, on the top of which superstructures containing officers' cabins have been erected. For a tropical hospital ship she has wisely been painted white, with a thin red moulding round her to relieve the monotony of colour, whilst her transport indicating number (75) in large block type-figures is on her quarter. This vessel is commanded by a R.N.V. officer, who, possessing the requisite number of hands on board belonging to that naval auxiliary service, is permitted to fly the blue ensign. On going below to the main deck, where the sick officers and men's quarters are, one is particularly struck with the advance that has been made in comfort on the old style. The ancient square canvas cots, swung by clews from bolts in the deck above, have now given place to the more cosy, evenly poised bedsteads capable of a momentum adjustment by a small metal check. These bedsteads can be fixed or they are allowed to swing at pleasure, while the addition of a neat wooden tray at the head of each cot, upon which food, medicine, or books can be placed within easy reach of the invalid is to be commended. Then, too, there are those small toggled lines suspended from the deck above just over the head of each bed, which, on being lowered, can at any moment be grasped by a patient and become a means of raising himself at such times as the nurses or attendants are busily engaged elsewhere. On this deck are the hospitals—the officers' aft and the men's forward. During the passage home the whole of the men's hospital not being required for use, a portion of it—in fact, a space stretching from side to side—has been given up for, and used as, an invalids' smoking-room. A very great boon it has proved too. When the weather became cold, and the men just recovering from fever could no longer pace the deck with any degree of comfort, they could at any rate (thanks to the principal medical officer's consideration for his charge) enjoy their "weed" below. On this deck, too, are the first-class saloon, passengers' cabins, pantries, galleys, engine-room, store-rooms, dispensary, operating-

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room, waterclosets, and baths. Light and air are admitted by open deck spaces, skylights, and air-shafts, as well as by a series of scuttles arranged at equidistant spaces in two parallel rows round the ship. The upper row, unlike those on the lower deck, consists of circular plateglass discs, inserted into square iron ports which in any ordinary kind of weather can be raised by means of a chain lanyard, and large, square, glass windows inside, corresponding to the size of the port raised, are discovered. Wind and weather permitting these windows can be run back, allowing plenty of air to enter and circulate along the whole length of the ship. Moreover, should the entrance of sunlight prove at all annoying to the invalids and require to be excluded this can be at once effected by letting down a roller-blind put up for that purpose. I was also pleased to notice that the luxury of a punkah had not been overlooked by those who were responsible for the fitting out of the ship.

A word or two with reference to the waterclosets and bathrooms on board the *Coromandel*. The porcelain pans of the closets appear to be quite new and very good. The mechanism seems to work well enough, and being on the pull-down flush principle, they are evidently of the most recent and approved type. But their location appears to be somewhat too near the sick and sleeping accommodation, and the policy of the juxtaposition of bath-rooms, urinals, and waterclosets, only eighteen inches separating these departments from one another, certainly seems to be open to objection. Bath-rooms possibly without much risk might be as near as possible to the dormitories, but surely urinals and waterclosets could, I think, with advantage be placed at a greater distance from the sick than they are on board the *Coromandel*. What is there to prevent these closets being placed somewhere entirely isolated and by themselves?

The dispensary, situated on the port side, is a model of pharmaceutical neatness and arrangement, the area of cabin space devoted to this department being ample and the supply of drugs quite sufficient to satisfy the requirements of the most punctilious of dispensers. Opening out of, and just aft of, the dispensary is the operating-room, fitted up with all the most modern surgical appliances, including an excellent operating table (which, by-the-by, has never yet been used). The space devoted to operative purposes is too narrow and restricted and in any new hospital ship might with advantage be increased, so as not only to allow more elbow-room to the surgeon, but likewise more comfort and advantage to others who might be assisting him.

The *Coromandel* is, very properly, electrically lighted throughout. There is also a large and very complete ice-making plant and distilling apparatus on board, the latter capable of turning out some 3000 gallons of water per diem. I was informed that all water was passed through a filter before being given to any patient. Another great and important addition to creature comforts is to be found in the introduction of a complete laundry plant in this hospital ship. Such a useful desideratum for the purification of soiled linen and the cleansing of dirty clothes has been sadly overlooked by those fitting out steamers for long sea voyages. On this same deck there are winches evidently driven by steam as well as derricks. Now, if there is one thing more than another that causes extreme annoyance to passengers even in the best of health it is the noise caused by these steam-driven lifts when hoisting in or discharging cargo. To the sick the din is simply intolerable. In many of the larger and newer vessels the use of steam has been discontinued in favour of hydraulic power, which is found to be as powerful as, if not more powerful than, steam and is productive of little or no noise whatever, and it might therefore be employed on board vessels intended for hospital use. On the lower deck of the *Coromandel* there is another large hospital; there were some thirteen cases in bed, two rather serious ones, at the time of my visit. The patients one and all expressed themselves very grateful for the comforts and treatment they had received while on board. Want of space forbids my entering more fully into a description of all that was to be seen on or below deck; but I may say the main deck occupied by so many departments leaves but a limited space for promenade purposes—I mean as far as the non-commissioned officers and privates are concerned. True, there is a fine space on the upper or hurricane deck; but in trooping or passenger ships this is exclusively set aside for the use of the officers or first-class passengers; and although the officers belonging to the ship have done their utmost to make everybody comfortable, both on the outward and homeward voyage—and the vessel appears to have fairly well satisfied authorities in her dual capacity of transport and hospital ship—still after all the *Coromandel* is but a makeshift at the best, and I venture to think (many more agreeing with me in this respect) that the time has arrived for the Government to have a properly built and suitably equipped ship for hospital purposes only, a vessel that would be ready at any moment for the particular service required of her. The *Coromandel* was built in 1885 and has been chartered at something like £1000 per week, with an additional cost of nearly £4000 for putting up and taking down her presant fittings. It would be interesting to know how far the accumulated cost of hiring the *Coromandel* would go towards building a suitable vessel.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Ladies' Charity and Lying-in Hospital.

THE troubles at this hospital, referred to in a former letter, have now reached a climax by the resignation of the staff—active, consulting, and out-door—with the exception of three, two of whom are ill and one away from home, nineteen in all. This action has been forced on them by the determination of the committee to push the alteration of the rules guiding the staff in their visits to the hospital, a proceeding so unreasonable that retention of office under such conditions would have rendered them unworthy of the respect of their brethren. It looks uncommonly as if the committee wish the hospital to be looked on as a midwives' charity, so great is their admiration for the female element, which is all-powerful just now. The committee may earn some *kudos* and avoid future injudicious action of a similar character by emancipating themselves from this feminine thraldom. If instead of being guided, as they now appear to be, by a ladies' committee, matron, &c., to the exclusion, practically, of the medical board, they will seek advice on medical matters from those who alone are competent to give it—viz., the medical staff—it will then be all the better for patients, committee, and subscribers. It is to be sincerely hoped that no medical men retaining their self respect will apply for the posts vacated under these circumstances by a competent and self-respecting staff.

Poisoning by "Transfer Pictures."

As the result of an adjourned inquest, held at Seaforth, on the body of a boy named Henry Bridge, evidence was given that some "novelty transfer pictures," which he had been in the habit of attaching to his hands and licking off with his tongue, contained lead paint,[1] and that the post-mortem symptoms were consistent with lead poisoning. The jury returned a verdict that deceased died from the effects of lead poisoning and recommended that the sale of the pictures should be prohibited.

Alleged Insanitary Shop Premises.

At the recent meeting of the Health Committee reference was made to a statement which lately appeared in *Truth* to the effect that the bedrooms occupied by employées in a large drapery establishment were in a dirty and insanitary condition. The medical officer of health, in reply, said that he had received no complaints, anonymous or otherwise, as to the condition of these sleeping apartments, and expressed his surprise that the matter should have been communicated to a London weekly paper to the exclusion of the local press. He also pointed out that all such establishments were under the examination of the corporation inspectors and that cards were provided showing where complaints should be addressed to.

Post-Graduate Course.

Arrangements are in progress for a post-graduate course of fifteen lectures and the same number of demonstrations in medical, surgical, and special subjects. The course will commence on May 12th and terminate on June 30th. Each lecture, which will occupy an hour, will be followed by a demonstration in one of the hospitals lasting from an hour to an hour and a half.

March 31st.

[1] We have tested in our laboratory specimens of these pictures for the ordinary mineral poisons, and one sheet contained a very large quantity of lead.

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WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Vaccination Question at Cheltenham.

AT Cheltenham, on March 26th, a deputation from the Public Health Committee of the corporation waited on the board of guardians and urged that increased facilities should be given for vaccination. Last year the number of people vaccinated was fifteen and last week five. The Health Committee suggested that twenty-four medical men should be selected to vaccinate and revaccinate people at their own homes or at the vaccination offices. It is estimated that there are no less than 1534 unvaccinated children in Cheltenham and that during the past ten or twenty years only 25 per cent. of the people have been vaccinated. It was resolved to ask the sanction of the Local Government Board to the additional facilities for vaccination.

The Bristol Board of Guardians and Vaccination.

At the last meeting of the Bristol board of guardians, held on March 27th, the chairman moved—"That the resolution passed that the vaccination officers do not take proceedings for default in compliance with the Vaccination Acts, pending the issue of the report of the Royal Commission on Vaccination, be rescinded, and that authority be given to the officers to take proceedings from time to time as may be necessary against all persons who neglect to comply with the Vaccination Acts as to the enforcement of vaccination, and who have not been before proceeded against for such neglect." The vice-chairman seconded. The motion, it was explained, was the response to the letter received from the medical officer of health (Dr. D. S. Davies). It was stoutly contested by the anti-vaccinationists. The discussion lasted for an hour and a half, both sides freely quoting statistics. The resolution was, fortunately, adopted—but only by a majority of *one*.

A Gloucester Clergyman's Opinion on Vaccination.

The Rev. Henry Proctor, Vicar of St. Luke's, Gloucester, in the course of a letter to the local press on March 23rd, stated: "There are two families living just outside my garden, in one there are six children, five vaccinated and one not; the unvaccinated child is the only one that has taken small-pox. In the other, out of eight children, one unvaccinated one has died of the disease. In another case there were seven children. The father, mother, and four unvaccinated children have already died, another is hanging between life and death, the other two—who were the only vaccinated members of the family—have not even taken the disease. I could multiply instances, but I will simply add this remark: I am now visiting over 100 small-pox patients from day to day—60 in the hospital and over 40 in their own houses in this parish—and I believe I could undertake to go round from bed to bed and state almost without error which had been vaccinated and which not without any previous knowledge as to the facts, so marked is the difference in the effect of the disease in the two cases." The Vicar of St. Luke's is to be congratulated upon having so well shown in this letter the advantages of vaccination.

The Jenner Memorial Fund.

The Dean and Faculty of the Medical School of University College, Bristol, having consented to receive and permanently locate the valuable collection of mementos of Edward Jenner, known as the "Jenner Relics," it is desired to raise by public subscription the sum of £1500 in order to defray the cost of purchase from Mr. Frederick Mockler of Wotton-under-Edge. Each subscriber of one guinea and upwards will receive when the list is complete a silver medal, and to subscribers of not less than half a guinea a bronze medal will be presented, commemorative of the Jenner Centenary, May 14th, 1896. The Bristol newspapers of March 28th publish a list of subscribers up to March 27th, but the subscriptions at present fall very far short of the sum required. Subscriptions are being received by Messrs. Prescott, Dimsdale, Cave, Tugwell, and Co., bankers, Bristol. Intending subscribers will greatly oblige by sending in their names at their earliest convenience to Mr. W. H. Greville Edwards.

Gallantry of a Medical Man.

The committee of the Royal Humane Society on March 18th awarded their silver medal to Mr. T. H. Morris, M.B., C.M. Glasg., of Tylorstown, Glamorganshire, for distinguished gallantry displayed at the explosion in the Tylorstown Colliery on Jan. 27th, when fifty-seven lives were lost and the mine was wrecked. Dr. Morris entered the pit with an exploring party which, with great difficulty and at the imminent peril of their lives, rendered assistance to the imprisoned miners. The risk to all concerned was extremely great as independently of the danger of being buried alive by the falling coal there was the additional prospect of a second explosion.

Prosecutions by the British Dental Association.

At the instance of the British Dental Association H. W. Shallard and Osborne White, both of Cardiff, were summoned before the local stipendiary magistrate on March 25th for practising as dentists, not being registered under the Act of 1878. They were each fined 40*s.* and costs.

An Infectious Hospital for Dorchester.

On March 25th the new isolation hospital, which has been recently built by the Dorchester municipal authority at a cost of £1200, was opened and several cases of scarlet fever were admitted.

March 30th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Death of the Medical Officer of Health for Sunderland.

MR. J. WOOD, the medical officer of health for Sunderland, died suddenly at Millfield on Wednesday last from syncope. He was only forty years of age and leaves a widow and two boys.

Nurses' Home and Training School, Newcastle-upon-Tyne.

The annual meeting of this valuable institution was held at the home last week, Professor Philipson presiding. From the report it appears there are now seventy nurses and ten probationers. Upon the year's working there has been a profit of £305, and this sum has been divided among the nurses, the amount given to each being regulated by the time she has been on the staff. The great success which has attended the career of the home is very much due to the admirable management of the matron, Miss Emery. 618 cases were nursed last year.

Lecture on the Roentgen Process by Professor Stroud.

A most interesting lecture by Professor Stroud was by request repeated in the large chemical theatre of the Durham College of Science on Monday last to a large audience, when a series of experiments were performed illustrating the effect produced by these mysterious rays.

Stoppage of the Rainton Collieries.

The Marquis of Londonderry called together the men employed in these extensive collieries, some 4000 in number, a few days ago, and explained to them that as he had lost some £15,000 by working the Rainton pits during the year 1895 it would be necessary for him to close them. The noble Marquis, between whom and the miners the very best relations exist, submitted his balance sheet and took the men into his entire confidence. The stoppage of these pits will be a terrible misfortune to the district and to the county of Durham. At present the men work from bank to bank seven hours a day. If they worked longer, as they used to do, when there was more coal in the pits, and it was easier to win than is now the case, it is possible the work might be carried on, but against longer hours is the veto of the union.

Projected Exhibition in Newcastle during the year 1897.

It is proposed to hold during the year 1897, in the city of Newcastle-upon-Tyne, an exhibition on a large scale of local industries, representative of the products of local engineers, shipbuilders, and manufacturers, the proceeds of which are to be devoted to the building fund of the new infirmary. A guarantee of £10,000 is being raised. The infirmary committee has secured the services of Mr. Engel, who has brought several similar ventures to a successful issue in the north of England. It is believed that a substantial sum will by this means be raised.

March 30th.

SUPERANNUATION ALLOWANCE.—Mr. T. Francis, L.R.C.P. Edin., M.R.C.S., has been granted a superannuation allowance by the Brentford board of guardians of £107 13*s.* 4*d.* per annum.

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SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

University of Glasgow.

THE University Court have appointed Dr. H. C. Cameron, Dr. D. C. McVail, and Sheriff Berry as delegates to represent the University at the Congress of the British Institute of Public Health to be held in the University buildings in July next.—The Professional Examinations for degrees in Medicine and Surgery, which have been in progress during the past week, give abundant evidence of the activity of the female undergraduate, for in all the published lists of successful candidates the names of women students are to be found prominent. Similar results are to be traced in the prize lists issued in the Faculty of Arts, where again the names of women students are to be found occupying honourable positions among the prize winners.—Mr. Thos. Gray, B.Sc., F.C.S., Lecturer on Chemistry in Queen Margaret College, has been nominated as secretary of the Scottish Branch of the Society of Chemical Industry, in succession to Mr. Stanley Muir, B.Sc., resigned.

Female Medical Officers.

At a meeting of the Govan parish council on the 26th ult. Mrs. Greenlees moved that lady doctors should be eligible as medical officers under the council. The chairman of the Medical Committee expressed his willingness to assent to the motion, and it was adopted. A medical member of the board, however, ventured to doubt whether the people in all the districts would have confidence in women as medical officers and suggested that the council should rather appoint a number of qualified midwives.

Glasgow Collegiate School Club.

The club, which consists of the "old boys" of the Collegiate School, celebrated its annual dinner on the 26th ult. A number of well-known medical men took part in the proceedings, and the dinner tables were decorated with flowers sent by Dr. Aikman of Guernsey. The newly elected president is Dr. William J. Fleming.

Glasgow Samaritan Hospital.

The annual meeting of the subscribers was held on the 26th ult., Sir James King, Bart., in the chair. The most interesting feature in the report was the announcement that the new hospital buildings will be opened in May next. There is every probability, too, that by that time the entire outlay will have been met by special subscription and that, therefore, the new building will start its career free from debt. The Bellahouston trustees have made a grant of £2000 to the building fund, Lord Overtoun has added £500, and another £500 has been obtained from various sources. There now only remains a balance of £1000, and a special effort is to be made to remove this before the hospital is opened.

April 1st.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Resignation of one of the Members of Parliament for Dublin.

THE sudden and unexpected resignation of the member of parliament for the College Green division of the city of Dublin, Mr. Joseph E. Kenny, M.P., L.R.C.P. Edin., L.R.C.S., L.A.H. Dub., has caused considerable interest in medical circles as well as among the general public. Mr. Kenny is now the coroner for the city of Dublin and is about to resign his seat in the House of Commons on account of the difficulty he finds in attending with sufficient constancy to his duties there. It will be remembered that Dublin has been represented in Parliament for long periods by members of the medical profession such as the late Sir Dominick Corrigan and Dr. Robert Lyons.

The Royal College of Surgeons of Ireland.

More than eighty students entered for the half-yearly preliminary examination at the Royal College of Surgeons in Ireland on March 24th. The fact indicates that the popularity of medicine as a profession here has not diminished.

The Downpatrick Guardians.

With reference to the inquest held in Downpatrick on March 13th,[1] in which the jury blamed the guardians for not providing proper medical assistance when their medical officer was attending the assizes, and to which attention was drawn in the House of Commons, the Local Government Board have instructed their inspector, Dr. Clibborn, to hold a sworn inquiry into the circumstances of the man's death.

Vaccination Prosecutions in Londonderry.

A merchant has been prosecuted by the Londonderry board of guardians for the fourth time under the Compulsory Vaccination Act, he having been fined on the three previous occasions. As the defendant had not complied with the provisions of the Act the guardians on March 14th passed a resolution ordering a fourth prosecution, which took place on March 30th. After it had been proved that the defendant's child, born on Sept. 1st, 1893, had not been vaccinated the father stated that if he were prosecuted twenty-four times he would not allow his child to be vaccinated. As the magistrates were equally divided as to whether or not a penalty should be imposed "no rule" was marked. In another case the same course was taken.

The Battle of the Clubs at Cork.

The fight with the clubs goes on gaily as far as the medical men are concerned. Nearly eighteen months have elapsed and the sixty medical men practising in Cork stand loyally together, shoulder to shoulder, as much so to-day as at the very inception of the movement. Such admirable discipline has necessarily produced a profound impression on the clubs and a public opinion favourable to the medical men is being formed slowly but steadily in Cork. A writer signing himself "Non-Medicus" has done yeoman's service. His letters are models of diction and close reasoning. In scathing terms he criticises the pharisaical hypocrisy exhibited by the clubs in referring to what they are pleased to call "the boycotting of the sick bed" by the medical men, and he aptly reminds them that there was no condemnation of the boycotting of the sick bed when a poor patient suffering from consumption was refused sick pay by his brother members because he had thought fit to ignore the services of the club medical man and call in those of one of the regular practitioners. Rejoinders of that kind have proved too much for club correspondents and "Non-Medicus" remains master of the field.

April 1st.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Health of Marseilles.

AT the last meeting of the Société de Médecine Publique et d'Hygiène Professionnelle M. Genis gave an *aperçu* of the important sanitary works now nearly completed in Marseilles. When the new drainage scheme is applied the sewage of the town will flow into the sea, the cost of the undertaking being 30,000,000 francs. M. Genis complains that the municipality has hitherto taken no steps whatever to utilise the new system of drainage. The Minister of the Interior has vainly urged the city authorities on four occasions to bestir themselves. As things stand, the sewage for the most part flows into the subsoil, which is thus converted into a gigantic cesspool, whilst the 122 kilometres of drains receive only the rainfall. It is not difficult to reconcile with this astonishing supineness the discreditable death-rate of the town—32 per 1000. Only last year the mortality from small-pox was very high. What can be thought of the sanitary notions of a municipality which finds that its duty was performed during the last epidemic of cholera by burning 60,000 francs' worth of sulphur in the drains?

Application of the New Photographic Method.

Professor Pinard exhibited at the Académie de Médecine on the 24th inst. a photograph obtained by the Roentgen process of the fœtus enclosed in a thick-walled uterus which had been preserved in spirit for four months. The image of the skeleton of the full-termed fœtus was clearly seen after an exposure of forty-five minutes. It would appear,

[1] THE LANCET, March 21st, 1896.

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however, that the living uterine tissues are more easily permeated by the "x" rays, for the images of six fœtuses photographed through the uterus of a living guinea-pig, and shown by Professor Pinard, are more clearly defined.

The Study of Anatomy at Montpellier in Old Times.

M. Gilis, Professor of Anatomy at Montpellier, has recently published his inaugural lecture at that Faculty in the *Revue Scientifique*. He reminded his audience that Montpellier was during the Renaissance the great medical school of France, and that crowds of foreigners repaired thither for educational purposes. Some of these students became celebrated. It is sufficient to quote the names of Felix and Thomas Plater, Felix and Gaspard Bauhin of Bâle, and the Dane, Olaüs Wormius. Despite the difficulty of procuring subjects for dissection anatomy was ardently studied at the Faculty. The method adopted for collecting subjects would hardly commend itself to nineteenth century ideas. At nightfall the students, attired in their cloaks and armed with their swords, would sally forth on resurrectionist expeditions, the scene of their lugubrious operations being the cemetery of the Convent of Saint Denis. Arrived at their destination they would frequently be accorded a rough reception by the monks armed with crossbows. The enthusiasm of the professors for their art sometimes carried them to great lengths. Thus Rondelet begged his friend and colleague, Fontanus, then very ill, to allow his body to be dissected after death. Before his pupils he also dissected the single placenta of twins—his own children. Nor did he shrink from practising a public post-mortem examination of the body of his own son.

Pharmaceutical Frauds.

The Paris Municipal Laboratory has been busy lately in analysing specimens of quinine and antipyrin bought at different drug establishments in the city. Numerous samples were found to be adulterated with bicarbonate of sodium to the extent of 50 per cent. It would appear also that iodoform gauze is extensively coloured with aurantine, and that such adulteration reduces the proportion of iodoform from the normal 25 per cent. to something below $\frac{1}{4}$th per cent. A good plan by which to discover the fraud is to soak the suspected gauze in tepid water, when the aurantine, if present, is dissolved and colours the water a brilliant yellow.

March 31st.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Anti-Malarial Measures.

THE Marchese di Rudini, head of the new Government, has begun well. I am not referring to his success in Chamber and Senate in vindicating his programme, especially as regards the African situation, but rather to the initiative he has taken in furthering a far more commendable policy—the reclamation of derelict or marsh lands from the fevers that haunt them and their subjection to agricultural industry. One of his very first acts has been to issue a series of precautionary measures against the diffusion of epidemics of malaria, taking as his starting-point those localities devoted to rice cultivation. From the Home Office (of which he holds the portfolio) he has, under the advice of the Consiglio Superiore di Sanità, published a paper consisting of six articles or heads, conveying as many ordinances for protecting the labourers in rice cultivation and the districts in which it is carried on. The first deals with the appointment of a Special Commission composed of the provincial medical authorities, an engineer, and an agricultural expert, charged with the duty of testing and reporting to the Prefect the cases in which demands for rice cultivation may be safely conceded—cases, that is to say, where the concession of such demand can be freely granted without compromising the health of the labourer or the sanitary conditions of the vicinity. There are rules in existence for the protection of both these interests—that of the working hands and that of the health of the surrounding population—and guided by these the Commission will proceed to grant or withhold the concessions alluded to. Should the concessionnaire in the process of carrying out his operations depart from the prescriptions laid down the Prefect shall then be empowered to withdraw the privilege conceded. Nay, more; if, in spite of all due observance of those prescriptions, the locality or the soil under rice cultivation develop unforeseen conditions prejudicial to health, the Prefect shall again be entitled to intervene and withdraw the concession or suppress the industry for a given number of years, always subject of course in so doing to the provincial sanitary council as advised by the Commission above indicated. The concessionnaire shall have no claim to indemnity for loss by the withdrawal of his concession. Other prescriptions relative to what may be called the business aspect rather than the hygienic aspect of these ordinances are minutely given and need not be detailed here; but the step taken by the Di Rudini administration is in all respects a meritorious one and forms, let us hope, the prelude to others equally calculated to raise the standard of health in the all too severely visited agricultural and pastoral regions of Italy. As I write the most gratifying report is handed to me on the Colonia Agricola di Ostia—a district on the Latin shore so haunted by the palustral miasm that ten years ago it was habitable only in winter, being for nine months out of the twelve a scene of desolation and death. A company from Ravenna to which the cultivation of this "regione morta" was conceded has been able to overcome by drainage and agriculture the pestiferous influences of the "stagno di Ostia," and at the cost of some 200,000 fr. has established a sanitary and agricultural "plant" which will not only maintain but extend the anti-malarial conquests already achieved. Only eighteen miles from Rome, that region, once an opprobrium to the civilisation and enterprise of the capital of United Italy, is now on the way to become a standing honour to both, and the institution of a local pharmacy and the provision of a medical staff are now only required to put it on a level with the best of those reclamations which year by year are lessening the area of "Italia irredenta."

March 28th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Gratuitous Hospital Treatment.

AS I have already stated,[1] the Vienna Medical Chamber has energetically protested against the abuse of hospitals by well-to-do patients, and has even proposed that those who apply for gratuitous treatment should be required to produce evidence that they are really necessitous. The managers of the Polyclinic, however, are satisfied with things as they are and point out in a pamphlet that the number of well-to-do people gratuitously attended in their establishment hardly exceeds 5 per cent. As the number of out-patients treated there amounts to about 50,000 in the course of a year it follows that the Polyclinic has been resorted to by about 3000 patients who were in a position to pay for medical assistance. The public, in fact, believe that they have a right to gratuitous medical attendance, and one of the consequences is that there are a great many medical men whose income hardly amounts to £40 a year. The number of practitioners in Vienna has, moreover, increased from 844 in 1870 to 1179 in 1880 and to 2000 in 1895; this is in a population of 1,400,000, whereas in Berlin, with its 1,800,000 inhabitants, there are only 1900 medical men. At a meeting of the Medical Society of the Southern Vienna Districts Dr. Kürth said that if this state of matters continues the poor medical man will soon form a counterpart to the poor country schoolmaster.

The Function of Hair.

A highly interesting paper on the Function of Hair has been read by Professor Exner at a meeting of the Medical Society. He said that writers have hitherto occupied themselves mainly with speculations on the circumstances which have led to man becoming denuded of his hairy covering. The hairs, however, are not only degenerated organs, but have also to fulfil some functions. There is a group, such as the eyelashes and eyebrows, for instance, which are sensorial organs, possessing tactile functions, and, moreover, serve as a protection to the eyes. In places where two integumentary surfaces are in contact, such as in the axillary region and in the fold between the scrotum or the labia majora and the leg, they act as rollers and facilitate the gliding of the integumentary surfaces on each other. A third function of the hairs consists in the equalisation of surface temperature.

[1] THE LANCET, Aug. 24th, 1895, p. 473.

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There is no doubt that the hair of the scalp protects the head against external cold and also prevents the loss of heat through the very low thermal conductivity of the hair cylinders and of the cushion of air intermingled with them.

The School of Medicine.

According to a report which has just been published the Vienna School of Medicine was attended by 3674 students during the past winter half-year, comprising 2211 ordinary and 1463 extraordinary students. The teaching staff consisted of twenty-nine ordinary professors, thirty-four extraordinary professors, and ninety-three *privat-docents* and assistants.

March 30th.

MEDICAL TRIAL.

QUEEN'S BENCH DIVISION, HIGH COURT OF JUSTICE.

(Before Mr. Justice HAWKINS.)

KITSON *v.* PLAYFAIR AND WIFE.

THIS case, part of which we reported in our issue of March 28th, was concluded on Friday last. We continue the report:—

Mr. Arthur Kitson, the plaintiff's husband, examined by Mr. Tindal Atkinson, said he left Sydney at the end of September or beginning of October, 1892. His wife was always suffering and in the doctor's hands. When he left Sydney he went to Port Darwin. His wife was then so ill that Dr. Ogg advised a long sea voyage. He wrote to his brother James of this, and saying that he intended sending her to England. From Port Darwin he went to Hongkong on his way to Honolulu. He had a letter from his wife on June 6th, 1894, which he had destroyed. This letter had reference to the accusations made by Dr. Playfair. He received another letter at Sydney to the same effect. He left for England as soon as he could, and arrived about Aug. 29th, 1894. She communicated to him all that had occurred and placed in his hands all the correspondence which had passed between her and Dr. Playfair. He then wrote to Sir James Kitson.

Cross-examined by Sir Frank Lockwood: He allowed his family to believe that he had surreptitiously visited England. He did so because he thought they wished to believe it. He had received letters from Sir James Kitson and Dr. Playfair withdrawing the accusations "after a fashion."

This closed the case for the plaintiffs and Sir F. Lockwood addressed the jury on behalf of the defendants. His first duty was to submit to his lordship that the occasions on which the libel and slander were published were privileged. Having regard to the relations existing between the parties he contended that the communication by Dr. Playfair to his wife was justifiable and the communication was privileged unless it could be shown that he was actuated by an indirect motive or by malice *per se*. With regard to the communication between Mrs. Playfair and Sir James Kitson, the communication was made by a sister to her brother in regard to the conduct of their sister-in-law, and they had a joint interest in the communication being made. Here, again, unless it could be shown that Mrs. Playfair was actuated by some malice or indirect motive the occasion was privileged.

Mr. Justice Hawkins: The question of actual relationship does not seem to me to cover the ground. Would there be privilege if the communication were made to an aunt?

Sir F. Lockwood: The point here is that these people were deeply interested in the conduct of their brother's wife, with whom they were associating on terms of intimacy.

Sir F. Lockwood, continuing, said he knew the great difficulties which lay in his way in putting forward Dr. Playfair's view of the case. Mr. Walton had drawn a pathetic picture of the sufferings of Mrs. Kitson, which he had been able to supplement to some extent by the testimony he had called. He was not going to ask the jury to approach the case in a hard-hearted way, but to judge temperately and fairly of the conduct of Dr. Playfair. Mr. Walton had charged Dr. Playfair with being a cruel and hard inquisitor, and made it impossible that his speech should go before the world uncontradicted. This man was the first to throw open his door to her. Shortly after she arrived in England Dr. Playfair examined her. She had complained to Mrs. Playfair of the state of her health and that lady suggested that Mrs. Arthur Kitson should consult her husband. Dr. Playfair examined her generally as to her physical condition and stated that there was nothing organically wrong. With reference to what occurred later he would not ask the jury to say that this lady had had a miscarriage or to say that she had not been chaste. All he asked them to say was that Dr. Williams was justified in the conclusion he had come to and that he *bond-fide* believed to be true that which he communicated to Mrs. Playfair.

Dr. William Smoult Playfair, examined by Mr. Charles Matthews, said he was Doctor of Medicine, Fellow of the Royal College of Physicians of London, Professor of Obstetric Medicine and teacher of diseases of women and children at King's College Hospital. His feelings towards the plaintiff were those of complete friendship. After her arrival in England she consulted him with regard to her health, and he made an examination as to the general state of her health. On Jan. 16th, 1894, he was called in by Dr. Williams. Before seeing her he met Dr. Williams and talked over the case, and the latter described it to him. They afterwards saw the lady together. She seemed generally ill, and complained of some hæmorrhage which had existed for some time. He thought the trouble was a somewhat profuse period. On Feb. 23rd he saw Dr. Williams in consultation. In the course of the examination he found the neck of the womb dilated to the size of a five shilling piece. Within the neck of the womb and above it he found a soft fungated mass, which he at first took to be a intra-uterine cancerous growth, but it was impossible to make a sufficiently complete diagnosis. He sent Dr. Williams for some chloroform, and when he returned they put the plaintiff under its influence. He then found that the mass was not growing from the interior of the womb and that it was easily scooped out and removed. He then found the mass to be a portion of fresh placental tissue of a spongy consistence and containing fresh blood in its interstices. After the operation he formed the opinion that Mrs. Kitson had had a recent miscarriage. There were not two administrations of chloroform. It was one continuous administration, with a stoppage while he showed Dr. Williams the substance which had been removed. He did not make use of the words, "I do not know what else it can be. I know very little about her, she may have been playing hanky-panky." Dr. Williams did not say, "I do not think it can be anything like that. She has submitted to every examination and been perfectly candid." She did not struggle up and say: "Oh, Dr. Playfair, for God's sake let me go now if you think there is anything wrong." It would have been impossible. He did not pat her and say: "There, there, my dear, it is all right; we think it is a cancerous growth." He did not say, "Give her some more." The substance he removed was certainly not, in his opinion, a blighted ovum. It was a piece of fresh placental tissue. A blighted ovum was the entire product of conception which had perished in the womb and undergone certain degenerative changes and which was eventually thrown off. It varied in size from that of a duck's egg to that of a small melon. He would not expect it to lie loose in the uterine cavity.

Cross-examined by Mr. Lawson Walton, he said that it was on the assumption that Mr. Arthur Kitson had been in Australia that he formed an opinion adverse to the plaintiff's honour. He formed it solely on his medical examination.

Mr. Lawson Walton: Do you retain that opinion still?

Dr. Playfair appealed to his lordship as to whether he was obliged to answer that question and eventually replied: I do.

Mr. Lawson Walton: Then why had you not the courage and manliness to put that on record in your pleadings?

Witness: I placed the case in the hands of eminent counsel and I was satisfied to act on their advice.

Mr. Lawson Walton: You thought it more politic?

Witness: I thought it more judicious.

Mr. Lawson Walton: Then, sir, why did you not insist on your counsel raising that issue in order that this lady might have the opportunity of refuting it?

Witness: Because I do not think it judicious to insist on raising issues not advised by counsel.

Mr. Lawson Walton: Do you still tell the jury that, notwithstanding the lady's oath and her husband's and the opinion of Dr. Spencer, you persist in your opinion?

Witness: I do. Continuing, witness said in coming to this conclusion he rejected all but medical considerations. He rejected all moral considerations, and the fact that plaintiff called in to attend her a member of her own family. It did not strike him as extraordinary that she asked him to wait until her husband came back. Dr. Spencer's evidence counted for nothing in his mind.

Mr. Lawson Walton: How much evidence of other doctors would serve to change your opinion?

Witness: No amount; for none saw it under the same conditions as myself. He never believed that Mr. Arthur Kitson had been in England.

Re-examined by Sir Frank Lockwood: He did not believe the statement; he accepted it that Mr. Arthur Kitson had been in England. The substance referred to in *Charpentier* bore no relation to the substance he removed from plaintiff. He had no desire to make imputations of unchastity against Mrs. Kitson.

Dr. Muzio Williams was then examined by Mr. Matthews, and detailed his attendance on Mrs. Kitson and the calling in of Dr. Playfair. On Feb. 23rd Dr. Playfair sent him to get some chloroform, and he administered it while Dr. Playfair made the examination and performed the operation. Dr. Playfair removed a piece of fresh placental tissue and its condition indicated to him (Dr. Williams) a three months' pregnancy. The tissue was spongy and contained fresh blood. Dr. Playfair said "This is terrible. It is a piece of placenta. I did not know the lady before she married Arthur Kitson." Witness did not recollect Dr. Playfair having said anything more. Shortly after Dr. Playfair left. Mrs. Kitson was not conscious when he left the room. He did not remember Dr. Playfair using the words, "I know very little about her. She may have been playing hanky-panky." He (witness) did not say "I do not think it can be anything like that," neither did he say she had submitted to every examination and been perfectly candid. The lady did not struggle up and say the words she alleged she uttered. He (witness) patted her and said, "It is all right." She said, "What is it you accuse me of?" I said, "We have not accused you of anything; we have not quite finished, go on breathing." Nothing was said about the cancerous growth. Witness was then cross-examined by Mr. Lawson Walton as to his action in refusing to give any information to plaintiff's solicitors except through defendant's solicitors.

Dr. Hugh Playfair, curator of King's College Museum, was next examined. He said the substance submitted to him by Dr. Playfair was undoubtedly placenta, which had only very recently ceased discharging its functions. Microscopical examination confirmed this opinion. Cross-examined by Mr. Lawson Walton witness said he heard Dr. Spencer refer to a period of eighteen months, but that was quite impossible. At the outside the piece could not have been more than ten months old.

Re-examined by Sir Frank Lockwood: A placenta of eighteen months would be perfectly different in appearance. It would be tough, hard, and fibrous, and partially discoloured. Moreover, the microscopical appearances would be totally different. There would be signs of degeneration and atrophy of the chorionic villi and an enormous overgrowth of fibrous tissue. None of these conditions were in the substance submitted to him.

Mr. Bland Sutton, professor of pathology at King's College, gave evidence as to having received specimens for examination which were undoubtedly placental tissue. It was not possible that this could have been formed in December, 1892, and removed in March, 1894.

Sir John Williams, examined by Sir F. Lockwood, gave evidence substantiating in the main the evidence of the previous medical witnesses. With regard to the matter of professional confidence, witness said there was no hard-and-fast line in the maintenance of professional confidence.

Sir Frank Lockwood: What are the considerations which do affect medical men in regard to professional confidence?

Witness: As a general rule medical men should hold inviolate professional confidence.

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Sir Frank Lockwood: Are there exceptions to that rule?

Witness: The exceptions are when there are higher claims upon the man, such as in a court of justice. With regard to crime, a medical man is obliged to inform the Public Prosecutor of any crime which has been committed or it is intended to commit. The higher claims that a man's wife and children have upon him justify him in taking every measure to protect them.

Cross-examined by Mr. Lawson Walton: Do you consider secrets obtained in the course of professional attendance the secrets of the patient or the secrets of the medical man and under the absolute control of the medical men?

Witness: It is the secret of the patient.

Mr. Lawson Walton: Do you consider the medical man is bound to consult the patient before he divulges that secret?

Witness: No.

Mr. Lawson Walton: Do you say that the medical man is the sole judge without appeal of the circumstances under which he should publish that knowledge to the world?

Witness: He is and he must be.

Mr. Lawson Walton: If he thinks he is entitled to do so, is he at liberty, if he thinks it is justified, to divulge it to anyone?

Witness: No, I do not think so.

Mr. Lawson Walton: Do you contend that the medical man is entitled, whether he be discreet or indiscreet, to disclose the secret without communicating with his patient?

Witness: I cannot answer that question yes or no.

Mr. Lawson Walton: Who is to decide the circumstances under which he may publish the secret to the world?

Witness: The courts of law in some instances.

Mr. Justice Hawkins: Suppose a medical man were called in to attend a woman, and in the course of his professional attendance he discovers that she has attempted to procure an abortion. That being a crime under the law, would it be his duty to go and tell the Public Prosecutor?

Witness: The answer of the College of Physicians to that very question was "Yes."[1]

Mr. Justice Hawkins: Then all I can say is that it will make me very chary in the selection of my medical man.

Mr. Lawson Walton: Who is to be the judge of the justification of the claim of wife and children to allow of the divulging of a secret the property of a patient?

Witness: The medical man himself.

Mr. Lawson Walton: Who is to say the medical man is wrong?

Witness: A court of law may.

Sir William Broadbent, examined, said he was a Doctor of Medicine and a Fellow of the Royal College of Physicians of London and Senior Censor on the board of the Royal College of Physicians.

Sir Frank Lockwood: Do you agree with the rule with regard to confidence in your profession as expressed by Sir John Williams?

Witness: The rule is a very strong unwritten law that no confidence made to a medical man shall be divulged.

Sir Frank Lockwood: What are the exceptions?

Witness: The exceptions are such as have been stated by Sir John Williams, that we are compelled to divulge confidences in a court of law and sometimes in order to prevent crimes. There are, in my judgment, also certain circumstances under which as a man of honour and acting under a strong sense of duty it might be necessary to divulge what is called a professional secret.

Sir Frank Lockwood: Do you recognise the exceptions made by Sir John Williams in favour of wife and family if it is a case where the medical man has clear convictions?

Witness: I think so. It is difficult to formulate an abstract opinion of this kind. It is conceivable that it might be necessary to divulge secrets under various circumstances.

Cross-examined by Mr. Lawson Walton: The disclosure should only be made in the last resort when it becomes inevitable?

Witness: Certainly.

Mr. Lawson Walton: If the object can be effected in a way short of divulging a secret, it ought to be done in that way?

Witness: Yes.

Dr. Champneys, F.R.C.P., agreed with the medical evidence of Sir John Williams respecting a blighted ovum, and

Sir Wm. Priestley, F.R.C.P., also gave testimony in respect of the same evidence.

This closed the case for the defence, and Sir Frank Lockwood and Mr. Lawson Walton addressed the jury on behalf of their respective clients.

Mr. Justice Hawkins, in summing up, said the plaintiff had brought this action for slander and libel. The charge made against her was that after she had come to England from Australia she had had adulterous intercourse with some person, the result of which was a miscarriage. To that the defendant had pleaded, first of all, that the words were not spoken or published at all; and, secondly, that if they were, they were published under circumstances which did not afford justification, but which robbed the libel or slander of its malicious character.

Mr. Justice Hawkins then dealt with the main facts of the case leading up to the question of privilege. The action was brought for the communication of the libel not only to Mrs. Kitson, but to Sir James Kitson, so that the question as between the husband and wife was not now before them. But since that question was discussed in the course of the case he would touch upon it, though what he said must not be taken to be a ruling on the point. The medical profession might, no doubt, discuss among themselves rules for their own guidance, but they had no power to impose the rules they made upon the public. With regard to the question of the exception to the unwritten rule of professional secrecy, he did not altogether agree with the medical evidence on that point. With regard to cases where it was said the doctor should inform the Public Prosecutor, the judge himself might in some cases refuse to commit a medical man for contempt in refusing to reveal confidences. Each case would be governed by the particular circumstances, and the ruling of the judge, deciding no doubt according to the law, would be the test. If the doctor were called in merely to attend a woman and give her advice his lordship doubted very much whether he would be justified in going to the police and saying, "I have attended a poor woman who has been trying to procure an abortion." That would be a monstrous cruelty. The rule did not meet with his approbation and he hoped it would not meet with the approbation of anybody else. There were cases, no doubt, in which it was obvious that a medical man should inform. He only protested against that rule being said to be applicable to all cases. There was a third objection—namely, a communication between the doctor and his wife or children in order that they might be protected. That required a great deal of consideration and it was a very delicate question.

[His lordship commented upon the action of Dr. Playfair in refusing to allow Mrs. Kitson an interview in order to clear herself, and, reading the correspondence, referred to the tight corner in which Mrs. Kitson had been placed.]

Mr. Justice Hawkins submitted the following questions to the jury: (1) Were the words uttered as alleged true? (2) Did the defendants believe the words to be true? (3) Were they uttered in good faith? (4) Were they uttered not from a mere sense of duty, or from some indirect motive or to gratify feelings of ill-will, anger, or irritation against the plaintiff or her husband?

The jury then left the box, and after an absence of about an hour answered the first question in the affirmative. To the second they said, "Yes; but Dr. Playfair did not afford the plaintiff reasonable time and opportunity for an explanation." To the third question they answered, "No," and to the fourth that the words were not uttered from a mere sense of duty but from an indirect motive. Damages were assessed at £2,000.

Mr. C. W. Mathews: I apply for a stay of execution on the ground that there was no evidence of malice.

Mr. Justice Hawkins: I will certainly not grant it on that ground.

Mr. C. W. Mathews: I ask for it on the ground that the occasion was privileged ——

Mr. Justice Hawkins: But malice is found by the jury.

By Mr. C. W. Mathews: And also on the ground that the damages are excessive.

Mr. Justice Hawkins: No.

Eventually his lordship agreed to consider the matter on Monday morning, March 30th, when

Sir Frank Lockwood renewed the application for stay of execution pending appeal.

Mr. Justice Hawkins: I have fully considered the matter and I have made up my mind. If I had disapproved of the verdict of the jury I should have granted the application for a stay of execution in the first instance upon terms. I always think one ought not to interfere with the verdict of the jury unless one is satisfied it is wrong. I ought to let you go to the Court of Appeal for the stay.

Sir F. Lockwood: My lord, I have come to an arrangement with my learned friend which will relieve us from going to the Court of Appeal. We have arranged for a stay by consent on the terms of a sum of money being paid over to the plaintiff unconditionally.

[1] Our special reporter was under the impression that the answer of the witness was as recorded above, but Sir John Williams has since written to The Times to correct this statement, which should be: "The last legal opinion upon that very question obtained by the Royal College of Physicians is 'Yes.'"

Medical News.

VICTORIA UNIVERSITY: FACULTY OF MEDICINE.—

The following candidates passed the under-mentioned examinations in March:—

SECOND EXAMINATION.

A. Anatomy and Physiology.—J. W. Aldred, Owens College; E. L. Anderson, University College; D. A. Ashton, Owens College; J. W. Barber, Yorkshire College; T. T. Bark, University College; W. J. S. Bythell, Owens College; John Craig, Owens College; Willie Cunliffe, Owens College; Harry Dunk, Yorkshire College; H. M. Fletcher, University College; E. W. Floyd, Owens College; J. P. H. Greenhalgh, Owens College; J. T. Grierson, University College; W. S. Henderson, University College; E. M. Hime, Yorkshire College; J. A. Howard, University College; Frederic Hoyle, Owens College; H. H. McNabb, Owens College; E. J. Martin, Owens College; B. C. Middleton, Owens College; Joseph Moreton, Owens College; Edgar Newhouse, Yorkshire College; W. P. Noall, Owens College; Harry Osborne, Owens College; W. F. Oyston, Yorkshire College; J. A. Reed, Yorkshire College; W. H. Richardson, Owens College; Ambrose Spong, Yorkshire College; Edward Trotter, Yorkshire College; Edward Turton, Yorkshire College; G. C. Walker, University College; T. H. Wignall, Owens College; and O. H. Woodcock, Owens College.

B. Materia Medica and Pharmacy.—H. M. Cockcroft, Owens College; P. A. L. Foulds, Owens College; E. C. Hulme, Owens College; S. C. Moore, University College; Joseph Moreton, Owens College; William Sankey, Owens College; W. H. Tattersall, Owens College; and O. H. Woodcock, Owens College.

The Scholarship in Medicine was awarded to Joseph Moreton, Owens College.

FINAL EXAMINATION.

Part I.—R. W. Bollans, Yorkshire College; Francis Darlow, Yorkshire College; J. H. Davies, University College; J. F. Hodgson, Owens College; E. E. Laslett, University College; Alexander Lawson, Owens College; G. G. Lawson, University College; Henry MacKennal, Owens College; F. E. Marshall, University College; Frank Prichard, Owens College; Graham Renshaw, Owens College; A. L. Rhind, Owens College; A. B. Smallman, Owens College; H. de P. B. Veale, Yorkshire College; Alfred Wightwick, Owens College; D. O. Williams, Yorkshire College; R. H. Wilshaw, Owens College; and William Wright, Owens College.

Part II.—W. S. Badger, University College; G. H. Bishop, Owens College; S. E. Christophers, University College; William Dyson, Owens College; John Hartley, Owens College; John Hay, University College; J. A. MacLaren, Owens College; D. W. Main, University College; J. F. Rimmer, Owens College; E. A. Smith, University College; and Bernard Stahlknecht, University College.

The following were awarded Honours:—*Class I.*: S. E. Christophers,

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University College, and E. A. Smith, University College. *Class II.*: John Hay, University College.

UNIVERSITY OF GLASGOW.—The following have passed the First Professional Examination (new regulations) for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subject or subjects indicated after their respective names (B., botany; Z., zoology, P., physics; C., chemistry):—

Adolph Anderson, B., P.; John Anderson, Z., P.; Gavin Barbour, Z., P.; James Oastler Barclay, Z., P.; Ernest George Dryden Benson, B., Z.; Alexander Binning, Z., P.; William Herbert Brown, Z., P.; John Douglas Brownlie, Z., P.; Patrick Thomas Cairns, P., C.; Thomas Bullough Calland, Z., P.; Samuel James Cameron, Z., P.; Thomas Carruthers, M.A., B., Z., C.; Edward Provan Cathcart, B., Z., P.; Robert Clark, Z., P.; John Craig, Z., C.; George Morris Crawford, C.; Charles Peter Garvie Crichton, P., C.; Charles Campbell Cuthbert, B., P.; Arch. William Wallace Davidson, B., C.; James Davidson, M.A., B, Z.; Alexander Doig, Z., P.; John Downie, Z., P.; John Pinkerton Duncan, Z.; John Forrest, Z., P.; Eric Dalrymple Gairdner, P., C.; George Gardner, P.; John Gardner, B., C.; George Garry, B., P.; James Gemmell, B., C.; William Girvan, B., Z.; John Gracie, Z., C.; John Gregor, Z., P.; Robert Archibald Hamilton, Z., P.; Archibald Wilson Harrington, B., C.; Leslie Charles Broughton Head, B., C.; James Macpherson Henry, Z., P.; Thomas Inglis, B., P., C.; John Kennedy, B., C.; Alexander King, Z., P.; William Henry Kirk, B., P.; James Dickson Laidlaw, B., P.; John Francis Lambie, Z., P.; Norman Maclean Leys, Z.; James Dunlop Lickley, Z., P.; Donald M'Farlane Livingstone, Z., P.; David Longwill, B., P.; Jacob Mains, Z., P.; Andrew Mair, Z., P.; Robert M'Nab Marshall, Z., P.; Allan Martin, M.A., Z., C.; James Millar, B., C.; Hugh Miller, Z., C.; William Archibald Mills, B., Z.; Alexander Robert Moir, B., Z., P., C.; Peter Moir, B., Z., P., C.; Daniel Morrison, B., P.; Alexander Munro, Z., P.; James Hogg MacDonald, B., C.; James William M'Dougall, B.; George Steventon M'Kinnon, Z., P.; James Mackinnon, B., P.; Charles Forbes Maclean, C.; Norman Forbes Macleod, C.; John M'Millan, C.; Burgess M'Phee, B., Z.; Thomas Neill, Z., C.; Robert Orr, Z., C.; James Patrick, B., Z., P.; William Barr Inglis Pollock, Z., C.; John Reid (Lanark), B., Z.; Peter Mackenzie Reid, Z., P.; John Duncan Richmond, Z., P.; William Alexander Riddell, B., P.; Henry Thomas Roberts, B., Z., P., C.; Arthur Robin, B., C.; James Crawford Ross, Z., P.; David Russell, Z., P.; Malcolm Scott, P., C.; David Shannon, Z., P.; Edgar William Sharp, Z., P.; Malcolm Alexander Sinclair, B., P.; Archibald Smellie, B., C.; John Steele Smith, B.; David Spence, Z., P.; Peter Alexander Steven, B., C.; Andrew Stewart, Z., P.; John Strathearn, Z., P.; Charles Pinkerton Thomson, C.; Joseph Swinburne Townley, B., Z.; James Cameron Turnbull, Z., P.; John Turnbull, P., C.; Arthur Vost, C.; Albert Ernest Wainwright, Z., P.; George White, Z., P.; Robert George White, Z.; George Henry Wildish, B.; Hugh Patrick Wright, Z., P.; and John Young (Bearsden), B., P. *Women*: Lizzie Thomson Fraser, P., C.; Helen Mary Gordon, P.; Jane Grant, B., Z.; Lila Stephenson Greig, P., C.; Catherine Spence Howden, P., C.; Mary Forbes Liston, P., C.; Jean Marion Farie Marshall, P., C.; Mary Lauchline M'Neill, B., C.; Maud Ada Richards, P., C.; Margaret Mitchell Ritchie, P., C.; Mary Ann Thompson Ritchings, Z., P.; Sara Maude Robertson, Z.; and Gert. Florence Fleetwood Taylor, B., Z.

The following have passed the Second Professional Examination (old regulations) for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):—

James Andrew, Robert Adair Lockhart, George Murray, Hugh McIntyre, Charles David Picken, and Charles Edward Cortis Stanford, B.Sc. *Woman*: Martha Jane Gilmore Cox.

The following have passed the Second Professional Examination (new regulations) for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subject or subjects indicated after their respective names (A., anatomy; P., physiology; M., materia medica and therapeutics):—

John Aitken, A., P.; George Alexander, A.P.; Arthur James Ballantyne, A., P.; Andrew Aitken Barclay, A., P.; James Barrowman, A., P.; William Bennett, A., P.; James Symond Beveridge, A., P.; George MacLellan Blair, A., P.; John George Wilson Boleyn, M.; Theodore Belchambers Broadway, M.; John Brunton, A., P.; Wm. Cochran Burns, M.; Robert Carswell, M.A., A., P., Alex. Henderson Cassells, A.; Andrew Clark, A., P.; Robert Crawford, M.; John Crow, M.; John Lithgow Davie, A.; Robert Douglas, M.A., A., P.; Alexander Garrow, A., P.; James Garden Green, A.; David Sloan Harvey, A., P.; Harold Smith Heap, A., P.; John Henderson, A., P.; Thomas Hunter, M.A., B.Sc., M.; Ernest Frederick Lionel de Jersey, P., M.; Edward William Reese Jones, A., P.; William Wallace Keir, A., P.; Alexander Millar Lindsay, M.; Robert Lunan, M.; Alexander Matheson, A., P.; James Blakeley Miller, A., P.; James Alex. Mitchell, A., P.; Percival Ambler Mitchell, A., P.; Murdoch Macdonald, M.; Arch. Turner Macewan, A., P., M.; Dugald M'Kinlay, A., P.; Roderick Reid Macnicol, M.A., A., P.; James M'Whir, M.; Robert Niven, A., P.; Percival Leslie Pearce, A., P.; Joseph Wilkie Scott, A., P.; Robert Scott, M.; John Shaw, M.A., A., P.; David Ap Simon, A.; John Macfarlane Sloan, A., P.; Francis Stevenson, P.; Frederick Ernest Stokes, A., P.; James Strang, M.; Thomas Morton Strang, A., P.; James Douglas Carnon Swan, M.; Daniel Rees Thomas, P.; William James Alexander Walker, M.; Ernest Watt, M.; Edward Roberts Weir, M.; Jas. Patterson Wilson, A., P.; and John Wotherspoon, M. *Women*—Daisy Annabelle Bennett, P., M.; Agnes Forbes Blackadder, A., P., M.; Lucy Buckley, B.Sc., M.; Mary Longmire, A., P.; Karen Margrethe Myhre, A., P.; Eva M'Call, A., P., M.; Minna Amelia Macfarlane, M.; Margaret Wallace Howie M'Neil, A., P.; Mabel Catharine Poulter, A., P., M.; Jean Effie Prowse, A.; Agnes Renton Robson, M.; Marion Jamieson Ross, A., P.; Catherine Love Smith, M.; and Sara Whiteford, P.

The following have passed the Third Professional Examination (old regulations) for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):—

(*A*) *Including Pathology.*—James Francis Agnew, William Buchan Armstrong, John Tait Bowie, Charles Cairnie, M.A., James Banks Cumming, James Donald Holmes, Archibald Livingston, George Bain Murdoch, Neil M'Callum, John Allan Craigie Macewen, B.Sc., Joseph M'Gowan, Robert Shanks, and James Weir. *Women.*—Annie Kirkby Anderson, Norah Kemp, Roberta Henrietta Margueretta Stewart, and Merbai Ardesir Vakil, B.A.

(*B*) *Not including Pathology.*—Andrew Phillips Aitken, John Ritchie Burns, John Herbert Lawson, Robert Hugh Meikle, James Millar, and John Alexander Paton.

The following have passed the Third Professional Examination (new regulations) for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subject or subjects indicated after their respective names (P., pathology; M., medical jurisprudence and public health):—

Francis James Charteris, P., M.; George Clark, P., M.; George William Coats, P.; James Duncan Cochran, P., M.; Joseph Muir Corbett, P., M.; Walter Scobie Findlay, M.A., P., M.; Adrian Andrew Forrester, P., M.; Lawrence Whitaker Harrison, P., M.; William Mitchell Lindsay, P.; William Glen Liston, P., M.; James M'Haffie, P., M.; David M'Kail, P., M.; Norman Emil Henry Scott, P., M.; Samuel Macfarlane Sloan, P., M.; David Steele Smith, P., M.; and Mathew Logan Taylor, P., M.

UNIVERSITY OF ST. ANDREWS.—The following registered medical practitioners having passed the fequired examinations had the degree of Doctor of Medicine conferred upon them on March 27th, 1896:—

Beatty, Thomas Carlyle, L.R.C.P.Edin., F.R.C.S.Edin., L.S.A. Lond., Clacton-on-Sea.
Blake, Thomas William, M.R.C.S.Eng., Bournemouth.
Edmiston, John Clark, L.F.P.S.Glasg., Glasgow.
Gramshaw, Farbrace Sidney, L.A.H.Dubl., L.R.C.S.Edin., L.K.Q.C.P.I., Stillington.
Harris, William, M.R.C.S.Eng., L.S.A.Lond., M.R.C.P.Edin., F.R.C.S.Edin., Hellesdon, Norwich.
Hayman, Charles Augustine, L.R.C.P.I., L.R.C.S.I., L.M.I., Clifton, Bristol.
Lacey, Thomas Warner, L.S.A.Lond., M.R.C.S.Eng., L.R.C.P. Lond., Woolwich.
Powell, Henry William FitzGerald, L.F.P.S.Glasg., L.R.C.P.Edin., F.R.C.S.Edin., London.
Reid, Thomas Whitehead, F.R.C.P.Edin., Canterbury.
Thomson, James Stitt, F.R.C.P.Edin., F.R.C.S.Edin., Dalkeith.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following gentleman having passed the necessary examination has been admitted a Fellow of the College:—

Brooke, James Stuart, L.R.C.S.I., &c.

The following gentleman having passed the necessary examination has been admitted a Licentiate of the College:—

Jones, William Arthur, L.S.A. Lond.

MEDICAL MAGISTRATE.—The Lord Chancellor has added the name of Mr. J. Goodwin Shea, F.R.C.S.Irel., to the Commission of the Peace for the borough of Chesterfield.

THE SOUTHAMPTON INFECTIOUS HOSPITAL.—It is not at all events general for the inspectors of the Local Government Board to publicly express the conclusion at which they have arrived at the end of an inquiry, but the Corporation of Southampton had a strong case for and practically no opposition to their scheme for an infectious hospital to supplement the present accommodation in the Small-pox Ship and the West Quay Hospitals. They asked permission to borrow a sum, estimated at about £2000, to purchase a site of ten acres for the buildings, but the actual price has not been fixed, for several interests being affected in the title to the land the matter has to go to arbitration. The land is high and the soil gravelly and easy to be drained. The present land hospital consists of two old houses scarcely worth repair and an iron addition thereto, while the nurses are not separated from the patients. The ship, of course, is reserved for small-pox patients, and Mr. Harris once more recalled a severe lesson to Southampton some few years ago, when no less than 135 cases were traceable to one imported small-pox patient. The vessel is, in fact, a port sanatorium. The new buildings will, it is thought, take eighteen months to erect, and the inspector disposed of the only serious objection—the carriage of infectious cases through a populous district—by remarking that it had been shown that with proper precautions there was no danger from this practice to the public health; and at the close of the inquiry Dr. Bruce Low said it seemed that the necessity for the purchase of this particular site had been shown, and it would appear from the evidence that it would be an economical scheme. He should report accordingly.

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MR. ROBERT HARTLEY, medical officer of health to the Pemberton Urban District Council, has been elected a member of the County Council of Lancashire.

NATIONAL ORTHOPÆDIC HOSPITAL. — At the National Orthopædic Hospital, Great Portland-street, there were last year 205 in-patients and 1188 out-patients.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—The Central London Ophthalmic Hospital was partially closed for several weeks last year on account of repairs to the building. The annual report shows that during the year there were 170 in-patients and 9521 out-patients. The receipts were £887, of which the small payments made by patients amounted to £456.

SOUTH DEVON AND EAST CORNWALL HOSPITAL.—The annual report of the South Devon and East Cornwall Hospital at Plymouth shows that during the last year 1152 patients were admitted and 75 deaths occurred; there were also 2274 out-patients. The expenditure exceeded the income by £190 and there was at the bank an overdraft of £801. The Earl of Mount Edgcumbe presided at the annual meeting.

SEAMEN'S HOSPITAL SOCIETY. — The annual meeting of the Seamen's Hospital Society was held at the Mansion House, Sir Donald Currie, M.P., presiding. The report showed that mainly through the receipt of a legacy of £2150 the receipts had been sufficient to cover the expenditure. Last year there were 18,293 patients, one-half of the in-patients being foreigners. The chairman read a list of subscriptions amounting to £675, which he had received, and said that he himself would contribute £1000. A vote of thanks to the contributors was proposed by the United States Ambassador and carried unanimously.

BIRMINGHAM GENERAL DISPENSARY. — The annual report of the Birmingham General Dispensary showed that the total number of patients admitted last year by tickets at the various branches was 32,774. Dental cases and accidents continued to be treated without tickets being obtained, and of these cases there had been 5091, bringing up the total number of patients to 37,865. The total income during the year was £10,770 and the expenditure £10,355, leaving a balance of £415 to be carried forward. The grant of the Hospital Saturday Fund was £900 to the general fund and £250 to the relief fund. The average cost of the patients was 3*s*. 9*d*.

ROYAL FREE HOSPITAL.—The annual report of the Royal Free Hospital showed that the patients treated during 1895 were largely in excess of the numbers recorded in 1894. More than 150 students of the London School of Medicine for Women received instruction in the wards, and 25 of them had become qualified to practice. The total expenditure was £10,898 and the income £9124. At the conclusion of the business Mr. Justice Bruce unveiled a marble tablet erected in memory of the late Mr. George Moore, who for twenty years had been a zealous supporter of the hospital.

THE PORTSMOUTH WATER SUPPLY.—The proposal of the Portsmouth Corporation to purchase the undertaking of the local waterworks company has been met with a good deal of difficulty. At the negotiations which were resumed some few weeks ago the chief point of difference between the parties was with regard to the amount of compensation to be paid to the directors and officials of the company; but at a recent conference between the committee of the town council and the directors the latter put forward other and fresh conditions. The directors ask that £10,000 be paid to them and to the auditors as compensation for disturbance; that £4000 be added to the company's reserve to make up the value of the back dividends; and that a year's pay, £4666 in all, be given to each employé of the company. In reply the committee recommend that seven years' fees (£6468) be paid to the directors and auditors, and they are opposed to the back dividends' scheme. They propose to pay seven years' salary to the secretary as superannuation and to retain at their present salaries every other officer of the concern. Arbitration is suggested should the directors fail to accept. This, then, with the addition of the handing over of sufficient Corporation stock to assure to the shareholders interest equal to the full statutory dividends for the water stock, is briefly the price the Corporation offer for the undertaking. The cost is put at just under a million and fifty thousand pounds.

LIVERPOOL INFIRMARY FOR CHILDREN.—The annual report showed that last year there were 1165 in-patients and 14,159 out-patients. The expenditure exceeded the income by £307. The amount received from the Hospital Saturday and Sunday Funds was £636.

ROYAL ISLE OF WIGHT INFIRMARY AND COUNTY HOSPITAL. — At the Royal Isle of Wight Infirmary and County Hospital 428 in-patients were admitted, and twenty-nine deaths occurred during the fifteen months from Oct. 1st, 1894, to Dec. 31st, 1895; there were also in the same period 1922 out-patients. The total income was £3510, and the total expenditure £3291, leaving a balance of £219.

LIVERPOOL LADIES' CHARITY AND LYING-IN HOSPITAL.—The annual meeting of the Liverpool Ladies' Charity and Lying-in Hospital was held on March 18th at the Town-hall, under the presidency of the Lord Mayor (the Earl of Derby). The report showed that during last year 2119 patients were attended at their own homes by the district midwives of the charity, whilst 274 were admitted into the hospital and attended by the nurses acting under the matron. The district medical officers visited 119 of the outdoor cases, and 28 of the hospital cases required the attendance of the hospital medical officers. There had been twenty-five pupils, of whom fourteen were trained as midwives and eleven as monthly nurses. The total expenditure for the year was £2230 and the balance due to the treasurer has now increased to £825.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.—The next examination for the Certificate in Nursing and Attending on the Insane will be held on Monday, May 4th. Particulars can be obtained from the Registrar, Dr. Spence, Burntwood Asylum, near Lichfield.—The spring meeting of the South-Western Division, as we have already announced, will be held at Bailbrook House, Bath, on April 14th, 1896, at 2.30 P.M. Communications: (As by resolution at last meeting) To Consider the Report of the Committee on Criminal Responsibility. Dr. P. W. MacDonald will introduce a discussion on the Nursing Staff in Asylums. Dr. R. S. Stewart will read notes on the Special Reports and Certificates required by Section 38 of the Lunacy Act, 1890, and Section 7 of the Act of 1891. There will be a dinner provided at the Grand Pump Room Hotel at 5 P.M., charge 5*s*. each, exclusive of wine.

LITERARY INTELLIGENCE.—Recent French and German works and new editions announced by Messrs. Williams and Norgate include a second edition of the "Traité des Methodes Techniques de l'Anatomie Microscopique," by Bolles-Lee and Henneguy; a sixth edition of Gegenbauer's "Lehrbuch der Anatomie des Menschen"; Bollinger's "Atlas und Grundriss der Pathologischen Anatomie" (Part 1, Circulationsapparat, Lymphdrüse, Milz- und Schilddrüse); Heitzmann's "Descriptive und Topographische Anatomie des Menschen" (Parts 1 and 2, Bones, Joints, and Ligaments); Lewin's "Beiträge zur Dermatologie und Syphilis"; Von Niessen's "Der Syphilis-bacillus"; third edition of Bresgen's "Krankheits- und Behandlungslehre der Nasen-, Mund- und Rachenhöhle"; "Abba's Manuale di Microscopia e Batteriologia applicate all' Igiene," "Oeller's Atlas der Ophthalmoscopie (Part I.)"; "Londe's Photographie Moderne"; and "Miethe's Lehrbuch der Praktischen Photographie." The same firm publish Murray's treatise on the Deep and Shallow-water Marine Fauna of the Kerguelen Region of the Great Southern Ocean and An Account of the Crustacea of Norway, by Professor G. O. Sars, of which Vol. I. on the Amphipoda appeared last year, and Vol. II. on the Isopoda is in preparation. Of special interest at the present time are Roentgen's "Photographiën einer neuen Art von Strahlen," and Wünschmann's "Die Rœntgenschen X-Strahlen, gemeinverständlich dargestelt."—The Rebman Publishing Company (11, Adam-street, Strand, W.C.) have ready for immediate publication a new work, entitled "Water and Water-supplies," by Dr. J. C. Thresh.—Mr. Young J. Pentland has in preparation a Text-book of Physiology, to be edited by Professor Schäfer of University College, and containing contributions by Professors Halliburton, Gamgee, Burdon Sanderson, Gaskell, Langley, Sherrington, McKendrick, Haycraft, and others.

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PRESENTATION.—Mr. J. F. Shanahan, L.R.C.P., L.R.C.S. Irel., has been presented by the Limerick Royal Irish Constabulary with a valuable dining-room clock and two bronze mantel figures. The clock bore the following inscription: "Presented to Dr. J. F. Shanahan by the Limerick Royal Irish Constabulary, on his marriage, as a mark of their esteem and in recognition of his ability and unremitting attention as their surgeon."

FOOTBALL CASUALTIES.—While playing a match on Saturday last for Bedminster against the Eastville Rovers, a young man sustained injuries to his head from which he died on the following day.—A player (a factory worker at Bessbrook, near Newry) died at Dungannon on the 29th ult. from injuries to his head received in a match on the previous Saturday.—While playing a game on the 28th ult. in the Anderton-road, Sparkhill, a young man aged twenty-seven fractured his leg and was taken to the General Hospital, Birmingham.

THE DIFFUSION OF SMALL-POX AT GLOUCESTER.—Affairs at Gloucester have entered upon a different and a more serious phase during recent days. Not only have the cases newly arising developed in larger numbers than at any former time in the course of the epidemic, but this has happened at a time when seasonal circumstances of one and another kind are in favour of a still further augmentation of attacks. True it is that the altered attitude of the guardians towards the enforcement of primary vaccination has made changes which may have an appreciable effect on the future of the disease in Gloucester if matters are properly handled. The chances of this being done are greatly increased by the fact that the Local Government Board have sent their assistant medical officer, Dr. Parsons, to the city for the purpose of showing how the newly-acquired life of the compulsory clauses of the Vaccination Acts may be spent to the best advantage in the interests of the unvaccinated portion of the community. This kindly action on the part of the Local Government Board shows still more the wisdom of the step taken by the guardians, as it would have been manifestly absurd of the Board to have intervened in any way whilst the vaccination authority was bent on remaining inactive. On the other hand it is pleasing to note the alacrity with which the Board have stepped into the breach the moment it was deemed possible that the experience of their experts would avail to help the disease-stricken city. Whilst Dr. Parsons is thus busy assisting the authority in their efforts to stamp out the epidemic, Dr. Coupland, on behalf of the Royal Commission on Vaccination, is, we are glad to learn, engaged in studying the facts as to vaccination in relation to small-pox, a matter which is worth a great amount of pains at the present moment when the Commission are apparently approaching the completion of their seven years' sittings.

Parliamentary Intelligence.

CURRENT NOTES.

The Meat-supply for the Army.

FROM time to time recently questions have been addressed to the representatives of the War Office with regard to the quality of the meat supplied to different branches of the Army and to the proportion of foreign-grown meat allowed in the contracts, and it is understood that the Secretary of State for War has decided to make the whole subject a matter of special inquiry.

Shops Early Closing Bill.

Sir John Lubbock's Bill for the earlier closing of shops has emerged from the Grand Committee on Trade in very much the same condition as when introduced. The advocates of the voluntary closing movement proposed many amendments, but were successful with only a few and these unimportant. One alteration made is to the effect that the application by two-thirds of the shopkeepers to the local authority shall mention the hour which they desire to see inserted in the order, and among the shops expressly excluded from the operation of the Act are those in which hot cooked provisions are sold.

HOUSE OF COMMONS.

FRIDAY, MARCH 27TH.

Butter Adulteration.

Mr. Walter Long, President of the Board of Agriculture, in reply to a question by Mr. Kearley, said that during February 170 samples of imported butter were taken, of which 15, or 8·8 per cent., were found to be adulterated.

The Outbreak of Small-pox at Gloucester.

Mr. Radcliffe Cooke asked the President of the Local Government Board whether he was aware that small-pox was increasing in Gloucester at the rate of sixty fresh cases a week, the mortality being especially great among children, and that in one school out of forty children attacked no less than twenty-six died; whether he could say how many deaths were of unvaccinated and how many of vaccinated persons; and what steps, if any, were being taken to check the ravages of the disease.—Mr. Chaplin replied that the number of cases of small-pox notified to the Local Government Board during the four weeks ended March 21st was 414, 155 being in respect of the last-mentioned week. No details as to particular schools or as to the proportion of deaths amongst vaccinated and unvaccinated persons were as yet available. He was informed by the town council that they had done all that they could in the way of hospital isolation and disinfection to check the spread of the disease, but he was advised that the only effective means of controlling the extension was the adoption of a general system of vaccination and revaccination. He was informed by the guardians that every facility was being afforded by them for vaccination and revaccination, that both operations were being carried out very largely, and that the guardians at their last meeting resolved to enforce the Vaccination Acts, which, he understood, had been in suspension for the last nine years.

Illness in Poor-law Schools.

Mr. Chaplin, in answer to a question by Mr. Drage, said that scarlet fever had been prevalent in the Forest Gate school since August, 1895. During the last five months of the year seventy cases occurred. It was of an extremely mild type and many of the cases were so slight that their nature was difficult to recognise. He was glad to be able to state that there had been no death from the disease. There were twenty-three cases of diphtheria in 1895 in the Poor-law schools of the metropolitan district. Dr. Downes, the Inspector of the Board, stated that so far as he could judge from the best available data diphtheria during 1895 was about three times more rife among metropolitan children of school age not resident in Poor-law schools than it was among the children resident in such schools. According to a return made in the present month there were 641 cases of ophthalmia under treatment or observation in metropolitan Poor-law schools. The number for the corresponding period of 1895 was 709. Dr. Downes informed him that the cases were chiefly those of catarrhal ophthalmia or of granular lids, and that he was not aware that there had been any outbreak of the more serious form of purulent ophthalmia during the year.

MONDAY, MARCH 30TH.

Venereal Disease in the Indian Army.

Lord George Hamilton, in reply to a question by Mr. Duncombe, said that the growth of venereal disease in the Indian army consequent upon the abolition of the previous protective measures against it had been a source of great concern to the Government of India, who reported that it prevails "to such an extent as to constitute a most serious cause of inefficiency in the army." The Government of India were considering what instructions or regulations it might be possible for them to issue to mitigate the scourge without infringing the restriction imposed upon them by the resolution passed by the House upon the subject.

Dissection of Rabbits by Girls.

Colonel Lockwood asked the Vice-president of the Committee of Council on Education whether he had become acquainted with the purport of statements lately published in Birmingham to the effect that a class of young girls at the Waverley-road Board Schools were made to dissect the bodies of rabbits; were these operations enjoined by the Government Inspector; if so, were they sanctioned by the department as a necessary part of the education of girls; was the kind of teaching involved to be continued; and would he see that the use of diagrams as illustrations were substituted for such experiments.—Sir John Gorst said, in reply, that the dissection in question was performed by some sixteen girls, not in an elementary school, but in the advanced course of the Organised Science School. Physiology was a compulsory subject in this course and the regulations of the Science and Art Department required a practical acquaintance by the use of a microscope with the minute structure of the several tissues and organs. None of the girls were under fourteen and nearly all were over fifteen. The clerk of the Birmingham School Board had stated that the actual dissection was nothing more than any girl would necessarily perform in preparing a rabbit for stewing and had probably been done without remark in most cookery kitchens.

The Alleged Increase of Lunacy.

Mr. Hobhouse asked the Secretary of State for the Home Department if he had communicated further with the Lunacy Commissioners, and if he was now prepared to make a further statement as to the causes of the recent great increase of lunacy and the operation of the 4*s.* grant or to institute an inquiry into the subject.—Sir Matthew White Ridley replied: I have had no direct communication recently with the Lunacy Commissioners on the subject, but I have suggested to the Lord Chancellor, under whose jurisdiction they are, that in view of the interest that is being taken in the question, it might be desirable to follow the precedent set by the Irish Government and direct the Commissioners, or some of them, to make special inquiries as to the causes of the increase of lunacy and embody their conclusions in the next annual report or in a special paper to be laid on the table of the House.

Medical Examiners in Ireland.

Mr. William Johnston asked the Chief Secretary to the Lord-Lieutenant of Ireland, in view of the fact that the three Queen's Colleges in Ireland sent up for the medical examinations of the Royal University at least three times as many candidates as did the Catholic University School of Medicine, would he explain why one-half of the total number of Fellows and examiners appointed by the Royal University were apportioned to the Catholic University. And, whether there was any clause in the charter or statutes of the Royal University giving this representation to the Catholic University at the

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expense of the Queen's Colleges of Belfast, Cork, and Galway.—Mr. Gerald Balfour said, in reply, that the charter and statutes of the Royal University of Ireland empower the senate to appoint or employ such examiners as may be necessary, and impose no restrictions as to the persons who may be so employed. He was informed by the secretaries to the University that it has been the usual practice, ever since its foundation, to appoint as far as possible one half of its ordinary examiners from amongst the professors of the endowed or Queen's Colleges, and the other half from the professors of unendowed colleges, this practice had been followed in the medical as well as in the arts faculty.

The Vaccination Question.

Mr. Channing asked the President of the Local Government Board whether inquiries had been made by the Royal Commission on Vaccination into outbreaks of small-pox at Warrington, Leicestershire, and other places; when the results of those inquiries would be made public; and what opportunities would be given to those who had taken local interest in the matter to represent any observations thereon to the Royal Commission before it presented its final report?—Mr. Chaplin replied that he had made inquiry and he was informed that it was the fact that inquiries had been made by the Commissioners into these outbreaks. When the results of the inquiries would be made public he was unable to say, but he was advised that the Commissioners could not undertake to delay the presentation of the final report until the publication of the results. The last question was one which ought to be addressed to the Commissioners, he having no authority to interfere.—In reply to a question by Colonel Russell on the same subject, Mr. Chaplin said that he had communicated with the Commission, and he had been informed that it was impossible to name a date when the Commission's report would be laid upon the table. The Commissioners had been for a long time engaged on its preparation, and they hoped it would not be long before it was presented. The Local Government Board had already sent Dr. Sidney Coupland to Gloucester to inquire into and report upon the epidemic there.

IN COMMITTEE.

Food Products Adulteration.

The Select Committee of the House of Commons on the Adulteration of Food Products held its final meeting for the examination of witnesses on Wednesday, March 25th,

Mr. Richard Bannister, Government Analyst at Somerset House, said that statements had been made by the representative of the Society of Public Analysts to the effect that the Somerset House authorities were incompetent for their work, and he desired to give evidence to prove that such was not the case. Long before the establishment of public analysts a large part of their duties had been performed, and performed with success, by the Inland Revenue Commissioners and their staff. They had bestowed very great attention upon tea and coffee, and upon spirituous drinks, vinegar, arrowroot, and articles of that kind, and the results of their work would be found in the records of the department and in blue-books. He maintained that the department had not been backward in scientific research and that its chemical and other scientific knowledge was well up to date. In five years there had been 933 prosecutions in connexion with excisеable articles. The cases dismissed were 14 in number, and the total amount of the fines imposed was £17,203, and he might add that no case was lost through faulty expert evidence. When the Food and Drugs Act came into operation in 1875 the department obtained a large number of carefully-selected samples of pure milk and butter and had them analysed in order to secure reliable data, and the results of the analyses were published in due course. He might say that no effort had been spared by the board or their chemical staff to carry out their duties in a manner entitling them to public confidence for zeal, thoroughness and impartiality. The most fruitful source of discussion with regard to the proper carrying out of the Food and Drugs Act was the limit or standard to be applied to milk, and he asserted that some analysts applied too high and rigid a standard and did not make sufficient allowance for natural variations in the milk. Mr. Bannister then discussed in detail a number of cases quoted by the representative of the Society of Public Analysts. Having done this, he said, in reply to the chairman, that it would certainly be most desirable that the authorities of Somerset House and the Society of Public Analysts who were engaged in the same class of work should, as far as possible, have uniform standards and limits. It was desirable that they should agree, but they could not agree. The present friction was considerable and greatly to be regretted, but he might say that with some of the public analysts in the country they had no difficulty whatsoever. He was not much in favour of fixed standards, but if they were to have a standard for milk it should be laid down in an Act of Parliament.

The Chairman (Mr. T. W. Russell) said that although the Committee had been sitting during three sessions of Parliament they were still being inundated with applications to be heard, and the Committee had decided to close their inquiry after hearing Mr. Beck, the solicitor of the Metropolitan Grocers' Association. They were of opinion that they would then have sufficient evidence with which to proceed to the consideration of their report.

Mr. Beck was then examined. He expressed the opinion that if properly administered and if amended in a few particulars the present Adulteration Acts were sufficient. In conducting prosecutions he found among magistrates a prejudice against traders undertaking prosecutions and among local authorities a distinct tendency to discourage information from private individuals. With regard to the sale of margarine as butter it appeared to him wise that there should be a minimum penalty from a second offence, and that with certain safeguards it should be possible in flagrant cases to impose imprisonment without the option of a fine.

The Committee have arranged to meet on April 14th to consider on what lines their report should proceed.

VACCINATION GRANT.—Mr. Horatio E. Walker, M.R.C.S. Eng., has again been awarded the full vaccination grant for the central district of the Corwen Union, North Wales.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ALCORN, R. G., L.R.C.P. Edin., L.R.C.S. Irel., has been appointed Government Medical Officer and Vaccinator for Maitland, New South Wales.

ALLEN, W. T. D., M.B., B.S. Irel., has been appointed Assistant Medical Officer for the Parish of Liverpool Workhouse.

ANDERSON, R. S., M.D., C.M. Edin., has been appointed Medical Officer by the Spennymoor Urban District Council.

BAIN, J. G., M.B., C.M. Glasg., has been appointed Medical Officer for the No. 2 District of the Wellington (Somerset) Union, vice A. Lyndon, resigned.

BARKER, W. H., M.R.C.S. Eng., L.R.C.P. Edin., has been appointed Acting Medical Superintendent of the Ararat Lunatic Asylum, Australia.

BLAXLAND, H., L.R.C.P. Lond., M.R.C.S., has been appointed pro. tem. Deputy-Inspector-General of the Insane, New South Wales.

BROWNE, V. E., M.B. Dub., L.R.C.S. Irel., has been appointed Health Officer for Rosedale Shire, Dennison and Rosedale Ridings, Victoria Australia.

CLAPHAM, G. P. P., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Assistant Medical Officer for the Workhouse of the Parish of Liverpool.

CROSS, G. F., M.B., B.S., has been appointed Medical Officer of Health to the Downham Rural District Council, vice F. W. Kirkham, resigned.

CROWTHER, E. L., M.D. Aberd., L.R.C.P. Edin., M.R.C.S. Eng., has been appointed Honorary Medical Officer to the General Hospital, Hobart, Tasmania, vice E. O. Gibbin.

DENSHAM, ASHLEY, M.R.C.S., L.R.C.P., L.D.S., has been appointed Assistant Dental Surgeon to the Dental Hospital of London, Leicester-square.

DUNN, E. D., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Public Vaccinator for the district of Nelson, New Zealand.

FENTEM, THOS., M.B., C.M. Edin., B.Sc. (Public Health), has been reappointed Medical Officer for the North Division of the Bakewell Rural District.

FOREMAN, JOSEPH, L.R.C.P. Edin., M.R.C.S. Eng., has been appointed Government Director of Sydney Hospital, New South Wales.

GORMLEY, J. W., L.K.Q.C.P., L.R.C.S. Irel., has been appointed Health Officer for North Ovens Shire, Victoria, Australia.

GOUGH, H. E., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Northwich Urban Sanitary District, vice J. M. Fox.

GRAHAM, JAMES, M.D. Edin., has been appointed a Director of the Prince Alfred Hospital, Sydney, New South Wales.

HARVISON, W. S., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Government Medical Officer and Vaccinator for Cooma, New South Wales.

HUGHSTON, R. W., M.B., Ch.B. Melb., has been appointed Health Officer for Fern Tree Gully Shire, Victoria, Australia.

KNOX, JOHN, M.D. Aberd., L.R.C.S. Edin., has been reappointed Medical Officer of Health for the South Division of the Bakewell Rural District.

LOVEGROVE, THOS. H., M.R.C.S. Eng., has been appointed Coroner for Perth, Freemantle, and Swan districts, Western Australia.

MORRIS, H. G., M.R.C.S., L.R.C.P. Lond., has been appointed Resident Medical Officer to the Hockley Provident Dispensary, Birmingham (Sands Cox Trust).

NATTLE, W. R., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Medical Officer at Mafeteng, Basutoland, South Africa.

NORRIS, W. P., M.B., Ch.B. Melb., has been appointed Health Officer for Romsey Shire, Victoria, Australia.

PERN, E. C., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Workhouse and the Droxford and Soberton Sanitary District of the Droxford Union, vice A. H. Goodwyn, resigned.

PLAYER, C. R., M.B., Ch.B. Melb., has been appointed Acting Medical Superintendent to the Sunbury Lunatic Asylum, Victoria, Australia.

RANDOLPH, C., M.R.C.S., L.R.C.P., L.M. Edin., has been appointed Medical Officer for the No. 5 District of the Wellington (Somerset) Union, vice H. W. Randolph, resigned.

ROTH, B., J.P., F.R.C.S. Eng., has been appointed Surgeon to the Orthopædic Department of the Royal Alexandra Hospital for Sick Children, Brighton.

SALTER, C. E., M.D. Lond., B.S., L.R.C.P., F.R.C.S., has been appointed Honorary Surgeon to the Scarborough Hospital.

SANTI, PHILIP R. W. DE, F.R.C.S., has been appointed Assistant Surgeon (vice C. Stonham) and Aural Surgeon to the Westminster Hospital.

SMITH, W. T., M.R.C.S., has been reappointed Medical Officer of Health by the Lepton District Council.

THOMAS, J. T., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Camborne Urban Sanitary District, vice R. Erskine, resigned.

THOMSON, J. A. M., L.R.C.P. Irel., L.M., L.R.C.S. Irel., has been reappointed Medical Officer of Health for Bradford-on-Avon.

THORP, S., M.R.C.S., has been appointed Medical Officer for the Fourth Sanitary District of the Hexham Union, vice A. H. Hoffman, resigned.

WHITLING, H. T. M., M.B., B.S. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Third Sanitary District of the Market Harborough Union, vice H. H. Lovell, resigned.

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Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BATH URBAN SANITARY AUTHORITY.—Medical Officer of Health. Salary £200 a year.

BELGRAVE HOSPITAL FOR CHILDREN, 77, Gloucester-street, London, S.W.—Dispenser. Salary £50 per annum. Also Clinical Assistant.

CITY OF BIRMINGHAM.—Deputy Medical Superintendent for the City Hospital, Little Bromwich, unmarried. Salary £175 per annum, with residence, rations, and attendance. Applications to the Clerk to the Health Committee, Council House, Birmingham.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Pathologist. Salary 100 guineas per annum.

DENTAL HOSPITAL OF LONDON AND LONDON SCHOOL OF DENTAL SURGERY, Leicester-square, W.C. — Lecturer on Mechanical Dentistry.

DR. STEEVENS' HOSPITAL, Dublin.—House Surgeon for two years. Salary £100 per annum, with apartments, fire, and light.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis-road, Shadwell, E.—Resident Medical Officer. Salary £80 per annum, with board and residence.

HEREFORD COUNTY AND CITY ASYLUM. — Medical Superintendent. Salary £400 per annum, with furnished house, coals, gas, vegetables, and washing. Applications to Chairman, Asylum Committee, Shirehall, Hereford.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—House Physicians. Also Clinical Assistants to the Out-patient Department and Clinical Clerks to the In-patient Physicians.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury.—Surgical Registrar, for one year, an honorarium of £40 being voted at the expiration of that term.

KESTEVEN AND GRANTHAM DISTRICT ASYLUM. — Resident Medical Superintendent. Salary £300 a year, with rations, coals, light, and washing. Applications to the Clerk to the Visitors, Stamford.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House Surgeon. Salary, £70 per annum, with residence and maintenance in the hospital.

MANCHESTER ROYAL EYE HOSPITAL.—House Surgeon. Salary £70 per annum, with residence, board, and washing.

MIDDLESEX HOSPITAL, W.—Honorary Senior Surgeon.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich-road, S.E.—Junior Resident Medical Officer for six months. Salary £30 per annum, with board, attendance, and washing.

OWENS COLLEGE, Manchester.—Junior Demonstrator in Physiology.

PADDINGTON-GREEN CHILDREN'S HOSPITAL, W.—House Physician and House Surgeon for six months. Salary at the rate of £50 per annum, board and residence.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—Resident Medical Officer for six months. Salary at the rate of £100 per annum, with furnished apartments, board, and washing.

RUPTURE SOCIETY.—Surgeon. Applications to Mr. C. Taylor, 27, Great James-street, Bedford-row, London, W.C.

SOCIETY OF APOTHECARIES.—Examiners. Applications to the Clerk to the Society, Apothecaries' Hall, Blackfriars.

SURREY DISPENSARY.—Obstetric Physician and a Surgeon. Honorarium in each case 50 guineas per annum. Applications to the Secretary, 53, Borough High-street, Southwark.

Births, Marriages, and Deaths.

BIRTHS.

BLAIKIE.—On March 29th, at Minto-street, Edinburgh, the wife of R. H. Blaikie, M.D., F.R.C.S. Edin., of a daughter.

HOLMES.—On March 29th, at Ferndale, Woburn Sands, Beds, the wife of T. D. Holmes, M.D. Edin., of a daughter.

SMITH.—On March 29th, at Brook-street, Grosvenor-square, the wife of Dr. Pye Smith, of a son.

STOCKEN.—On March 28th, at Connaught-road, Harlesden, the wife of Arthur P. Stocken, L.D.S., of a son, stillborn.

MARRIAGES.

BENSON—SIMMONDS.—On March 26th, at St. Paul's, Herne-hill, Henry Mitchell Benson, M.B., C.M. Edin., eldest son of John Benson, Broomhill, Sheffield, to Stella Theodora, third daughter of the late Henry Simmonds, Aylesford House, Herne-hill.

SHUTER—TIPPETT.—On March 26th, at the Parish Church, Chiswick, George Percy Shuter, M.A., M.B., B.C. Cantab., D.P.H., of Oaklands, Chiswick-lane, W., to Ellen Frances Tippett, of Cleveland House, Chiswick, second daughter of G. F. Tippett, of Bromley.

STEPHEN—HETT.—On March 26th, at St. Stephen's, Westminster, by the Rev. J. Rogers, Vicar of Gatton, Surrey, assisted by the Rev. H. Twining, Vicar of St Stephen's, John Stephen Stephen, M.B., C.M., Edinburgh, and of Gallowcrook, Elgin, to Emmie Cundell, second daughter of J. Hett, Esq., Headlam Hall, Darlington.

DEATHS.

COPELAND.—On March 25th, at Staindrop, William Copeland, M.R.C.S., aged 80.

MONCKTON.—On March 26th, at Maidstone, David Henry Monckton, M.D. Lond., aged 67.

TUCKER.—On March 29th, at Glaslyn, St. Leonards-on-Sea, John Dunning Tucker, aged 67.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 1st, 1896.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Mar. 26	29·69	N.W.	48	47	88	52	47	0·01	Cloudy
,, 27	29·93	N.W.	45	41	92	53	41	0·08	Cloudy
,, 28	29·59	S.W.	44	42	78	46	38	...	Raining
,, 29	29·75	N.	41	39	58	44	39	0·28	Raining
,, 30	30·01	N.	40	38	81	51	35	0·05	Overcast
,, 31	30·19	N.E.	41	39	88	51	38	...	Cloudy
April 1	30·04	W.	48	46	64	52	41	0·02	Overcast

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index for the second half-yearly volume for 1895 was given in the issue of Dec. 28th. The practice of supplying loose copies has been discontinued, the Index having been placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1895 are now ready. Bound in cloth, gilt lettered, price 18*s*.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s*.; by post, 2*s*. 3*d*.

To be obtained on application to the Manager, accompanied by remittance.

CHARGES OF EXTRAVAGANCE AGAINST THE ASYLUMS BOARD.

THE Islington vestry, which is represented by Mr. Elliott in the Metropolitan Asylums Board, has very properly declined, notwithstanding strong and almost plaintive pressure from Mr. Elliott and his friends, to express any opinion on his position in regard to the charges which he has seen fit to bring against the Board in connexion with the payment of large sums for sites for hospitals. The public admires any man who has the courage to push such charges to a demonstration. But to make them and then to flinch from carrying them through is a very different matter. The whole system of the Board, its efficiency, its wholesale admission of patients of all sorts and conditions with "no restriction or regulation" such as was contemplated in the Acts by the Local Government Board, constitute a big question for very serious inquiry of which we see little chance at the present time. The Board has given every opportunity of inquiry to Mr. Elliott.

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"THE POISON OF THE PRIMULA."

To the Editors of THE LANCET.

SIRS,—In answer to your inquiry on the above subject in THE LANCET of March 28th I beg to say that about two months ago a young man, a gardener, consulted me about a very severe attack of inflammatory eczema, confined to the right forearm and back of the right hand. He said he had been handling primula obconica and that he had had a similar, though less severe, attack of the same kind in the previous autumn from the same cause. I have made several inquiries amongst those interested in gardening in this district, and it seems to be a well-recognised fact that primula obconica at any rate produces in many cases artificial eczema of varying degrees of severity. I have not obtained evidence against any other variety of primula in this respect, but as the whole order of primulaceæ are more or less noted for their acridity it is very likely that other members of the order produce skin eruptions. Primula obconica is in flower all the year round, and it would be interesting to know if the poison be virulent throughout the year or only at particular seasons. The poison is distilled from the hairs which may be seen thickly covering the leaves and other parts of the plant. Gardeners, amateur and professional, should know of this possible source of discomfort and should always have their hands and arms covered when handling plants of the order primulaceæ. The eczema in my case quickly subsided by local application of the following lotion: Acidi carbolici, acidi boracici, āā 3 ss.; calaminæ præparatæ, 3 iv.; magnesiæ ustæ, 3 ii.; glycerini pur., 3 ij.; aquæ destillatæ ad ℥ viii.

I am, Sirs, yours faithfully,

LOUIS E. STEVENSON, M.B. Camb., &c.

Temple Sowerby, Westmorland, March 30th, 1896.

To the Editors of THE LANCET.

SIRS,—About five years ago I had under my care a lady who suffered from recurring attacks of an erysipelas-like character. She had suffered more or less for twelve months. As a rule the attacks came on suddenly, her whole face would swell, including the eyelids, so that she could no longer see, and large blisters formed over the cheeks and chin. The dorsal aspect of the hands and forearms were also affected, but in a much slighter form. She had never had erysipelas or anything resembling it previously to the beginning of this attack, and no known cause had been discovered. She was usually confined to bed for a few days and then quite recovered, but whenever she came downstairs a few minutes — sometimes ten — were sufficient to close her eyes, &c., so that she had to retire at once. I at last discovered that when she came downstairs the first thing she usually did was to take away the decayed foliage, flowers, &c., from a very fine specimen of primula obconica. I removed the primula and the patient since then has never suffered from primula erysipelas. I have seen one or two cases since in gardeners, but confined to their hands and forearms, but have never seen such a severe case as described above.

I am, Sirs, yours truly,

THOS. A. F. HOOD.

Ivy Bank, Blairgowrie, N.B., March 28th, 1896.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of March 28th you say you would like to hear of anyone having had under his care a patient suffering from the handling of primulas. I met with such a case in June last. A middle-aged lady consulted me with reference to a rash affecting the dorsal aspect of the hands and fingers. It was not erysipelatous in character, but more like a dry eczema and attended with a good deal of pruritus. She had been under the care of a dermatologist in London, but soon after she returned home the condition recurred. As I noticed that the rash stopped abruptly, where the wrist became covered by the dress, and also failing to find any diathetic cause for the condition, the treatment of which was not very satisfactory, it occurred to me, as I had heard of the effects of the primula in this way, to ask her if she was in the habit of handling these plants. She at once said she had several pots containing plants of primula obconica with which her hands were often in contact. I advised her to leave off all medication and to keep her favourites at a respectful distance. She did so, and in about ten days returned to say that my surmise was evidently correct, as she was quite free from her complaint.

I am, Sirs, yours faithfully,

Hull, March 30th, 1896. GEO. F. ELLIOTT.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of March 28th you refer to cutaneous irritation from primulas, and inquire if other instances are known. I may say that I have seen two well-marked cases of irritation of the fingers and dorsum of both hands from this cause. The first case which I saw some three years ago was that of a gardener who had been potting or repotting primula obconica for two or three days previously. The dorsum and fingers of both hands were the seat of a red raised rash and the skin of the fingers in some places had become abraded and the surface wept slightly. The other case was in a gentleman who had been potting primulas. The rash was similar to that seen in the first case, but was not so marked, and the right hand was more affected than the left. The irritation in both cases was great, but soon yielded to oleate of zinc ointment and the wearing of gloves when handling the plants.

I remain, Sirs, yours truly,

Halifax, March 28th, 1896. PRIESTLEY LEECH.

THE AERIAL CONVECTION OF INFECTIOUS DISEASE.

To the Editors of THE LANCET.

SIRS,—In times gone by cholera was always believed to be a visitation of Providence; a cholera cloud was constantly talked about and the germ-laden air was supposed to affect one spot and pass over another. But we now laugh at these notions as out of date; at the same time, this apparently does not prevent us from falling back upon this identical method of explaining the spread of other infectious diseases. When we cannot find out some clear cause for some particular outbreak of zymotic disease we say it is due to the atmosphere; the same as when we are unable to explain some peculiar chemical action we say it is due to catalysis. But why, after all, should we discard certain reasonable methods of explanation and fall back upon mere suppositions? For instance, why should we put forward the idea as regards small-pox, that the occurrence of cases around small-pox hospitals is due to aerial convection, when we know that nurses and attendants are constantly going into the surrounding districts and in all probability carry some infection with them? Because the germs of malaria are wafted about by the air that is no reason of itself why animal poisons should be distributed in the same way. The soil would say destroys the animal germs, but keeps alive those peculiar to marshy districts. If it be asserted that both vegetable and animal poisons get disseminated in the same way, then a belt of trees round infectious hospitals should be equally as efficacious as they are round low-lying marshy areas. But will anyone be got to say that they will be? My own belief is that the air is destructive to animal but not to vegetable poisons.

I am, Sirs, yours faithfully,

Surbiton, March, 1896. F. P. ATKINSON.

P.S.—From Dr. Manson's lectures on malaria it would appear that even the idea of the aerial convection of the malaria germ may soon be swept away.

H. F. (Southernhay).—It seems to us, from our correspondent's account, that X. ought to decline to attend the patient. An interview between A. and X. would ensure amicable relations, whatever their mutual decision.

Mr. E. Curtin.—The circular is discreditable, but we cannot find by the current Register or Directory that it is issued by a qualified medical practitioner.

Devon.—(1) Our correspondent's first duty is towards his patient. (2) Certainly not.

THE STRENGTH OF THE HUMAN JAW.

THAT the muscular strength of the jaw in man, notwithstanding the remoteness of his reputed descent from simian ancestors possessed of gigantic maxillæ, has by no means dwindled into insignificancy is a matter of common knowledge. Readers of "Alice's Adventures in Wonderland" will remember how Father William explained his prowess as a trencherman to his son:—

> "'In my youth,' said his father, 'I took to the law,
> And argued each case with my wife;
> And the muscular strength which it gave to my jaw
> Has lasted the rest of my life.'"

But it appears that an American dentist claims the honour of being the first to endeavour to determine the exact amount of such muscular strength by means of a special dynamometer of his own invention, with which he has carried out a series of experiments on no fewer than 500 persons of both sexes and various ages. It has been argued, with some show of reason, that owing chiefly to the introduction of knives and forks and the consequent partial disuse of the teeth as agents for disruption the jaw-bones of civilised peoples are gradually undergoing attenuation, the shrinking process being further aided by the abbreviation of mastication which has attended on the aspirations towards tenderness of modern cooks; but we are not aware that any serious attempt has ever been made by ethnologists to investigate the truth or falseness of this theory. The subject is nevertheless one to which considerable interest attaches, and the American record, if authentic, should prove valuable to future investigators. It seems that the owners of the 500 jaws were able to exercise therewith on an average a pressure equivalent to about 100 lbs.; but the maximum and minimum, owing to age and other causes, were widely divergent. A little girl aged seven, for instance, could raise the index of the dynamometer to the 30 lb. mark with her incisors alone and to that for 65 lb. with her molars; while a gentleman with an extraordinarily powerful jaw (who happened, curiously enough, to belong to the medical and not to the legal profession) succeeded without apparent effort in exhausting the resources of the indicator with a pressure equal to 270 lb. The sole account of these experiments, which has reached us through a Continental channel, is rather meagre and inconclusive, but doubtless a complete report has been, or will be, published.

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"THE BALL-NOZZLE SYRINGE AND ENEMA."

To the Editors of THE LANCET.

SIRS,—With reference to your remarks on the ball-nozzle syringe in THE LANCET of March 21st, we write to say that the improvement suggested by you is being carried out, so that no part has the smallest bit of metal about it, the whole being made entirely of ebonite.

We are, Sirs, yours faithfully,

THE BRITISH-AMERICAN BALL NOZZLE CO.

Oxford-street, W., March 26th, 1896.

E. A. H.—Under these circumstances we know that half a fee has been taken. Whether this is fair or not must differ in different cases. For an opinion on the legal aspect of the case we must refer our correspondent to a solicitor.

L.R.C.S.—Certainly not. The certificate can only be signed by a registered medical practitioner.

"AMBULANCE LECTURES AND MEDICAL ADVERTISEMENT."

OUR paragraph upon this subject has brought us several illustrations of the thing we complained of. We cannot express an opinion on individual instances, preferring to leave it to the taste of ambulance lecturers to decide how far publicity is given to their name, and when it takes an unprofessional form.

M.O.H.—The Infectious Disease (Notification) Act, 1889, is quite clear on the point. Section 3 (*b*) says, "*every* medical practitioner attending or called in to visit the patient" shall forthwith notify. If it were not so, a patient might immediately after the first notification remove, or be removed, into an adjoining district, where he would avoid his infectious sickness being placed under any control. If the district council still refuse the fee, the actual circumstances of the case, with the dates of the two notifications, should be submitted to the Local Government Board and their view be asked. But we have dealt fully with this question and have quoted the decision of the Local Government Board as to it in the last of our series of four articles entitled "Difficulties under the Infectious Disease (Notification) Act, which appeared in THE LANCET of Jan. 19th, 26th, Feb. 9th and 16th, 1895.

Perplexed.—The circumstance mentioned must be regarded as favourable to our correspondent's chances, but scarcely to constitute a claim. Assuming that there is nothing in his relation to the retiring medical officer forbidding his candidature his success should be very probable.

ADVERTISING DENTISTS IN KENSINGTON.

"Dr." Cadwaladr Jones seems to have a warm, if rather injudicious, friend in the editor of *Society*, which on more than one occasion has contrived little paragraphs designed to send patients to him. The following is a specimen which—who could resist?

> "Cloe.—You will find 'Dr.' Cadwaladr Jones an excellent dentist, and very kind and gentle. He knows all about crowns and bridgework, and if he considers it desirable he uses it at reasonable charges. You will find him at 2, Queen's-road, a pretty little house overlooking Kensington-gardens."

Our only difficulty in acquitting Mr. Jones of any responsibility for such paragraphs is their appearance more than once, for presumably a word from him would stop the puff. He must know that the Irish College of Surgeons, whose dental licence he has, would not hold any of its licentiates blameless who sanctioned such paragraphs even by silence.

M.R.C.S. (ambulance) has omitted to enclose his card.

THE CONSULTING-ROOM IN AMERICA.

THE *Maryland Medical Journal* says that Philadelphia is soon to have a large office building which will be known as "The Clinic," and will be occupied exclusively by consulting-rooms for medical men. Cincinnati and New Orleans have such buildings in successful operation, and at New York a similar project is in contemplation.

MADURA FOOT DISEASE IN AMERICA.

IN the *Montreal Medical Journal* for January Adami and Kirkpatrick describe the first indubitable case of mycetoma recorded as occurring in a patient who had never travelled outside the continent of America. The affected limb was after amputation exhibited before the Medico-Chirurgical Society of Montreal.

KITSON *v.* PLAYFAIR AND WIFE.

WE have received a large number of letters on this case from medical men in different parts of the United Kingdom. It is obvious that pending the appeal the case cannot be commented on.

ERRATUM.—Mr. Lennox Browne informs us that he was preceded in his views upon lingual varix by G. Lewin of Berlin, who described it with pictorial illustrations, and attributed to it some importance as far back as 1863.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (6th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.).

TUESDAY (7th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (8th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY (9th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Great Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.) Gt. Northern Central (2.30 P.M.).

SATURDAY (11th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

WEDNESDAY (8th).—HUNTERIAN SOCIETY (London Institution).—8.30 P.M. Dr. P. Warner: Notes on a Case of Typhlitis; Mr. Symonds (late President) who operated on the case will also contribute his notes.

THURSDAY (9th).—BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M. Adjourned Discussion on Ventro-fixation, Ventre-suspension, and Allied Operations, with their results. Mr. Bowreman Jessett: The Importance of Early Diagnosis of Cancer of the Uterus (illustrated by numerous specimens and the results of treatment).

FRIDAY (10th).—WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary, Greenwich-road, S.E.).—8.15 P.M. Mr. H. Marsh: Recent Progress in the Pathology and Treatment of Diseases of the Joints (illustrated by specimens).

CLINICAL SOCIETY OF LONDON.—8.30 P.M. Mr. R. J. Godlee: Two Cases of Acute Abscess of the Liver.—Dr. S. West: On Albuminous or Serous Expectorations.—Dr. G. N. Pitt and Mr. Arbuthnot Lane: Cranial Cyst of Sarcomatous Origin; no recurrence two years after Operation.—Mr. H. W. Page: Sequel to a Case of Syphilitic Cranial Necrosis recorded in vol. xxviii. of the Transactions; Gumma of Frontal Lobe; Death.—Mr. L. Hudson: A Case of Malingering in a Boy of Eleven.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY (West London Hospital, W.).—8.30 P.M. Papers:—Mr. J. B. Jessett: A Case of Fæcal Fistula cured by Resection of Small Intestine by Maunsell's Method.—Dr. Thudichum: The Chemistry of the Carbohydrates, with special reference to Diabetes. Pathological specimen by Mr. A. Doran.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

FRIDAY (10th).—CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL.—4 P.M. Dr. Dundas Grant: Some recently introduced methods for the Diagnosis of Diseases of the Ear.

During the week marked copies of the following newspapers have been received:—*Dudley Herald, Sheffield Telegraph, Newcastle Leader, Hull Daily Mail, Times of India, Norfolk Daily Standard, Rangoon Gazette, Manchester Guardian, Doncaster Chronicle, Pioneer Mail, South Wales Daily News, Montreal Star, Hongkong Weekly Press, Leicester Daily Mercury, Hastings Independent, Newbury Weekly News, Sussex Daily News, Bradford Observer, Wolverhampton Chronicle, Walsall Advertiser, Birmingham Post, Kingston News, Architect, Darwen News, Portsmouth Times, Scotsman, North British Advertiser, Coventry Daily Telegraph, Builder, St. Pancras Guardian, Dundee Advertiser, East Dorset Herald, Liverpool Courier, Westminster Gazette, The Morning, Cork Weekly News, Invention, Electrical Review, Brighton Gazette, Morning Advertiser, The Times, Hertfordshire Mercury, Bedfordshire Times, Local Government Chronicle, Mining Journal, Reading Mercury, City Press, Weekly Free Press and Aberdeen Herald, West Middlesex Standard, Gloucestershire Chronicle, Guy's Hospital Gazette, Surrey Advertiser, Cheltenham Chronicle, Australian Medical Gazette, The Gazette (Montreal), Cornish Telegraph, Chatham News, Public Opinion, Local Government Journal, &c., &c.*

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The Hunterian Lectures
ON
INFANTILE SYPHILIS.

Delivered at the Royal College of Surgeons of England on March 23rd, 25th, and 27th,

BY J. A. COUTTS, M.B. CANTAB., M.R.C.P. LOND.,
PROFESSOR AT THE COLLEGE, AND PHYSICIAN TO THE EAST LONDON HOSPITAL FOR CHILDREN.

LECTURE I.

MR. PRESIDENT AND GENTLEMEN,—In the first place I have to acknowledge my indebtedness to the Council of this College for allowing me to occupy this present position. I feel, however, that I can best fulfil the trust imposed on me by not elaborating this acknowledgment, but by proceeding at once to the subject with which I have to deal.

That syphilis can be transmitted from parents to offspring few will have the hardihood to deny at the present day. Long after the recognition of the symptoms of inherited syphilis in the infant, however, there would seem to have been a minority of observers who doubted this transmission. Hunter, it is well known, was induced to deny it; but in this College we may fairly claim for the great Scotch surgeon that with him "error was but opinion in the making." During his lifetime and for years after his death his teaching was widely accepted and believed in. Further experience and knowledge, and especially the works of Colles, had shown that much of Hunter's writing on venereal disease was erroneous, and I fancied that, with the refutation of this mistake, the non-belief in the parental transmission of syphilis had been universally abandoned. It was then with surprise that I learnt from Kassowitz that in 1875, more than three centuries after the general acceptation of the fact of hereditary syphilis in the infant, there were still "authorities" who doubted this transmission. As late, indeed, as 1882 Hermann of Vienna published a work in which he endeavoured to prove that the assumption of such a complaint as hereditary syphilis was entirely a fallacy. Considering the recent date of this work, and having regard to the manifest differences between the inherited and acquired complaints, it needs but slight powers of prophesy to foretell that other "authorities" will in the future come forward to support Hermann and their predecessors in Kassowitz's time in the denial as to the identity of the disease in parent and infant. It is easy to predict, moreover, that the grounds of their unbelief as to the hereditary form of syphilis will be based on the theory that the latter is a germ disease, and that what is really transmitted from parent to offspring is not the living germ itself, but merely a toxine or some other product resulting from it. But in the light of our present knowledge doubts as to the transmission to the infant are not within the range of practical controversy, and if there still lingers any smouldering scepticism as to this transmission it is of little import, and I feel I can fairly ignore it without further comment.

I assume then as proven the fact that syphilis can be transmitted from a parent to the infant. I feel I may also take as proven that syphilis in the infant can be derived from the complaint in the father alone or the mother alone, or may be a joint heritage from parents who are both affected. It is true that within comparatively recent times authorities have doubted the power of the father to transmit except through the previous contamination of the mother, and others who have doubted the pregnancy resulting from a tainted ovum proceeding as far as the birth of a living child. Proofs in abundance, however, are forthcoming where, the father alone being infected, the mother has borne a syphilitic infant without presenting the least sign of the complaint herself, and others where a syphilitic mother has produced a tainted infant and the father undoubtedly been free. Any attempt, then, to refute the views of those who have argued otherwise would be superfluous on my part, and I will proceed to attempt an investigation as to whether there are any differences in the frequency and severity with which the infant is affected dependent on the parental source from which the complaint is derived. Apart from the consideration of disturbing elements introduced by such factors as the length of time elapsed from primary infection and the amount of treatment, there are other inherent difficulties in the way of estimating the paternal influence as regards the frequency of transmission of syphilis and its severity in the infant. One such difficulty lies in the fact that the mother may possibly have been affected in the ordinary manner, although she may exhibit no signs of the disease, and then it becomes a matter of impossibility to rightly assign to either parent his or her due share in the production of the complaint. Another difficulty arises from the assumption that every mother bearing a syphilitic infant has herself contracted the complaint from the fœtus in utero—a contingency that will be considered later when dealing with the question of "syphilis by conception." On one point bearing on the paternal influence, however, all observers are agreed. This is that a very large proportion of the mothers of syphilitic infants exhibit no outward evidences of the complaint themselves even after prolonged and careful search. It is only in such cases as these that any estimation as to the paternal influence in syphilitic heredity can be attempted. When writers such as Fournier, who believe in the doctrine of "syphilis by conception," give statistics as to the paternal influence, they simply refer, I take it, to cases where there is certain proof of the disease in the father and where there is an entire absence of the ordinary signs of it in the mother. Fournier's statistics as to the paternal influence, subject to the reservation I have stated, are as follows. From notes of 1127 pregnancies in his private practice where the father alone was manifestly syphilitic he places the mortality amongst infected children at 28 per cent. In his hospital practice, from notes collected by Mademoiselle Krikus, he places the mortality where the father alone was syphilitic at as high a figure as 48 per cent., an increase fully accounted for by the difference of surroundings of the parents in private and hospital practices. Kassowitz, who denies the doctrine of syphilis by conception, gives the following figures: out of 105 pregnancies where the father was syphilitic there were 26 abortions, 21 children who died early, and 58 who survived. This gives a percentage of mortality of 26 5, a result closely in accord with Fournier's record from private cases. I have collected notes from my out-patient practice at Shadwell of 100 families where the mother presented no signs of syphilis and the disease in the infant was presumably derived from the father alone, and a similar number where the mother was unmistakably syphilitic. They are, of course, subject to the disadvantages attaching to notes gathered from patients actually brought for inherited syphilis, and that they refer to infants born at widely differing periods from the times of primary infection. Subject as they are to these sources of vitiation, they are still not without interest. In the first set, where the mother was apparently free from syphilis, there had been 563 pregnancies, resulting in 187 abortions, 193 children who died early, and 183 children still living. This gives the high mortality of 56 6 per cent., but poverty and other factors are probably as much responsible for it as syphilis when dealing with East-end babies. But the mortality amongst affected infants by no means adequately gauges the evils of syphilis on the offspring. Its responsibility for death of the fœtus in utero and the harm wrought by it in infants who survive must also be taken into account in this respect. Fournier, reckoning up the number of abortions and the number of infants attacked by inherited syphilis, and comparing their sum with the total number of pregnancies, has deduced what he terms "indices of harmfulness" (*nocivité*) for parental syphilis. This "index of harmfulness" when the father alone is syphilitic he places at 37 per cent. But a true "index of harmfulness" is only to be arrived at by following out the whole of the child-begetting histories of numerous syphilitics; an opportunity, however, for doing this is never likely to fall to any one observer. Were it possible to gain such statistics I cannot but think that Fournier's "indices of harmfulness" would be materially lowered.

The marked effect of time in decreasing and annulling the power of the father to transmit cannot be gainsaid. But it is difficult or rather impossible to give any definite limit of time beyond which this power of transmission is entirely lost. Mr. Hutchinson is probably right in the main in limiting the time during which the father can infect the mother at five years from the date of his own infection and also in his statement that such an eventuality is rare even after the

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lapse of only three years. That the power of infecting the offspring, however, may long outlast that of directly infecting the mother cannot be doubted. Kassowitz from his own experience would give the limit of time during which transmission to the offspring is possible at from ten to fourteen years after primary infection, and he also propounds the important aphorism that if there is even a remote chance of the mother being contaminated in such a case inheritance by her offspring is a certainty. That the power of transmission can be retained by the father for a longer period than that assigned by Kassowitz is sufficiently proven. Henoch quotes a case from his own experience where syphilis in the infant was due to disease contracted by the parent more than twenty years before. Dr. George Ogilvie has published a case in which amongst other interesting facts was the one that nineteen pregnancies, spread over nineteen years from the date of infection of the father, all resulted in syphilitic infants or abortions, and this in spite of prolonged and vigorous treatment. Dr. Colcott Fox mentioned at a meeting of the Royal Medical and Chirurgical Society that he had known a case where the transmission from parent to infant took place more than twenty years after primary infection. Dr. Eustace Smith, too, tells me of the following case. A man married fifteen years after contracting syphilis; his wife during the first five years of her married life had several abortions. Dr. Smith saw the first living child, born more than twenty years after the contraction of the disease by the father, and it was deeply syphilitic although the mother was apparently a strictly healthy woman. I have personally known a case where the fourteenth pregnancy, sixteen years after the incurrence of syphilis, resulted in a tainted infant. Happily, such cases of long retention of the power of transmission are rare. In very exceptional instances, however, it might well be, judging from the cases given, that the power of transmission is only limited by the child-bearing or child-begetting capacities on the part of the parents.

That time alone, independently of any treatment, may abolish the capability of the father to transmit is undeniable. Before finally annulling the power of transmission lapse of time engenders the quality of rendering transmission less certain. When this stage is reached at which transmission is uncertain though possible it becomes a mere matter for surmise what determines the infection of the infant in one case and freedom from it in another. That such infection is dependent upon any fresh outbreak of symptoms in the father is not proven. All the same, I should consider the father more likely to transmit the disease at a time when he had outward manifestations of the complaint than he would at a time when all symptoms are latent. At whatever period of the disease the father transmits, if he transmits at all, he probably does so with the same intensity as he would do at the beginning of his syphilis when transmission was almost certain. The case of an infant in this respect is identical with that of a woman. When a man late in his syphilis, having reached the stage at which transmission is uncertain, contaminates a woman, there is no proof that such a woman acquires a milder form of the disease than she would have acquired at a time when his syphilis was recent and transference certain. In other words, there is no proof that lapse of time brings with it attenuation of the virus. And so with regard to the infant. When a syphilitic man and a healthy woman bear a succession of infants I grant the gradual lessening of the severity of, and tendency to eradication of, the complaint in each succeeding infant. This diminution of the symptoms in successive infants by the same couple, where the father alone is syphilitic, is not, however, necessarily dependent on the assumption of any progressive increase of attenuation of the virus in the man. In fact, I believe that such lessening severity in the successive infants is independent of the father and due entirely to the presence of some product in the mother, this product being by her absorbed from the fœtus *in utero* and in amount proportional to the number of syphilitic conceptions she has carried. When a syphilitic man, by the same woman, has begotten a succession of infants in the latest of whom the syphilis has decreased to the vanishing point, we have no proof that, if he still retain the power of transmission, he would not in other women beget infants with syphilis as virulent as that in the initial conception by the first woman. Indeed, such slight evidence as we possess would tend to prove that he would. Plenty of cases are on record where men, many years after infection, have begotten infants with syphilis as virulent as in any born within a short period after the primary disease. Diday's law of decreases I hold to be true in the main, but only as regards infants from the same couple.

The effects of treatment in limiting the power of transmission are still more marked than those of time alone. But again we have no proofs where the man alone is affected that treatment any more than time can furnish an attenuated virus, and, however fully a man may have been treated, if he transmit at all he probably transmits in full to woman or infant. Obviously such a rule does not apply in the case of the woman, for the mercury taken by her may help to mitigate the disease of the fœtus *in utero*. What would seem remarkable about mercury is not its power of attenuating the virus transmitted, but its power of temporarily preventing transmission altogether, and especially if it be administered about the times of procreation. A case recorded by Fournier is a striking example of this: "A young man, against the advice of the last-named, married in the first year of his syphilis, but continued his treatment. His wife conceived and bore him a healthy infant. Thinking by this latter fact that he was absolutely cured he left off his mercury; he then infected his wife, whose second pregnancy resulted in a deeply infected infant." Diday, too, quotes cases where by the administration or withholding of mercury healthy or infected infants were alternately produced. There is, however, a mathematical precision about some of these cases that makes them difficult of acceptation. All the writers, however, in dealing with this power of mercury describe the infants born under the conditions in question as "healthy" and not as merely suffering from a mitigated form of the disease.

Time and treatment are concerned in another question of great practical importance—viz., the date at which marriage should be sanctioned in a man after the incurrence of syphilis. A definite answer, applicable to all cases, is, I think, impossible and unadvisable. The age at which the disease was contracted, the varying degrees of severity of the symptoms, the amount of treatment and the lapse of time over which it has been spread, are all factors which must largely qualify the answer in every instance. As it may be of interest I will give the dates after primary infection at which some modern authorities consider a man is justified in marrying with a fair prospect of not transmitting the complaint to wife or offspring. Schuster of Aix-la-Chapelle, who has written a *brochure* on the subject, places the date at two years after primary infection. Mr. Hutchinson finds the same period, and says he has only once had to regret his sanction to marriage after this interval. This is, perhaps, more a tribute to the results of his treatment than a warrant of justification for others to follow his example in sanctioning marriage at so early a date. Mr. Hutchinson, however, is emphatic on the point. "Probably," he writes, "in the vast majority of cases the risk of transmission to children is over long before the end of two years." With this favourable view of the matter I cannot but think he will find many authorities to disagree. Mr. Cooper would allow marriage three years and Fournier and Otis four years after first infection. Kopp and Lesser would extend the time to as long as five years. Personally I am in most cases in favour of the longer interval. The responsibility of sanctioning a marriage with any risk of imparting syphilis to others is not to be lightly undertaken. Diday's sarcasm "that the extreme caution displayed by some authorities on the matter would soon depopulate the earth" I think can be ignored. If treatment has been thorough and delay of marriage in any way detrimental I would shorten the interval to one of two years after the disappearance of all active symptoms, or to one of three years after primary infection. In no case would I sanction marriage until at least three months after the disappearance of active symptoms, no matter how long a time had elapsed between their appearance and the incurrence of the complaint.

That syphilis in the mother can be transmitted to her infant when the father is healthy is now placed beyond all manner of cavil or doubt. It was the mother alone that Hunter accredited with the transmission of the complaint in the days whilst he yet believed in the reality of hereditary syphilis. As the father is the introducer of syphilis into the household in the vast majority of instances, it is somewhat difficult to meet cases of hereditary syphilis where there is a positive guarantee of the mother's sole responsibility for the transmission, and on this point I have to rely on the

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statistics of others. Fournier has recorded the cases of 13 syphilitic women whose husbands were free, and 28 pregnancies in these women resulted as follows: 7 children living, 4 syphilitic; 15 infants died at birth or soon after; and 6 abortions. Fournier gives the percentage mortality amongst infants born alive of syphilitic mothers as 60, but it reaches as high as 68 1 if calculated from the figures last given. Kassowitz records the results from his own practice of 40 pregnancies where the mother alone was syphilitic and they gave 18 abortions, 5 children died early, and 17 living children. This gives a percentage mortality of only 22 7 as compared with Fournier's 60, but the percentage of abortions is incomparably higher in Kassowitz's figures than in Fournier's. Elsewhere, too, Kassowitz gives the mortality amongst syphilitic infants inheriting from the mother alone as 80 per cent. Fournier's index of harmfulness for maternal syphilis is 84 per cent.; but as he probably formed it on statistics drawn from mothers bearing infected infants, it is in all likelihood much too high if intended as applying to the whole community of infected mothers. Two other questions concerned with syphilis in the mother—the effect on her offspring of her contamination during pregnancy and "syphilis by conception"—I purpose dealing with later.

In attempting to estimate the influence of syphilis in both father and mother upon the offspring the disturbing elements of time and treatment have redoubled force, as here they have to be reckoned with in each parent instead of one only. Fournier, from statistics gathered under conditions as identical as the case permits of, places the mortality of infants where both parents are syphilitic at 68 per cent., as against 28 where the father alone and 60 where the mother alone is syphilitic. Kassowitz, out of 76 pregnancies where both parents were affected, found 28 abortions, 24 infants that died early, and 24 infants that survived, this giving a mortality of 50 per cent. The same author, however, in another series found the mortality as high as 69 per cent. From my notes of 100 families where the mother was syphilitic, and in the vast majority the father syphilitic also, I gather the following statistics. In these 100 families 539 pregnancies resulted in 189 abortions, 203 infants who died early, and 147 living children. This gives a mortality of exactly 58 per cent., a result not differing greatly from that obtaining in my cases where the father alone was affected. Fournier's index of harmfulness rises to 92 for the mixed type of inheritance. Statistics such as I have given as to the parental influences in transmission are subject to many faults and discrepancies. For a due and reliable estimation of these influences and their effect upon the progeny we want more detailed statistics than have as yet been furnished us. Thus, it would be of value if we had the results of pregnancies tabulated according to the number of years elapsing from the dates of primary infection. As an example of this Kassowitz gives the figures for 90 pregnancies of women contaminated by their husbands and conceiving in the first year of their syphilis and these resulted in 50 abortions, 38 infants who died early, and only 2 infants who survived. Further statistics of a like character and others giving details as to successive pregnancies independently of the times elapsed from infection might be of great practical utility and interest. Rough and imperfect as the statistics are that I have given, I think that they indubitably show that maternal syphilis is more deleterious as regards the offspring than a paternal one, and that the mixed type is the most serious of the three. The extra severity of the one type over the other, however, is, I believe, entirely exercised upon the fœtus *in utero* and has no influence after birth. The greater severity upon the fœtus of a maternal syphilis over a paternal one is due, probably, to the reason unusally assigned for it, the deleterious influence of the vitiated maternal fluids upon the fœtus *in utero*; and the slight increase in the mixed parental type over the maternal one is possibly owing to a greater certainty and frequency of transmission. Mr. Hutchinson writes: "There is no reason for believing that the infection from the mother (germ transmission) produces more serious results than sperm transmission or that the child who inherits from both parents suffers more severely than he would if one were free." Exceptions to this rule, he admits, occur in cases "in which children are born with syphilitic lesions actually present or with traces of intra-uterine disease." If I interpret these sentences correctly Mr. Hutchinson would seem to agree with me as to the extra severity of one form of inheritance over another being entirely exercised during intra-uterine existence. As a practical point, in any infant brought at the usual age for treatment I know of no facts that would justify any qualification of prognosis depending on the parental source from which its syphilis might be derived.

I turn now to a subject of practical importance and interest, the effect upon the fœtus of a syphilis contracted by a mother during her pregnancy. For many years one set of authorities strongly asserted that in this contingency the fœtus was usually infected and another set as strenuously denied it. Even at the present day, in fact, it cannot be claimed that the dispute is settled to the satisfaction of all, although the possibility of infection of the fœtus is commonly accepted. Diday, who is much quoted on the point, lays down the curious rule, and defends it on the anatomical relations of the placenta, that if a mother is infected during the first forty days or after the seventh month of her pregnancy the child will escape, but the latter will be syphilitic if the mother be infected in the interval between these times. Kassowitz justly asks, however, if a mother infected during the first forty days of her pregnancy is not syphilitic also in the interval during which Diday claims transmission is probable? Ricord writes: "If the infection of the mother takes place during the last three months it is not certain that transmission is possible." Mr. Hutchinson, again, doubts whether a woman would be likely to go to the end of her pregnancy who had suffered from constitutional syphilis in the early part of it. Most of the facts in his own personal knowledge occurred in cases in which the disease was incurred by the mother late in pregnancy. There is then great discrepancy amongst authorities as to the time during pregnancy when infection of the mother can occur with the production of a syphilitic infant. Fournier, who believes in the infection of the infant through a syphilis incurred by the mother during pregnancy, follows Cazenave and Diday in adopting the name of "congenital syphilis" for the type of complaint in the infant under these conditions, restricting that of "inherited syphilis" for the class of cases originating at times of conception. He, moreover, claims that the symptoms of this "congenital syphilis" are easily distinguishable from those of inherited syphilis. Mr. Hutchinson will not admit of any possible differentiation of symptoms in the two classes and throws the onus of proving any difference between them on those who assert it. There is then as great a contention amongst leading authorities as to the symptoms in the infant as there is regarding the times of pregnancy at which a mother can be infected with transmission to the infant. Kassowitz and other German authorities deny the transmission to the infant at whatever period of pregnancy a mother may be infected. There is no proof, Kassowitz argues, that in any one of the cases where a mother was infected during pregnancy and produced a syphilitic infant that such syphilis was not derived from the father at the time of conception. But if he admitted the possibility of the carrying of a syphilitic fœtus for several months in her uterus, and the subsequent contamination of the mother, Kassowitz in this way allowed the possibility of what is in reality an equivalent of a breach of the first part of Colles' law, a deduction from his belief that would seem to have escaped this astute observer. Personally, I have no experience in the matter; but in all the cases of this nature under the care of my friends the infants escaped. I have, moreover, met with twins born of a syphilitic mother where the one infant was deeply affected and the other apparently free, and I know of similar cases under my colleagues. This circumstance would seem to show that there is no imperative necessity for the inoculation of the fœtus by a syphilitic mother's blood, and also that infection of the fœtus is probably most often effected through the ovum. Henoch has never known a case of a mother contaminated during her pregnancy, but he deems transmission to the infant likely under such conditions. Birch Hirschfeld knew three instances where a mother was infected during pregnancy. The infants born from these pregnancies died soon after birth from some complaint other than syphilis, and the necropsies revealed no trace of the last disease, not even the characteristic changes so generally found in the epiphyseal cartilages. Birch Hirschfeld, nevertheless, believes that transmission is possible to the infant under the conditions in question, but that such transmission is not possible so long as the integrity of the endothelial barrier between the maternal and fœtal circulations is maintained. He claims to have proved that any affection of this endothelial barrier permitting of the passage of micro-organisms from the mother to the fœtus is secondary to serious vascular disease

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in the maternal portion of the placenta. If his views are correct, then contamination of the fœtus under the conditions in question must be allowed as possible, but abortion or the entire escape of the fœtus would seem much the more probable event. When writers like Mr. Hutchinson and Fournier cite cases where the infant has inherited the disease incurred by its mother during her pregnancy, I take for granted that they have satisfied themselves as to the freedom of the father at the times of conception, and I accept the possibility of the transmission to the infant. Nevertheless, I believe that what is possible has unwittingly been exalted into what is probable. To thoroughly settle several of the points concerned in the question we want the publication of further cases giving details as to the freedom of the father at the time of conception, the date of infection of the mother in her pregnancy, and a full description of the symptoms in the child.

The converse of the preceding question, the effect upon the mother of the blood returned to her through the placenta from a syphilitic fœtus, may appropriately be taken here. This, amongst others, involves the much debated subject of "syphilis by conception." First prominently promulgated by Ricord and Diday, the doctrine of "syphilis by conception" has been alternately advanced and denied by every eminent writer on syphilis since their time. Some of the uncertainty and contention on the subject has undoubtedly arisen from a want of due appreciation of what is really implied by "syphilis by conception." It is not very uncommon to find the term used in connexion with the disease in the infant—a strange confusion of ideas. Under these circumstances I trust it will not be deemed superfluous if I define what is implied by the term. "Syphilis by conception" is the syphilis supposed to be acquired by a healthy mother by means of the tainted blood, returned to her through the placenta, from a syphilitic fœtus infected by the sperm of the father—a "syphilis by return shock," as Diday calls it. The term, of course, implies an escape of direct infection of the mother by the father, and that her syphilis is solely and entirely due to the fact of her conceiving. It is claimed by many eminent authorities that if a woman cohabit with a man incapable of directly contaminating her, but who is still capable of transmitting to the fœtus, such cohabitation may be harmless to the woman unless she conceives, but that this last condition of necessity leads to her impregnation with syphilis. More than this, the syphilis, such writers allege, which had lost much of its virulence in the man is merely from the fact of conception on the part of the woman regenerated in her with all its initial virulence—"*vires acquirit eundo*," as Diday quotes. Such are some of the principles underlying the theory of "syphilis by conception." It is a syphilis, its upholders claim, agreeing with one acquired in the ordinary way in all secondary manifestations and sequelæ, but nevertheless possessing certain characteristics peculiar to itself. Fournier, the most able advocate of the doctrine at the present day, has styled it a "syphilis decapitée," inasmuch as with it there is an entire absence of primary chancre and enlargement of the corresponding glands and the periods of primary and secondary incubations are abolished. For the establishment of "syphilis by conception" in any particular instance its upholders allow that proofs of the following essentials must be forthcoming: (1) That the father was free from any innoculable lesion at a time when the date of the mother's syphilis was consistent with direct acquirement from him; and (2) that the mother has always been free from any primary chancre and any enlargement of glands resulting from the presence of one. The first requisite for the establishment of "syphilis by conception," the absence of innoculable lesion in the father, is absolutely incapable of proof in any instance. It is impossible for any one of us to guarantee the freedom of any patient in this respect at all times and seasons. In many of the published cases, too, of syphilis by conception it is recorded that sores on the scalp, palmar psoriasis, and such like trifles were missed; and, this being so, how much more readily might a slight abrasion of the penis be passed over by a layman? Such a lesion might, moreover, be easily missed by a medical man even with ample opportunities of examining his patient. The history, then, of the freedom of the father from innoculable lesion is in no case a partial proof of the possibility of syphilis by conception.

The second requisite—the establishment of the absence of a primary chancre and enlargement of the corresponding glands in the mother—stands on an equally unsatisfactory basis as the preceding one. In a large number of syphilitic women who have never been pregnant the site of the primary lesion is impossible to locate. There are admitted difficulties in this respect applying to women that do not obtain in men. But even in men a careful observer like Mr. Hutchinson has to admit that "in not a few cases he has been unable to ascertain the original site of innoculation." The absence of proof, too, of any glandular enlargement is not conclusive of its non-existence or of that of a primary sore. When the latter is high in the vagina or on the cervix uteri the demonstration of enlargement of the corresponding glands may be physically impossible. How, then, can it ever be proven that the syphilis of a pregnant woman is acquired through the agency of conception when there are such insuperable difficulties in establishing her non-acquisition by the ordinary channels?

If we turn to the descriptions furnished by the upholders of the doctrine we find a marked discrepancy amongst them as regards the times of onset of the complaint after conception. Fournier would seemingly place the time at as early a date as three weeks after this latter. He gives the case of a young woman who developed syphilis soon after marriage and in whom he could find no primary chancre or trace of inoculable lesion in her husband. At the woman's monthly period, however, shortly preceding her syphilis the menstrual flow was attended with more pain and some firmer clotting than usual. Fournier gravely argues from this that, as there was no proof of primary contagion, this undue clotting and pain were owing to the expulsion of a three weeks' fœtus, and that the short sojourn of this last *in utero* was sufficient to account for a syphilis by conception in the mother. Most of us would, I fancy, however, find a less subtle explanation of such a syphilis. If Fournier is correct in his interpretation, and syphilis by conception can manifest itself after so short a period as three weeks after impregnation, then in other cases the pregnancy should never be far advanced before the appearance of symptoms. Diday, however, who is chiefly responsible for the doctrine of "syphilis by conception," suggests parturition, or shortly after, as the time at which symptoms of such a syphilis are most likely to appear. There is, then, seemingly a most marked disagreement amongst the upholders of the doctrine on one of its most vital points. Diday is, however, quite clear in his teaching as to the frequency of such a syphilis. "If a woman bear a syphilitic infant," he writes, "I say she has had the complaint herself." Fournier is equally emphatic. According to him, pregnancy with a tainted fœtus, however short a time it may last, implies the certain acquisition by a woman of "syphilis by conception." If there are none of the outward signs of syphilis in such a woman, then, according to Fournier, she has it in a latent form. As a proof of the reality of this last condition cases have been instanced where women have borne infected infants by syphilitic husbands, and although presenting no early symptoms of the disease themselves have in later years appeared with tertiary ones. That such cases do occur will be readily granted, but they are not restricted in occurrence to fertile women. Cases of sterile women, and of men also, in whom the presence of tertiary symptoms is accompanied by an absolutely negative history as regarded primary and secondary manifestations are far from rare. Charrier's case of this nature, quoted by Fournier, Messrs. Cooper and Cotterell, and others, is to me an ordinary one of a woman in whom, owing to the mildness of the secondary symptoms, the complaint had been missed until the supervention of gummata. Such cases, were they infinitely more common than they are, go but a slight way to prove the reality of "syphilis by conception," latent or manifest.

The preceding are not all the arguments that can be adduced against the theory of "syphilis by conception." Diday, as I have already stated, is generally credited with being the founder of the doctrine. Most of those, however, who have accepted his teaching on the point would seem to pass unnoticed the deductions he drew from it. This is what he terms the "law of increases," and it would seem to me a fairly logical outcome from the establishment of this "syphilis by conception." By this law, Diday asserts, every conception on the part of a woman by a syphilitic partner adds to her syphilis, and these additions tell in their turn upon the fœtus, and thus each succeeding pregnancy results in a product more syphilitic than the preceding one. The "law of decreases," the lessening severity upon the fœtus in each successive pregnancy, only applies, he asserts, to cases where the mother or both parents are affected. When

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the father alone is affected, which applies to by far the greatest number of cases of inherited syphilis, this "law of increases" condemns each successive infant in a family as more syphilitic than the last—a dreadful state of things to contemplate if true. But fortunately, I think, all experience proves its falsity and that of the theory that gave it birth. It is repulsive enough that a woman should be compelled to bear syphilitic infants against her will. This repulsiveness would be vastly increased if "syphilis by conception" were proven and that such a woman could be tainted from her unborn infant. The one slight tittle of evidence in favour of the possibility of "syphilis by conception" is that afforded by Ricord and Diday, and Henoch quotes Fournier and Mr. Hutchinson to the same effect, that they have known women to have lived long with syphilitic partners and escaped contamination as long as they remained sterile, but conception brought syphilis in its train. But cases such as these, where proof of infection by the ordinary methods is wanting, are not sufficient in number to free them from the class dependent on mere coincidence.

I have stated my disbelief in the theory of "syphilis by conception" and have given the reasons for that disbelief. The theory no doubt arose from the immunity to syphilis displayed by mothers bearing affected infants. That such mothers do enjoy immunity, partial or complete, would seem almost universally accepted at the present day. But immunity to syphilis by no means entails the necessity of having passed through an attack of the disease itself. In accordance with all modern teaching there is every justification for the supposition that syphilis is a disease dependent upon a specific micro-organism. It is true that hitherto attempts at identification and cultivation of the responsible organism have not met with a success universally acknowledged. Notwithstanding the failures, or perhaps partial successes, of Lustgarten, Klebs, and others, the prevalent opinion that syphilis is a germ disease has not been shaken. If, then, syphilis be a germ disease, the termination of an attack in the individual is brought about by the evolution by the germs themselves of some chemical principle antagonistic to their own growth and existence. By analogy with other complaints this chemical product is possibly an antitoxin, the syphilitic equivalent of that occurring in diphtheria. Now, if the syphilis in an infant, inherited from the father, is ever a contagious disease, this last of necessity implies the transference of active micro-organisms from the father to the fœtus. Once implanted in the fœtus, the evolution of these micro-organisms could be active ensue a as in extra-uterine life, and with their growth would *in utero* corresponding production of the "syphilitic antitoxin." Now the possibility of the passage of such a substance as this "antitoxin" into the maternal circulation no one would contest, although many would do that of the germs themselves, with the consequent syphilisation of the mother. Chauveau has recorded some observations with a close bearing on this point. He claims to have proved that when gravid sheep are inoculated with "symptomatic anthrax" the lambs they drop are immune to that complaint. This immunity, too, Chauveau states, is not due to the direct passage of the anthrax germs themselves to the lambs, but to that of some product generated in the mother and absorbed by her progeny by means of the placental vessels. In an exactly analogous manner to this last, although the direction of the stream is reversed, I would suggest that a mother may absorb the antitoxin from her syphilitic fœtus and so gain immunity for herself, partial or complete. In this way such a mother, without having incurred the actual complaint herself, may have gained the position of one who has passed through and recovered from an attack of syphilis. In this last deduction from the germ theory of syphilis I am seemingly supported by many. For a further deduction—a wild speculation it may be called—I fear I must charge myself with the sole responsibility. It has occurred to me that if the immunity in the mother has been gained by the absorption of some "antitoxin" from the fœtus, this substance may in its turn beneficially react upon the fœtus *in utero*. In the case of a first conception the absorption of the "antitoxin" by the mother, and its consequent diffusion through the two circulations, may be detrimental to the fœtus and to some extent explanatory of the more untoward results of first syphilitic pregnancies. But in succeeding pregnancies the mother's "antitoxin" would act upon the fœtus from the start and with much more marked effect. With each pregnancy the amount of antitoxin in the mother would be increased, and it may be that its accumulation would be sufficient to cure the disease in later conceptions, although all the time the father transmit in full. Such a theory would seem to me fairly explanatory of the extra severity of the complaint in the first infant in a family, the lessening severity in each successive infant, and the final disappearance of the complaint in the latest ones. It would also account for the greater severity *in utero* of a mixed parental or maternal syphilis over a paternal one. By the theory, too, the later infants in a syphilitic family, although presenting no signs of the complaint, should be immune to it, and possibly also the earlier infants by a second husband, who is free, of a woman who has borne infected infants by a former partner. In conclusion, I would suggest that if the serum treatment of syphilis is deemed worthy of further trial such serum should be taken from mothers who have borne affected infants and themselves remained free, rather than from persons broken down with tertiary symptoms.

The Lumleian Lectures

ON

THE SEQUELS OF DISEASES.

Delivered before the Royal College of Physicians of London

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LECTURE III.[1]

Delivered on March 26th.

MR. PRESIDENT AND GENTLEMEN.—The sequels of *Syphilis* are now amongst the best recognised disorders we have to deal with. Their variety, complexity, and far-reaching nature are well appreciated. Much light has been thrown upon them in the course of the last thirty years, and many labourers have worked in this field of pathology, not a few of whom have been our own countrymen. We may feel sure that a great variety of disorders depending on manifestations of syphilitic virus constituted difficult problems for solution to our predecessors, and, no less, enabled many of them to score remarkable successes in the days when mercurial treatment was so largely, and in an empirical routine fashion, in vogue. For the most part, it may be affirmed that the sequels of syphilis pertain to adult and middle life. I am reminded here of an axiomatic declaration of the older physicians related to me by our learned librarian Dr. Munk, to the effect that many of the mysterious and puzzling cases of disease occurring in early life generally depend upon tuberculous processes; those commonest in middle life upon syphilis; while those occuring in later periods are generally dependent upon gouty manifestations. In these days we do well to recall the wisdom and shrewdness of the great men who have preceded us, for we are rather apt to think that we have lighted our own torches, and to regard those handed on to us as but feeble and flickering links. Our modern electric illumination sometimes fails us, and we may be glad to fall back upon the older sources of light. We have to note as sequels some of the so-called secondary phases of syphilis, and may not only regard in this light such symptoms as appear after a period of apparent complete restoration to health in the form of late, or so-called tertiary, manifestations. These appear from one to two years after primary contagion and may recur any time within the life of the patient. Yet we can draw no hard and fast line between the end of the period in which secondary and that in which tertiary troubles may arise. Attention has recently been directed to the onset of grave nervous symptoms, such as paraplegia from transverse dorsal myelitis, general analgesia, anæsthesia, and acute multiple neuritis in patients at an early period after primary infection, at a time, that is, when secondary manifestations are most likely to occur. So, too, neuritis, affecting single nerves,

[1] Lectures I. and II. were delivered on March 19th and 24th respectively, and were published in THE LANCET of March 28th and April 4th.

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may be an early occurrence. Syphilis, as a destroyer of arteries, may act in this fashion, with the production of grave symptoms within the first year of primary infection, at a period when only secondary manifestations are to be expected. Dr. Sharkey has recorded a case in which death occurred from disease of the cerebral arteries in the seventh month of syphilis while a secondary eruption was still present on the body. The late Dr. Bristowe recorded a like case in which death occurred from obstructive endarteritis, cerebral softening, and meningitis six months after the occurrence of the primary chancre, while secondary scaly syphilides were still present on the skin. The importance of a due recognition of these facts is great in respect of prompt and adequate treatment, since early lesions of this character are distinctly more amenable to the influence of mercury than are those which arise in the later or tertiary stage, and they are prone to begin slowly and to prove both chronic and rebellious under any treatment. These early sequels pertaining to the secondary or constitutionally active period of the disease are apt to develop rapidly, with serious disturbance of the general health. They are often productive of symmetrical lesions, and they quickly subside on appropriate treatment. We may not look for them, as Mr. Hutchinson tells us, within six months of the date of the primary lesion. Most of them relate to the arteries of the pia mater of the brain and spinal cord and in this way lead to nervous symptoms. The nervous elements may, however, be primarily involved in this stage, as evidenced by the occurrence of neuritis and myelitis with both motor and sensory symptoms. In this secondary stage the blood and inflammatory secretions of the patient are infective and capable of originating a chancre. The later or tertiary sequels occur without constitutional disturbance, slowly, generally unsymmetrically, and are more distinctly local in character. The patient's blood and secretions are non-infective in this stage.[2] Mr. Hutchinson is disposed to regard all tertiary symptoms of syphilis as true sequels, or more strictly "regroaths." In support of this view he and other authorities adduce evidence showing that persons have become the fathers of families of healthy children, and have subsequently developed tertiary lesions. In such cases there must have been freedom from constitutional taint, although local conditions remained in a condition of latency or abeyance ready to be evoked by some determining excitant. It would be unseemly and unnecessary in these lectures to present to my audience any detailed account of the manifold tertiary symptoms of syphilis regarded as sequels, such being now matters of common knowledge. We are happily aware of the fact that in the majority of cases of primary syphilis prompt, adequate, and sustained treatment suffices practically to cure the disease and to avert the onset of sequels throughout life, and so we may fairly regard their occurrence as evidence either of imperfect original diagnosis or of incomplete treatment. The pathogenic conception of the malady as one dependent on a specific micro-organism helps us in forming an opinion, judging by analogy with the behaviour of other like organisms, that such particulate agents may long lie dormant in certain tissues and only wake up into activity under various provocations, such as irritation, exposure to exhausting agencies, depressed vitality from the inroad of other diseases, and traumatism. The unsymmetrical character of these consequent lesions affords some evidence of their local and non-constitutional nature. I have already referred to the occurrence of tabes dorsalis as a definite sequel in most instances of antecedent syphilitic infection, and I may add, too, that of general paralysis of the insane as one standing often in the same category. In my first lecture I adduced the fact that when women presented the symptoms of locomotor ataxia they were commonly found to have been at one time the subjects of constitutional syphilis. I regarded this fact as affording strong evidence of the former disorder being in consequential relation to the latter, as, in short, a quaternary sequel of syphilis. This contention is, I consider still further supported by the occurrence of examples of tabes dorsalis in both husband and wife. My colleague, Dr. Ormerod, has reported two examples illustrating this condition and he has referred me to a series of four or five other pairs of cases which have been recorded in this country, on the continent, and in Canada, also to cases of pairs of general paralysis of the insane, nearly all of which distinctly prove that syphilis was the common antecedent factor. I therefore regard this evidence as irresistible and practically proving the case.[3] In some of these instances the husband had tabes, and the wife general paralysis, or *vice versâ*. Even tabes dorsalis has its own intercurrent sequels, amongst them being the peculiar acute onset of a riotous arthritis known as Charcot's arthropathy, which may affect several joints; also perforating ulcer of the foot, and the several varieties of crises, whether gastric, laryngeal, rectal, or vesical. We may note several degrees of gravity in the cachexia of inherited syphilis. There are often to be noted indications of a merely slight taint, such as anæmia, earthy complexion, and perhaps one or two characteristically modified teeth. General growth may be but little interfered with. In the graver cases we have usually present many, if not all, of the specific physiognomical indications, and in viable cases full development of the body is never reached. It is important to recognise even the minor indications of such taint, inasmuch as they may serve to throw light upon subsequently occurring obscure symptoms, and so afford a guide to treatment. Twelve years ago Mr. Hutchinson expressed the opinion that it is not the diathesis of syphilis that is transmitted from parent to offspring, but the germs of the disease itself—the particulate elements of the virus[4]; a transference, therefore, of contagion rather than hereditary transmission. "A child inherits syphilis in precisely the same sense and in precisely the same manner as it may inherit small-pox." He believes that "no minimised transmission of syphilis is possible." The child gets either nothing at all or the germs of the disease, and in the latter case they will, subject to the laws of idiosyncracy, develop equally in all cases. The minor indications of this specific taint I have alluded to may be amongst those which have not been permitted to develop fully owing to some inhibitory condition. Paralytic dementia, ophthalmoplegia, a variety of epilepsy, grave arterial atheroma, and general arterial sclerosis are certainly due sometimes to pre-existing syphilitic taint. These conditions have been called by Fournier parasyphilitic affections, by some post-tertiary, or quaternary. Lardaceous degeneration may sometimes be clearly traced to previous syphilis, not merely as an associated condition with gummata and a resulting fibrosis as in ordinary tertiary sequels, but as an independent and widely-spread degeneration both of viscera and of other portions of the frame, constituting, indeed, a variety of so-called syphilitic cachexia. Congenital syphilis may sometimes be followed by manifestations of Raynaud's disease with gangrene of fingers and toes. I have seen several examples. The conception in regard to these conditions is that the remote lesions are not directly due to syphilitic toxine, or to growths determined by it, but that a constitution having been once tainted by this special virus and its ravages, becomes a prey to other specific degenerative changes which would in all probability not have occurred in persons not subjected to such an ordeal. With several authorities I am in accord in regarding the occurrence of aneurysm as, not infrequently, a sequel of syphilis, and this contention is strengthened by the fact that when this condition occurs in women, which is rare, they have commonly been the victims of syphilis. The same view is also tenable, in my opinion, in respect of cardiac aneurysm, which is usually a result of gummatous carditis. The latest researches on syphilis support the view of Paget and others, that the long-delayed manifestations of syphilis plainly indicate that there remain in the tissues of the body residues of the disease after apparent recovery, and that these may be roused into activity, affording specific characters of their own or modifying the signs of other morbid conditions with which they may be associated or combined, such as gout and struma. Examples of this latency pertain, indeed, to each phase of syphilis. Thus, there may be remarkable delay in the formation of a hard chancre after primary infection. An indolent bubo has been known to precede the occurrence of induration on the penis by seven weeks, according to Mr. J. Hutchinson, jun. Secondary symptoms followed in due course with a more active condition of the bubo. A period of ten weeks was noted by Aimé Martin in another case before the occurrence of a hard chancre.[5] Delay in the

[2] For many of these statements I am indebted to Mr. Hutchinson's address at the Royal Medical and Chirurgical Society introductory to a discussion on Affections of the Nervous System occurring in the early (secondary) stage of Syphilis. 1895.

[3] St Bartholomew's Hospital Reports, Vol. xxv, p. 87. 1889. Dr. Ormerod's references are as follows:—Dawson Turner. THE LANCET, Nov. 1, 1890; Goldflam Neurologische Centralb att, 1892, p. 445; Mendel, Ibid, 1895, p. 335; Reed, Montreal, a pair of cases seen in private (reported to Dr. Ormerod); S. Pearce, Journal of Nervous and Mental Diseases, 1895, p 8; and Erb, Ætiologie der Tabes, 1892.

[4] The Pedigree of Disease p. 89. 1884.

[5] THE LANCET, Dec. 21st, 1895.

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onset of secondary symptoms has also been carefully noted. M. Diday's observations show, and Mr. Hutchinson confirms them, that intercurrent illnesses may cause such postponement. Thus, typhoid fever and pneumonia have been proved to cause postponement of secondary symptoms for periods varying from three to over five months, the activity of the specific virus being suspended till recovery from these illnesses had taken place. These facts are very remarkable. Mr. Hutchinson, jun., has recorded an example of extraordinary prolonged latency in respect of tertiary manifestations. A man contracted syphilis at the age of twenty-one years, had secondary symptoms, and remained wholly free from any lesions till, after exposure to much privation, he had, at the age of fifty-three years, multiple nodes on the skull, ischium, and humerus. For thirty-two years, therefore, there had remained potential elements within the body ready to resume activity on due provocation. The only analogous condition to this is that presented by the strange behaviour of the malarial organism which has a similar propensity to lie long dormant or latent within the body. "It is seldom that a syphilitic process develops thirty years after the malady, whether it be a direct or indirect process. ..... A period of thirty years after the primary disease brings most patients into the degenerative period of life ..... but the syphilitic virus has then generally ceased to act."[6] It is highly probable, but not yet proved, that the infective microbes, if such they be, or possibly their germs, are present in tertiary deposits and completely localised there, though not always inactive. Some arguments in favour of this view have lately been adduced by my former house physician, Dr. Parkes Weber, in two able papers on the subject of Syphilis published in the *American Journal of the Medical Sciences*. He further expresses his belief that in the post-tertiary or quaternary sequels, such as tabes dorsalis, microbes will not be found, and that thus there is a clear demarkation between tertiary and quaternary lesions. He is also of opinion that the metabolic products of the specific organisms have, like those of the staphylococcus pyogenes aureus and the bacillus pyocyaneus, the peculiar property of inducing lardaceous formation in their immediate neighbourhood.[7] The presumed localisation and latency, or comparative latency, of surviving microbic germs appear adequate to explain the fact that persons so infected may long continue to produce healthy children, for our latest conceptions of syphilis lead us to regard the various active processes which it induces as the results of the presence of developed organisms circulating abundantly in the blood in the secondary exanthematous stage, and leaving behind germs localised in various textures which are inoperative till some exciting cause sets up their development with new tissue-growths and other tertiary manifestations in later stages.

Pyæmia.—There are sometimes to be met with cases of chronic arthritis or of articular deformities, with ankylosis, which have developed from an attack of pyæmic arthritis, which may have occurred perhaps many years previously. Malignant endocarditis is sometimes a sequel of pyæmia.

Having now described the various sequels which are recognised in the train of the great class of acute and infectious diseases the greater part of my task is accomplished, for not many others than these can be affirmed to have true sequels.

Taking the whole class of *Nervous Diseases* we can find but few remote consequences which can fairly be regarded in the light of sequels. Imperfect recovery may lead to recurrence, and the onset of new symptoms for the most part betokens further progress in any such morbid process, strange and unconnected with the original disorder as they may appear to be. The sequels of chorea commonly depend on renewed activity of rheumatic processes in other parts of the body, and relapses are frequent. Caleb Parry stated that the worst case of spasmodic wry-neck he ever met with followed chorea. This must be a very rare sequel.[8]

We may note the onset of a form of riotous arthritis as a sequel sometimes in cases of syringo-myelia, a condition singularly akin to the arthropathy described first by Charcot in cases of tabes dorsalis.[9] Sufferers from megrim and chronic headache, especially females, are sometimes in middle life and later the subjects of xanthelasma in the eyelids. A happy and frequent sequel of hemicrania is an immunity from it after middle life, so that sufferers cease to be its victims even when subjected to conditions which formerly and unfailingly provoked it. Certain varieties of zona have sequels, some of which are not unimportant. Supra-orbital zona may, especially if the nasal branch of the nerve be involved, lead to ulceration of the cornea, iritis, photophobia, conjunctivitis, partial ptosis of eyelid (involvement of third nerve), defective vision temporarily, or even permanently, with papillary atrophy.[10] Troublesome neuralgia may ensue. This variety of zona is further remarkable for leaving indelible scars behind it. Necrosis of the alveolar part of the lower jaw, with loss of several teeth, was noted by Paget as a sequel of infra-maxillary zona.[11] Sir Thomas Watson's cases are noteworthy; in one, a patient who had been annoyed with continual noises in his head for seven years, became free from them for eighteen months subsequently to an attack of zona of the scalp; in another, a chronic teasing cough disappeared on the supervention of zona. The worst sequel is that of terrible and rebellious neuralgia, which more especially plagues elderly subjects who have suffered from herpes zoster. This may last for months or even for ten or fourteen years, as in cases described by Trousseau[12] and Watson.[13] Injuries to nerves may be followed by vesicular and bullous eruptions and by glossy condition of skin. The sites of former zonal eruptions may subsequently become anæsthetic, hyperæsthetic, or pruritic. Pigment may also be removed from adjacent areas of the integument. An attack of herpes limited to the foot has been reported as following a twist of the ankle-joint.[14]

As bearing on the subject of neuro-trophic lesions and sequels I may refer to two cases within my knowledge where the hair from every part of the body was permanently lost in two male adults after injury to the head caused by violent concussion.[15]

Not many sequels are recognised after the occurrence of diseases of the *respiratory system*. An attack of pneumonia sometimes appears to predispose patients to subsequent attacks. Bronchitis sometimes evokes attacks of spasmodic asthma, which might possibly never have supervened but for the original disorder. We may regard the fatty and lardaceous changes in the liver following on pulmonary tuberculosis as varieties of sequels or consequential degenerations, the latter change ensuing more especially upon prolonged purulent discharge from vomicæ. Neglected and inadequately treated empyemata commonly lead to this condition. Lardaceous change is certainly less frequently met with now than formerly, probably because suppuration is better controlled by modern surgical methods of treatment. We may note the occurrence of rheumatoid affections and of cerebral abscess as pyæmic sequels to bronchiectasis, a condition now also better understood and treated than formerly. We should hardly be justified in regarding fatal hæmoptysis in cases of chronic phthisis, due to aneurysm of a branch of the pulmonary artery, as a true sequel, or the occurrence of tuberculosis as an apparent outcome of an attack of pneumonia. We should have to prove that the original process was not a tuberculous invasion. We may, however, certainly regard as a sequel the occurrence of neuralgia of branches of the fifth nerve supervening on severe attacks of coryza. Respecting pleurisy, whether dry or with more or less effusion, we may still seek to discover whether, when it arises on the right side, it is more commonly the precursor, if not the first step, in the progress of pulmonary tuberculosis. Left-sided pleurisies appear to be more commonly benign in character. This is an old doctrine of the French school and was taught at Edinburgh in my time, and I think there is something to be said in support of it. Many cases presenting strumous adenoma are void of tuberculous symptoms in after-life. Others develop pulmonary tuberculosis, or in advancing years, under the stress of acute

[6] Gowers: Lecture on Adult Anterior Poliomyelitis, Clinical Journal, Feb. 12th, 1896, page 41.

[7] Op. cit., November, 1885.

[8] Elements of Pathology and Therapeutics, Second Edition, vol. i., p. 258, 1825.

[9] Howard Marsh: Diseases of the Joints, &c. Account of this affection by J. H. Targett.

[10] Vide J. Hutchinson, Royal London Ophthalmic Hospital Reports part iii., vol. v., and J. Bowater Vernon, St. Bartholomew's Hospital Reports, vol. iv., p. 121, 1868.

[11] Brit. Med. Jour., 1866, p. 492.

[12] Clinical Medicine.

[13] Op. cit. The late Sir Robert Christison, my former revered preceptor in Edinburgh, suffered from this condition at an advanced age. He told me he secured more relief from his sufferings by brisk walking exercise than by any other measures.

[14] Medical Chronicle, March, 1893, p. 366 (quoted by Malcolm Morris)

[15] One of these is recorded in my paper on the Nature and Treatment of Porrigo Decalvans in Vol. viii. of St. Bartholomew's Hospital Reports, 1872, p. 150.

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illnesses, become the subjects of new and revealing developments of senile scrofula. Amongst the sequels of chronic nasal catarrh, and often aggravating the condition, are post-nasal adenomata, polypi, and enlargement of the tonsils. Pneumonia may sometimes have a very untoward sequel in the form of pneumococcal endocarditis with a fatal issue therefrom. A case of this kind occurred lately in the practice of my colleague, Dr. Church, and death occurred with sudden onset of anginal symptoms owing to plugging of the coronary artery by the new growth from one of the aortic valves. Osler has found that pneumonia is an antecedent of malignant endocarditis in 25 per cent. of all cases of that disease.[16] Disseminated cerebro-spinal sclerosis has also been known to follow in the train of pneumonia.

Nothing very definite can be affirmed respecting consequences of *diseases of the heart and bloodvessels* which may not rightly be regarded as evolutionary manifestations to be expected in accordance with our modern knowledge of them. We may note the fact that the subjects of congenital cardiac malformation, even when viable to the period of puberty, never attain mature growth, and are bad subjects for the exanthemata, especially for the invasion of scarlatinal poison, and are often prone to be tuberculous. A similar stunting of growth pertains to almost all subjects of endocarditis, with valvular disease, attacked before puberty. Osler remarks that death is due in many cases of congenital heart disease to abscess of the brain. This fact has never been verified in our experience, within my knowledge, at St. Bartholomew's Hospital. Within the last few weeks, however, a case under the care of my colleague, Dr. Church, in which suppurative meningitis occurred, proved fatal. There was no ear disease. There was stenosis by fusion of the three segments of the pulmonary valves, leaving an aperture admitting a swan's quill, and the septum of the ventricles was deficient in the usual situation. The patient was a fairly well developed girl aged sixteen. There was much cyanosis. Headache, several general convulsions, and bilious vomiting occurred for a week before death. The temperature never exceeded 100·6° F. The relation between the cardiac condition and meningitis or cerebral abscess I am quite unable to explain in such cases, and I know of no other author who mentions the connexion but Osler.[17] Insanity sometimes supervenes in cases of aortic and mitral valvular diseases during the stage of compensation, and has been known to lead to suicide.

Ear diseases have sequels which are only too common but now well recognised. I have incidentally alluded to such as occur after the acute infectious fevers. Suppurative meningitis, cerebral or cerebellar abscess, necrosis of the petrous part of the temporal bone, and infective thrombosis of the lateral sinus and internal jugular vein are the chief consequences; and a general pyæmia is not seldom a result, direct infective particles being readily conveyed to the lungs to set up multiple and still further purulent and septic foci of the disease. Prompt surgical measures now, happily, avert many of these terrible sequels. We have further to bear in mind the possibility of otitis media in many patients presenting cerebral symptoms who have no ordinary indications of ear disease as the primary source of this malady.

Respecting the sequels of *gout* I have nothing to note. The many and varied disorders occurring in persons goutily disposed are often distinctly gouty. The several visceral and tissue degenerations observed in grave cases are evolutional manifestations of this disorder. Traumatism, shocks, bodily or mental, or operative procedures may all give rise to outbursts of gout in predisposed subjects and are thus provocative of this revealing symptom.

I may refer to the fact that *adenoid growths in the naso-pharynx* sometimes lead to subsequent tuberculosis, impaired mental functions (aprosexia of Guye), disease of the ear, and to stunted growth of the body. With the activity of modern surgery, which now a days seldom permits these new growths to induce any of these evil conditions, we may perhaps find such sequels of less frequent occurrence in the future. I might add my opinion that operative interference in these cases is not always imperatively necessary.

Such sequels as occur in patients who have been subjected to *ovariotomy* relate rather to physiological than to pathological manifestations. An obese tendency is common, while vocalisation approaching that of the male, growth of hair on the upper lip and chin or over the entire body, loss of general energy, tendency to indulge in stimulants, and proneness to gout have been noted. This is interesting when considered with the commonly asserted statement that eunuchs do not suffer from gout. To these may be added the onset of symptoms of a premature menopause, with flushings, chills, and profuse sweatings. The spleen may, as Mr. Knowsley Thornton informs me, become temporarily enlarged a few months after this operation. He has observed the occurrence of pains in the joints, tendons, and fasciæ, but these have subsided generally within a year or two, but he believes any other changes to be exceedingly rare.

Amongst *diseases of the skin* we may observe the tendency of some scars to become the seats of Alibert's keloid. Long-persisting local irritation may eventuate in the formation of fatty and fibro-fatty tumours, and predispose to malignant growths. Psoriasis may pass into lichen ruber. Chronic tinea capitis may lead to patches of area which, so far as I regard the latter, are neurotrophic and non-parasitic. General dermatitis may supervene on ringworm. Dr. Abraham had an example of this kind under his care. Erythema appeared over the trunk, desquamation of the palms and soles followed, and the skin assumed a xerodermia-like condition with furfuraceous scaliness. Anthrax has sometimes been followed by malignant endocarditis. It is still undetermined whether acro-scleroderma is a true sequel in cases of Raynaud's disease. The association of the two conditions is certain. If we enlarge, as I think we should do, our conception of the state known as Raynaud's disease or local asphyxia I think it is permissible to believe that such cases may sometimes eventuate in a condition of wide-spread scleroderma with telangiectases and acro-sphacelus. I have now under observation in private a grave example illustrating these changes. Lupus may sometimes become the seat of epithelioma, and the inflammatory lupoid ulcerations met with in Kaposi's disease (xerodermia pigmentosa) may also produce cancer. It is not yet determined whether the condition of skin known as Paget's disease of the nipple, scrotum, and penis is a benign form of eczematoid irritation due to psorospermial infection, leading ultimately to cancer, or whether it be, as held by Dr. Thin, cancerous disorder throughout. In most cases of mycosis fungoides there is also a long preliminary stage of eczematoid disease, not seldom mistaken for chronic eczema, urticaria, or erythema, which is followed months or even years afterwards by the special fungating lesions. Sometimes the latter appear without any superficial dermatitis. It is not without interest to know that an attack of erysipelas is alleged to have cured one case of this intractable and slowly fatal disease. A variety of xanthoma, temporary in character, is occasionally met with in the course of chronic glycosuria, probably due to irritation either from glucose or some ill-metabolised matters in the circulation.

The consequences of specific *gonorrhœal* infection are well known in the form of ophthalmia, often incoercible arthritis, especially in those of a gouty habit of body, and in flat-foot. The toxine generated by the gonococcus may sometimes prove very virulent. Whether it be generated directly by this organism or whether, as in the case of diphtheritic bacilli as shown by Dr. Sidney Martin, it arises from a chemical substance of the nature of a ferment, which acts upon albumoses in the body and converts them into a toxine, is not yet ascertained; but it has been suggested by Dr. Gowers that this may in some cases alight upon the nervous structures as it does in others upon joints, and so set up a rapidly spreading myelitis which has sometimes proved a fatal sequel of gonorrhœa. Dr. Gowers has described a case of this kind which ensued three weeks after primary infection and one week after convalescence. The patient was an overworked youth of nineteen years of age. Gonorrhœa in youth appears to predispose to urethral stricture at a period of life when prostatic changes set in. Dr. Hale White has recorded two cases in which malignant endocarditis resulted from gonorrhœal virus, the pulmonary valves being affected in each case.[18] Pericarditis, pleuritis, and peritonitis are also amongst recognised sequels, and gonococci have been found in the pus of gonorrhœal ophthalmia and may probably be discoverable as the cause of the iritis which is often associated with it. In women ovaritis and chronic pyo-salpinx may follow gonorrhœa.

Obesity is sometimes a sequel of acute illnesses and is especially frequent after enteric fever and pneumonia.

[16] Other experience does not support this observation.
[17] Principles and Practice of Medicine, second edition, 1895.

[18] THE LANCET, Feb. 29th, 1896, p. 534.

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Anæmia, hæmorrhagic or otherwise, may also be followed by obesity, and the same condition has been observed to develop after courses of mercury.

There are no very noteworthy sequels in the train of *diseases of the alimentary system*—none, that is, in the sense in which I have considered them in these lectures. Most consequences of these disorders relate to renewed attacks or are of the nature of complications and direct extension of morbid processes. I may mention the occurrence of tetany as sometimes following cases of gastrectasia, especially after the stomach has been washed out (Kussmaul). In cases of chronic indigestion in young children, described as the "cœliac affection," or diarrhœa alba, by Dr. Gee,[19] when recovery is slow there is apt to remain a frail condition of health, with stunting of growth and a weakness in the limbs, the child being unable to jump. Leucoma, psoriasis, syphilitic ulcers, and all varieties of irritation of the tongue are amongst recognised conditions which may eventuate in the sequel of carcinoma at some later date. Gastro-intestinal catarrh has been observed in one case to be followed by paresis of the lower extremities, according to M. Potain, and the same authority has described a case of secondary spinal paralysis which followed chronic diarrhœa. Right hemiplegia with anæsthesia has been also noted in the course of gastro-intestinal catarrh. It is not improbable that some febrile disorders as yet not differentiated may arise from absorption into the system of toxalbumens from the alimentary canal. Mr. Macnamara has suggested that septic products due to many carious teeth may thus sometimes exert pernicious effects, including some forms of painful arthritis.

Hepatic diseases.—The vagaries and symptoms set up by gall-stones are fully appreciated and tend to many and strange sequels—biliary fistulæ, pyrexia, catarrhal cholangitis, and intestinal obstruction amongst many others. Some of the most difficult diagnostic problems, clinical mysteries, come to be solved by the presence somewhere of biliary calculi. In a considerable number of cases carcinoma is the outcome of their continued irritation, arising in the gall-bladder or gall-ducts and gradually invading the liver texture and even spreading generally to the abdominal lymphatics, the lungs, peritoneum, and omentum. Biliary calculi being more frequently present in women this grave sequel is rather more common in them. Dr. Norman Moore met with ten examples of cancer of the gall-bladder and large bile-ducts, five in each sex, all of carcinoma. Gall-stones were present in four and a calcified hydatid cyst in one.[20] The occurrence of xanthelasma may be mentioned as an occasional sequel of chronic jaundice. In several cases of hepatic abscess I have known the patient to suffer from recurring pain in the region of the liver, evidently due to adhesions. This has been severe enough to arouse fear of a fresh abscess. In one case an officer could never comfortably bear the weight of his sword when doing duty on his horse. In another case death occurred within two years owing to adhesions between the liver, stomach, and adjacent parts, the original abscess, a very large one, having long been healed. No operative measures would have been of any avail.

Diabetes cannot be said to have any sequels, properly so called. The conditions of glycosuria as a manifestation of gouti ness, the result of faulty metabolism in intestinal digestion or of hepatic inadequacy, is one which induces a general faulty nutrition and a vulnerability of the tissues of the body, which may expose the patient to special dangers under the stress of acute diseases, or render him especially liable to tuberculosis, boils, carbuncles, and gangrene. A saccharine impregnation of the blood appears to render that fluid a better medium for the cultivation of microbes.

Animal Parasites may lead to several untoward sequels. Thus, the blood-flukes—Bilharzia hæmatobia—as a cause of endemic hæmaturia may form nuclei for the formation of vesical calculi and also induce a form of dysentery. Distomata, or liver-flukes, may lead to cholangitis, hepatic enlargement, jaundice, and ascites. Lumbrici may pass into the larynx or trachea, causing suffocation or gangrene of the lung, or they may enter the common and also the smaller bile-ducts. The bowel may also be perforated by them and peritonitis result. Trichiniasis, when recovered from in the acute stage, may leave behind it great muscular weakness, lasting for months, or, as in one case, for eight years. Filariasis may lead to a form of intermittent hæmatochyluria lasting for many years.

[19] St. Bartholomew's Hospital Reports, vol. xxiv., 1883, p. 17.
[20] Bradshaw Lecture, Royal College of Physicians of London, 1889.

The condition of *Anæmia*, apart from the pernicious variety, has but few sequels. It is commonly recovered from, and women who have suffered at one time from chlorosis are subsequently found to have good health and to bear children satisfactorily. In certain neglected cases, cardiac dilatation leading to grave symptoms may ensue, but adequate, that is prolonged, treatment should avail to avert any such sequel. As a constitutional condition, however, we may, I think, affirm that anæmia distinctly leads to gastric ulceration. It is certainly uncommon to meet with this disease in either sex if the patient's blood is of due corpuscular richness and adequate in respect of hæmoglobin. We may not accept the opinion that anæmia is the cause of Graves' disease, although there is not seldom some degree of this present, occasionally induced, as it would appear, by rebellious and intractable diarrhœa. I agree with Trousseau that many cases of anæmia require treatment extending over three years.

Ren mobilis.—Displacement of the kidney may lead to several troublesome consequences of which pain at the menstrual periods is a frequent one. Occasional strangulation of the vessels and ureter may occur, leading to hæmaturia and to occlusion by kinking of the ureter with temporary hydronephrosis. The hepatic flexure of the colon is apt to suffer by contiguity to the right and commonly displaced organ, and sometimes irritation is set up which ends in the establishment of adhesions between this part of the bowel and the kidney. Fears may thus come to be entertained of serious new growth in the colon, owing to localised pain, sense of fulness and resistance, and symptoms of partial obstruction of the bowel.

Renal diseases.—There are no recognised sequels of diseases of the proper structures of the kidneys which cannot be readily explained by the natural outcome and influences, far reaching enough as they are, of the original disorders of these organs. We are as yet, however, in ignorance of the ultimate clinical history of cases which we often meet with, known as examples of albuminuria of adolescents or cyclical albuminuria. We know that many persons so affected ultimately recover, but we wait for knowledge of the life histories of many more in order to be able to frame a prognosis for them and to direct the management of such cases. Paroxysmal hæmoglobinuria is met with sometimes in persons subject to Raynaud's disease, though not as a sequel. In my opinion, the former is sometimes but a phase of the latter state. Hæmoglobinuria of the toxic variety, due to dissolution of the blood-corpuscles, is sometimes witnessed as the result of the specific infectious fevers, such as scarlatina, variola, yellow fever, enterica, malaria, and syphilis.

Chemico-toxic Sequels.—Dr. Alexander Scott of Glasgow has recently recorded a case of poisoning by carbon monoxide vapour in which a form of dementia resulted with occasional and partially lucid intervals, and he tells of a similar case reported by Stockes of Lucerne.[21] The symptoms continued for three months up to the time of recording the case in Dr. Scott's patient, and in the other case were present two years after the poisoning. Slight but very slow improvement occurred in both instances. The explanation afforded is to the effect that the carbon monoxide combines with the hæmoglobin of the blood, forming a very stable compound, carboxyhæmoglobin, which will neither diffuse nor dissolve and which resists oxygenation. The nutrition of the body thus suffers, and in particular that of the brain and nervous system, with the induction of long abiding mental and other symptoms. Carbon monoxide may also lead to one variety of toxic hæmoglobinuria. As examples of other chemico-toxic sequels we have the ultimate effects of arsenicism in producing melasma, zona, and peripheral neuritis; œsophageal stricture and acute tuberculosis following the action of corrosive poisons; gout supervening on plumbism; saturnine nephritis, neuritis, and encephalopathy; tabes sicca from zinc impregnation; skin discolouration from silver salts;[22] tremor from mercurial poisoning; and neuritis caused by alcohol and by bisulphide of carbon.

Lastly, amongst favourable sequels may be mentioned the rare occurrence of involution or withering of malignant growths. This is met with in old persons in whom cancer often remains almost stationary. Dr. Robert Liveing and

[21] THE LANCET, Jan. 25th, 1896, p. 217.
[22] In one case of this kind (argyria) I found staining of the lining of the aorta. Transactions of the Pathological Society, vol. xviii., 1886, p. 59.

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Mr. Morrant Baker had under their care a case of fibro-sarcoma of the scalp in a young man aged twenty-four years which slowly underwent involution. When last seen four years later the process of atrophy had greatly exceeded that of growth.[23]

Having now discussed so far as I am able the various consequences and sequels of diseases—some of which may possibly have been wrongly interpreted or summoned and alleged to do duty for them by reason of the mental temper which always besets an eager inquirer into any particular set of circumstances—I may sum up my efforts by endeavouring lastly and concisely to classify, in accordance with the most recent knowledge available, the sequels that have come under notice. I mentioned at the outset of these lectures that a distinction should be made between complications, even late ones, of diseases and the sequels of them. I have tried to make this distinction, but it has not been quite an easy matter to do so. We are strictly concerned with the consequences of disease, or, in other words, the diseases of convalescence. A consideration of the whole group of acute infectious diseases, which furnishes the greater number by far of those which have sequels, shows up this difficulty very strongly, for we have found that most of these consequential troubles owe their existence to specific residual infective elements which have lain dormant or more or less latent within the body, giving rise either to early or late sequels. These are, therefore, to be termed bacterio-toxic or microbic sequels. Of these we have examples in the various fevers, in diphtheria, influenza, malaria, and syphilis. We have seen that these may be manifested very variously in different organs and parts of the body. When affecting the nervous system they lead to central or to peripheral symptoms, according to the locality involved. With these we sometimes find associated sequels dependant on fresh invasion by microbic elements non-specific of the primal disease, but which are ever ready either within the system or outside of it to alight upon parts that have recently been rendered vulnerable by pre-existing morbid processes. These I term indirect sequels. We have seen that certain acute diseases sometimes reveal diathetic proclivities hitherto little marked or even dormant, as in the cases of gouty or strumous habits of body, or which, as in the case of syphilitic taint, awaken long latent residues and so evoke revealing symptoms of unexpected character. These I term revealing sequels.

The debility and diminished tissue-resisting powers of the body induced by acute diseases or by exhausting influences and low state of health open the door to fresh invasion from within or from without, and in this way invite new sequels and often a succession of diseases. So-called "surgical scarlet fever" is, without doubt, an instance of true infection by that specific disorder to which patients are particularly prone after the shock and wound of an operation, owing to the vulnerability and susceptibility thus induced. Traumatism of any kind is apt to be followed by revealing symptoms of some constitutional tendency or taint. Thus, we have instances of puerperal septicæmia set up by invasion of varieties of specific and toxic microbes. We meet with cases in which tuberculosis awakens and rages after injuries to the head and other parts of the body, such as joints, and we have already noted the occurrence of erysipelas as an attendant on traumatism. We may take note of the diathetic and local determinants which materially affect the original incidence and the sequels of diseases. Weak points are attacked, areas of special vulnerability, and organs and parts whose functions are inherently inadequate—*loci minoris resistentiæ*. We perhaps too little regard the frailties of particular organs and tissues, frail by inheritance and prone to premature failure and decay, although adjacent to other and more robust portions of the frame of the individual; for likeness of organs and tissues goes by descent, as does mere likeness of features. Hence many puzzling conditions and surprises in the study of diseases. But the clinical physician must take note of such. *Nervous sequels* relate chiefly to neuro-trophic disorders and neuralgia. *Sequels due to chemico-toxic influences.* Respecting many of these, we have to note the fact of symmetrical or bilateral nervous affections due to general impregnation of the system through the blood.

[23] Catalogue of the Anatomical and Pathological Museum of St. Bartholomew's Hospital, vol. iii., 1881-93, p. 383.

DISEASES OF CONVALESCENCE AND SEQUELS OF DISEASES.

Complications of Diseases.—(*a*) Early, (*b*) late. Incomplete convalescence.

Sequels.—1. *Bacterio-toxic:* (*a*) Early, microbic, or germinal, with short latency; (*b*) late, microbic, or germinal, with longer latency; residual diseases; ultimate evolutions or manifestations of the original disease; (*c*) direct, specific of the primary disease; (*d*) indirect, induced by the primary disease, but due to fresh or secondary infections by new toxines—(*a*) already present in the body, or (*b*) newly introduced from without (mixed infections), hence succession of diseases. 2. *Revealing:* Determinative of manifestations of constitutional habits of body or of inherited or acquired specific (? germinal or particulate) taint. 3. *Nervous:* Neurotrophic, neuralgic. 4. *Chemico-toxic:* Arsenic, lead, mercury, silver, carbon monoxyde, corrosives. 5. *Direct*, non-toxic: *Residual* sequels, &c.; Residual sequels probably determined to certain localities by tissue-predisponency—(*a*) inherited, or (*b*) acquired by previous injury—*loci minoris resistentiæ*.

We have found that most sequels of diseases are an increased burden for the patient, but we have also noted that a few of them are even favourable and happy. The great fact remains that the majority of sufferers from all manner of diseases are not the victims of sequels, and that for this majority the course of their maladies, when not directly fatal, is singularly and fortunately free from any important consequences. A study of the subject of the sequels of diseases cannot, however, fail to impress upon all of us who are actively engaged in treating patients during their illnesses the supreme importance of steadfastly regarding the patient, and not so much his disease, in all our therapeutic management. To conduct the patient prudently and safely through his troubles, to realise how he bears them and what they mean or may mean to him, to gauge his powers of tissue resistance and his reserves of vital power, to have regard to his mental condition and to all his particular environments, and to secure sound convalescence, is as far as possible to avert the worst consequences, early or remote, of the particular malady in progress. This, and no less than this, is the duty which lies before each one of us, and to carry it out effectually demands the best qualities both of head and heart that we can place at the disposal of our patients. And such qualities, Sir, I venture to say, have not been wanting in the lives and work of the majority of the great and good men who have adorned this venerable college and left us the legacy of their skill and of their characters; who have, no less, left us under the responsibility of maintaining here, as the Physicians of England, the highest standards of work, of duty, and of professional honour. May we try to be worthy of our predecessors. We can hardly surpass them in any of these qualities.

It only remains for me to offer to you, Sir, and to this auditory, my best thanks for the kind attention given to me in this course of lectures.

A PRELIMINARY NOTE ON

A METHOD FOR RAPIDLY PRODUCING DIPHTHERIA ANTITOXINS.[1]

BY G. E. CARTWRIGHT WOOD, M.D., B.SC. EDIN.

THE method for producing antitoxins described in this preliminary communication is the outcome of an investigation into the action of the products of the diphtheria bacillus on which I have been engaged for more than a year.[2] The toxines described by Continental observers have been those obtained from broth cultivations of the organism, where we cannot expect the products, even if identical in nature, to be present in the same proportions as when vegetating in the living body of an animal. More than eight

[1] A paper read before the Royal Society on Feb. 20th, 1896. (Communicated by Dr. Pye-Smith, F.R.S.)

[2] The investigation has been carried out in the laboratories of the Royal Colleges of Physicians of London and Surgeons of England, and I should like here to express my great indebtedness to the Laboratories Committee for the facilities they have afforded to me. I must also thank them and, through them, the Honourable Goldsmiths' Company, from whose Research Fund a grant was placed at my disposal.

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years ago Hueppe[3] and I pointed out that we must grow the pathogenic organism on a natural albumin if we wished to obtain the toxines proper of the microbe; and working on this principle by inoculating hens' eggs with Koch's cholera bacillus we succeeded in producing much more powerful poisons than had been previously obtained. The toxines produced by the action of the diphtheria bacillus on albumen have been minutely investigated by Sidney Martin, and the occurrence of the same substances in the bodies of patients who have succumbed to the disease has proved the correctness of this view. In this communication I shall not enter into the precise nature of the products in question as my present purpose is to describe a practical method of rapidly producing powerful diphtheria antitoxins.

In these experiments two species of diphtheria toxine were made use of: firstly, the ordinary toxine produced by the organism in peptone broth; secondly, the substances present in serum broth cultivations which had been filtered and heated up to 65°C. [In the former the active principle consists almost entirely of the so-called ferment toxine, while in the latter this has been destroyed by heating up to 65° C. so that its action must depend on the presence of other substances.[4]] The medium employed for the production of the serum toxine was ordinary peptone broth, to which an addition of 10 or 20 per cent. blood serum or plasma had been added; where the latter was used the broth was previously decalcified to prevent coagulation. As a rule the broth was inoculated with a virulent diphtheria culture some three or four days previous to the addition of the serum or plasma and then incubated at a temperature of 37° C. for at least three or four weeks. Before being used for injection it was subjected to a temperature of 65° C. for about an hour and then filtered through a sterilised Chamberland candle to remove the bodies of the bacilli. This fluid will be spoken of subsequently as "serum" toxine in contradistinction to the ordinary poison, which will be spoken of as "broth" toxine. The serum toxine is characterised chiefly by giving rise to little local irritation but to marked febrile reaction, which is still more pronounced when the injection is repeated. As the diphtheria albumose described by Dr. Sidney Martin was characterised by precisely these properties, in all probability the potency of the serum toxine depends on its presence. In addition to these properties, however, it was found that animals which had been subjected to its action were rendered more or less refractory to subsequent infection, and this suggested the possibility of its application as a means of shortening the preliminary treatment which a horse must undergo before it can receive the large doses of broth toxine which are usually necessary for the production of antitoxin of any strength.

The first horse (No. 1) was treated on the same general principles which are adopted in immunising guinea-pigs—that is to say, it received a certain quantity of the "vaccinating" substance and after the elapse of ten or fourteen days it was subjected to the action of the microbe or toxine. During the first twelve days this horse received 380 c.c. of serum toxine spread over three injections on different dates. The temperature (starting at 9·25° F.) rose on the second day to 100·25° F. after the first injection (120 c.c. serum toxine), falling on the third day to 99·25°. On the fifth day, when 150 c.c. of serum toxine were injected, the temperature rose till it attained on the sixth day 101·75°, falling to 98·75° on the twelfth day, when 110 c.c. of serum toxine were injected. The temperature rose on the thirteenth day to 102°, falling to 99 25° on the fourteenth day. On the nineteenth day of the experiment it received 50 c.c. of unfiltered serum toxine (sterilised at 65° C.) and 150 c.c. of broth toxine (of which one-half c.c. killed a 500-gramme guinea-pig in forty-eight hours) the temperature rising to 101·5° on the twentieth day. This unfiltered serum toxine unfortunately gave rise to a small abscess which greatly impeded the treatment, and subsequent experience has convinced me that the bodies of the bacilli which gave rise to this irritation must be removed by filtration if the process is to be carried out smoothly and successfully. On the twenty-eighth day with the temperature nearly normal it received 50 c.c. of the same broth toxine, the temperature rising to 100·5°, and on the thirtieth day (temperature 99·4°) another injection of 115 c.c. The horse was then bled on the thirty-second day of treatment, and the serum was found to possess the strength of ten normal units, that is to say, $\frac{1}{100}$ c.c., protected a 250-gramme guinea-pig against ten lethal doses of broth toxine. As this strength is only attained by Roux's method after at least ten weeks' treatment it was evident that the serum toxine had considerably shortened the process. It may be mentioned that the horse which had been in very poor condition at the beginning of the treatment, steadily improved during the month. The experiment was not carried further with this horse, which was then subjected to the ordinary method for producing antitoxins where it reacted in every respect like an animal which had been under the usual treatment for several months.

In the case of the next horse (No. 2) it seemed safe to inject much larger quantities of the serum toxine, but to avoid the risk of constitutionally injuring the animal the addition of a certain amount of antitoxin was made. During the first twelve days 1350 c.c. of serum toxine had been injected, and mixed with this 50 c.c. of antitoxin obtained from the previous horse each c.c. of which contained ten normal units, the temperature never exceeding 101° F. after the injection. During the next week 550 c.c. of broth toxine (of which $\frac{1}{4}$ c.c. killed a 500-gramme guinea-pig in forty-eight hours) was injected spread over three injections, and to the last of these 100 c.c. of serum toxine was added. In the succeeding week it received 400 c.c. of the same broth toxine mixed with 250 c.c. of serum toxine in two injections, the temperature rising next day (twenty-fifth) to 102° F. On the thirtieth day the animal was bled ($\frac{1}{2}$ of a litre) and the antitoxic value of its serum estimated. It was found that $\frac{1}{100}$ c.c., $\frac{1}{800}$ c c., $\frac{1}{300}$ c.c., $\frac{1}{150}$ c.c., $\frac{1}{50}$ c.c., and finally $\frac{1}{1000}$ of a c.c. protected completely against ten lethal doses of the toxine. After six weeks of treatment $\frac{1}{1000}$th of a c.c. protected against ten lethal doses, while on the ninth week $\frac{1}{2500}$th of a c.c. sufficed. In this experiment which furnished such brilliant results, as has been stated, antitoxin was mixed with the serum toxine injected, but that this was not at all necessary was shown by a subsequent experiment, in which another horse (No. 3) received no less than 2180 c.c. serum toxine in the space of a fortnight without any apparent injury. The serum of this animal was tested during the first and second weeks, before it had received any broth toxine, and it was found that $\frac{1}{300}$ c.c. and $\frac{1}{100}$ c.c. respectively protected guinea-pigs against ten lethal doses. On the third week $\frac{1}{800}$ c.c. protected, and at the end of a month $\frac{1}{1250}$ c.c. sufficed. [The large amount of antitoxin produced during the first two weeks, when the horse received serum toxine alone, was quite unexpected, and leaves still unsettled the question as to how far the acquired immunity produced by the serum toxine is due to increased tissue resistance or to the presence of the antitoxin in the fluids of the body.] These results are shown in Table I. (horse No. 3).

TABLE I.—*Horse No. 3.*

—	Antitoxic value of serum.	Amount of toxines injected.
7th day	$\frac{1}{250}$ c.c.	1200 c.c. serum toxine.
14th day	$\frac{1}{50}$ c.c.	980 c.c. serum toxine.
21st day	$\frac{1}{125}$ c.c.	650 c.c. serum toxine and 1050 c.c. weak broth toxine.
28th day	$\frac{1}{1250}$ c.c.	1100 c.c. serum toxine and 1200 c.c. stronger broth toxine.

Although the serum toxine had been used primarily in the expectation of rapidly immunising the animal and thus shortening the necessary period of treatment, the very high antitoxic value of the serum obtained from horses Nos. 2 and 3 suggested that the method might be applied effectively at a later stage. For the purpose of testing this a number of horses which had been under the ordinary treatment for from six to nine months were very kindly placed at my disposal by the Director of the Laboratories, Dr. Sims Woodhead. In the first experiments 200 or 300 c.c. of the serum toxine was mixed with the ordinary broth toxine, and injected as usual. The results obtained, although slightly better, were not at all so marked as one might have expected. On examining more in detail the horses in which the best results had been obtained it was found that these had been under more or less continuous treatment with the serum toxine, both toxines being

[3] Centralblatt für Bakteriologie, No. 5, 1884.
[4] The passages in brackets were added after the reading of the paper.

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injected as frequently and in as large amounts as possible. Guided by these facts four of the horses (Nos. 4, 5, 6, 7) received one evening each 300 c.c. of serum toxine and on the following morning an injection of weak broth toxine. Although the quantity of weak broth toxine would under normal conditions have produced hardly any effect it produced on this occasion most marked local and constitutional reactions. During the remainder of the week these horses received injections of weak broth toxine each day or on alternate days according to their condition, and on each occasion these gave rise to quite definite constitutional and local reactions. During the following week an injection of 300 c.c. of serum toxine was introduced, succeeded by similar quantities of weak broth toxines, as in the previous week. [It will be observed that all these horses received practically the same quantities of toxine, with the exception of horse No. 5 in which the injections were stopped earlier than the others owing to its temperature showing a tendency to remain permanently elevated. In horses Nos. 6 and 7 the production of antitoxine was much less than in Nos. 4 and 5, and this is, no doubt, to be ascribed to the injections producing much less marked reactions owing apparently to their greater refractoriness. In all probability, however, this condition might have been overcome by the use of larger injections and stronger broth toxine.] The rise in antitoxic value of the serum of these horses is shown in Table II.

TABLE II.

—	Strength of serum before treatment.	Strength of serum after sixteen days' treatment.	Amount of toxines injected during the sixteen days.
Horse No. 4 ...	$\frac{1}{500}$ c.c.	$\frac{1}{2000}$ c.c.	650 c.c. serum toxine and 2350 c.c. weak broth toxine.
Horse No. 5 ...	$\frac{1}{50}$ c.c.	$\frac{1}{1000}$ c.c.	600 c.c. serum toxine and 1800 c.c. weak broth toxine.
Horse No. 6 ...	$\frac{1}{50}$ c.c.	$\frac{1}{750}$ c.c.	650 c.c. serum toxine and 2350 c.c. weak broth toxine.
Horse No. 7 ...	$\frac{1}{100}$ c.c.	$\frac{1}{750}$ c.c.	650 c.c. serum toxine and 2350 c.c. weak broth toxine.

These results indicate very strikingly that the rapid production of antitoxin depended at any rate in great part on the "cumulative" action of the toxines by means of which the animal was kept in a chronic condition of local and constitutional reaction. It is probable that we produce in this way the earlier stages of that condition of "supersensitiveness" described by Behring, in which an animal whose blood may be charged with the most powerful antitoxins suffers the most profound constitutional disturbance on the introduction of even the smallest quantities of toxine while at the same time the temperature of the animal may remain for months permanently elevated above the normal. By taking advantage, however, of this cumulative action in its earlier effects we are furnished with a means of easily producing much more powerful antitoxins than is otherwise possible, and it is probable that by the use of stronger broth toxine the method may be carried still further in this direction. This cumulative action may also be taken advantage of to obviate that most troublesome occurrence where an animal becomes apparently absolutely refractory, ceasing to react to the toxine and failing to produce antitoxin, so that it has to pass out of use for the purpose of producing the curative serum. Some preliminary experiments have, however, indicated that this cumulative action may be produced still more markedly by the use of other toxines than those elaborated by the diphtheria bacillus, a result which I was quite prepared for, as Woodhead [5] and myself had in a previous communication drawn special attention to this "summative" action of bacterial products.

Although this part of the investigation is still quite incomplete, an application of this principle which may be of importance may be here suggested. The excessively costly nature of snake venom and the practical difficulties of obtaining it in sufficient quantities have been a great obstacle to the immunisation of the larger animals or the production of "anti-venines" of any high degree of strength. It is probable that by the use of other toxines in the later stage the quantities of the costly snake venom necessary may be greatly lessened.

[In this preliminary communication I have dealt with horses which have been under treatment only for a short period, and have shown that antitoxins at least as strong as the best in use can be quickly and easily produced, but I have every reason to believe that under more prolonged treatment much more powerful diphtheria antitoxins can be obtained than has been previously possible.]

In conclusion it may be said that the following advantages may be claimed for the use of the toxines in the way I have described. 1. That powerful diphtheria antitoxins can be produced without risk in a much shorter period of time than has been previously possible. 2. That much more powerful antitoxins can be easily produced so that the amount necessary to be injected into a patient can be greatly reduced, and one of the great objections to its introduction into private practice in this country may be removed. 3. That the greater strength of the serum will permit of the patient receiving at the beginning of treatment a sufficient quantity of the serum at one injection when, as is universally recognised both by animal experiment and clinical experience, its curative action is exerted most markedly.

I must acknowledge my extreme indebtedness to the Director of the Laboratories, Dr. Sims Woodhead, for much invaluable advice and assistance during the course of this investigation.

[5] On the Antidotal and Summative Actions that the Products of Bacteria exert on the Course of Infective Disease, THE LANCET, Feb. 22nd, 1890.

THE RÔLE OF THE STREPTOCOCCUS PYOGENES IN HUMAN PATHOLOGY.

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IN 1880 Ogston [1] described the presence of streptococci in the pus of abscesses. In the fifteen years that have passed since then, our knowledge of the micro-organism has gone forwards by leaps and bounds. Its practical importance as a cause and concomitant of disease has correspondingly increased. Isolated workers have chronicled their observations, but unfortunately these observations to a large extent remain isolated. Therefore it seemed desirable to give a brief *résumé* of our present day knowledge, especially in consideration of the successful attempts which have been made in the treatment of streptococcic diseases. The introduction of the culture methods by Koch enabled Rosenbach [2] (1884) and Passet [3] (1885) to make a more complete study of the streptococcus. In the meantime, however, Fehleisen [4] (1882) had described the occurrence of chain-cocci in erysipelas under the name of "streptococcus erysipelatis." Extended observation soon demonstrated the presence of streptococci in many different pathological conditions, and to these cocci specific names were given, such as the streptococcus septicus of Nicolaier,[5] the streptococcus septo-pyæmicus of Biondi,[6] and the streptococcus pyogenes malignus of Flügge.[7] However, the opinion now almost universally held is that the grounds upon which these distinctions have been founded are insufficient and that there is but one species of streptococcus which plays a part in human pathology—viz., that generally termed "streptococcus pyogenes." The identity of the streptococcus pyogenes (Rosenbach) with that found in erysipelas and in puerperal fever was first affirmed by Widal,[8] whose position has subsequently been fully supported by Verneuil and Clado,[9] E. Fränkel,[10] Achalme,[11] and

[1] Archiv für Klinische Chirurgie, Band xxv., 1880. Report upon Micro-organisms in Surgical Diseases, Brit. Med. Jour., 1881, p. 369.
[2] Die Mikroorganismen der Wundinfectionskrankheiten. Wiesbaden, 1884.
[3] Zur Aetiologie der Acuten Eitrigen Entzündung. Fortschrift der Medicin, 1885, Band iii.
[4] Untersuchungen über Erysipel. Deutsche Zeitschrift für Chirurgie, Band xvi.
[5] Nicolaier and Guarnieri: Flügge's Die Mikroorganismen, ii. Auflage, 1886, p. 154.
[6] Die Pathogenischen Mikroorganismen des Speichels. Zeitschrift für Hygiene, Band ii., p. 225.
[7] Die Mikroorganismen. Leipzig, 1886, p. 153.
[8] Étude sur l'Infection Puerpérale. Paris, 1889.
[9] De l'Identité de l'Érysipèle et de la Lymphangite Aiguë. Comptes rendus de l'Académie de Sciences de Paris, tome cvi'i, p. 714.
[10] Zur Lehre von der Ideutität des Streptococcus Pyogenes und des Streptococcus Erysipelatis. Centralblatt für Bakterio.ogie, Band vi., 1889, p. 691.
[11] Considérations sur l'Érysipèle et ses Complications. Thèse, Paris, 1892.

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most recently by Petruschky[12] and Marmorek.[13] The differentiation into species probably arose from the number of varieties of pathological lesion in which chain-cocci are found. Clinical and experimental evidences unite to show that diversity of lesion may be explained otherwise than by the presupposition that the infecting micro-organisms differ in species. There are four main factors the variations of which determine the nature and extent of streptococcic lesions. 1. The first and most important of these factors is the extraordinary variability in the virulence of the microbe. Starting from a streptococcus harmlessly inhabiting the buccal cavity we may pass experimentally through all stages till we obtain an organism of such exalted virulence as to be capable of producing a rapid and general infection (bacteriæmia). Any one of such experimental lesions finds its parallel in human pathology. 2. A variation in the site and depth of the infection produces a difference in the nature and severity of the lesion; this seems to explain why at one time an erysipelas is developed and at another time a phlegmon. 3. Varying resistance on the part of the body is the third factor in the production of a diversity of lesion; witness the severe streptococcic lesions met with in advanced cases of diabetes and Bright's disease. 4. The association of the streptococcus pyogenes with other microbes, pathogenic and non-pathogenic. These associations or "mixed infections" I propose, following the nomenclature of Verneuil, to call throughout this paper "polymicrobic infections."

The wide distribution of the streptococcus pyogenes renders it difficult in certain cases to determine what has been the immediate source (*Herkunft*) of the infecting cocci. Undoubtedly in a great number of cases an exogenous infection must be assumed. In the polymicrobic infections, however, while this mode of origin cannot be excluded, it is quite possible that the secondary streptococcic infection may be from cocci normally inhabiting the skin or mucous membranes (endogenous infection) and leading a saprophytic existence there under normal conditions. There are two further possibilities: (1) that the virulence of the streptococcus pyogenes is exalted by being associated with other microbes, pathogenic (e.g., bacillus typhosus) and non-pathogenic (experimentally bacillus prodigiosus); or (2) that the apparent exaltation is really an expression of a diminished resistance on the part of the body caused by the primary infection. In some of the polymicrobic infections both factors seem to be at work; in others only one. In most cases the primary coccic lesion can be determined, but there occur cases of generalised infection where after the most careful investigation the point of entry cannot be ascertained. For convenience such cases have been called by Jürgensen, Leube, and others "cryptogenetic infections." A strepto-mycosis (any streptococcic infection) is at first essentially a local process. It may remain local, giving rise to an erysipelas or a phlegmon, or it may become generalised, a condition ordinarily designated "streptococcic pyæmia," but better called "metastatic strepto-mycosis." The streptococcus gains access to the blood stream directly or indirectly by gradually working its way along the lymph paths, producing lymphangitis, inflammations of serous membranes, &c., and eventually entering the general circulation. These varieties of localisation occur in the polymicrobic as well as in the monomicrobic infections.

Erysipelas.—This affection is an ideal example of a strepto-mycosis. Jordan[14] has recorded cases where the staphylococcus pyogenes aureus was found in company with the streptococcus, but it is a question whether these were not cases of polymicrobic infection, the staphylococci gaining entrance after the commencement of the erysipelas. Although mainly a local disease the general symptoms are probably in some cases caused by a coccic invasion of the blood as demonstrated by von Noorden[15] and others. The local lesion is a dense small-celled infiltration. The cocci are found for the most part in the lymphatic spaces and vessels of the corium. The bloodvessels are as a rule free. Towards the edge of the red area the fibres of the cutis are œdematous and the lymph vessels contain numerous cocci. The cessation of the redness on the fourth or fifth day is due to the rapid disappearance of the infiltration by a process of fatty degeneration. While one part undergoes resolution a new part is, however, invaded. As regards the coccic distribution the erysipelatous lesion may be roughly sub-divided into three main areas from centre to periphery. 1. The area of resolution, where the process is beginning to subside; the cocci are comparatively few in number and in some places have entirely disappeared. 2. The area of active inflammation corresponding to the red part; there the streptococci are abundant in the lymph spaces and vessels. 3. The area of commencing coccic invasion, which extends for a short distance peripherally to the red area; the cocci are numerous and inflammation is just commencing. In severe fatal cases the general lesions are cloudy swelling of the kidney, liver, spleen, cardiac muscle, and pyogenic endocarditis. In such cases the streptococci have entered the general blood system and they may be found in pure culture in all the viscera (Hartmann,[16] Pfuhl,[17] and Petruschky). Metchnikoff[18] has affirmed that in favourable cases the streptococci are to a very large extent destroyed by phagocytes; while in fatal cases no phagocytosis was found when the micro-organisms had become generalised. The severity of the lesion in any given case of erysipelas depends for the most part on the degree of virulence of the streptococci. There is also distinct evidence that in man, as is seen experimentally in rabbits, the passage from one individual to another in epidemics of erysipelas exalts the virulence of the streptococcus, the later cases being more severe than the earlier ones.

Phlegmon of the skin (pseudo-erysipelas).—Phlegmon of the skin, although not necessarily always caused by the same organism, has very frequently the streptococcus pyogenes for its cause. Here, in contradistinction to erysipelas, there are progressive suppuration and breaking down of the tissues. The pyogenic chain-cocci rapidly invade the lymphatics of the subcutaneous tissues and set up a streptococcic lymphangitis and lymphadenitis. If the suppuration extends deeply there is great danger of purulent thrombo-phlebitis and general strepto-mycosis.

Pyæmia and septicæmia.—The general conditions following the introduction of the streptococcus into the blood are those which are loosely described under the collective names of "pyæmia" and "septicæmia." The terms "sepsis" and "septicæmia" were originally used to denote certain morbid conditions caused by *putrefactive* blood poisoning. Later, Davaine and Koch used the word "septicæmia" for certain microbic blood infections where the microbes multiply in the blood and cause a rapidly fatal disease. Anatomically it is distinguished from pyæmia by the absence of metastatic purulent deposits. Early in the history of bacteriology micro-organisms were demonstrated to exist in the wounds of pyæmic individuals and also in the metastases. Of all the numerous organisms which are found in pyæmia and septicæmia the streptococcus is the most frequent, although in what was clinically known as a "pyæmia" other micro-organisms have been isolated, notably staphylococcus pyogenes aureus, bacillus coli communis, gonococcus, and actinomyces. Thus, at the present time it must be accepted that "pyæmia" is a collective name for metastatic suppurative processes of differing origins (Virchow). The nomenclature is palpably defective. To be strictly accurate one should speak of a streptococcic pyæmia, or staphylococcic pyæmia, or still better of a "metastatic strepto-mycosis," and for cases which have been called streptococcic septicæmia "non-metastatic general strepto-mycosis," reserving the term "septicæmia" for a class of cases caused by the entrance and local multiplication of *putrefactive* organisms within the body. In the case of large wounds the usual thing which leads to metastatic strepto-mycosis is phlebothrombosis of the vessels of the wound. The thrombi break down and fragments are carried into the blood stream as septic emboli, which in turn give rise to purulent deposits at the site of their impaction. Since the introduction of the Listerian treatment of wounds such cases are uncommon, yet they are not infrequently seen after streptococcic middle ear disease with sinus thrombosis. Cases in which pyæmia follows a slight wound are still more uncommon, having their etiological position midway between cases of phanerogenetic and cryptogenetic infections. In

[12] Untersuchungen über Pyogenen Kokken. Zeitschrift für Hygiene' Band xviii., 1894, p. 413.

[13] Le Streptocoque. Annales de l'Institut Pasteur, tome ix., No. 7, p 594.

[14] Die Aetiologie des Erysipels. Archiv für Klinische Chirurgie, Band xlii., p. 325.

[15] Ueber das Vorkommen von Streptokokken in Blut bei Erysipelas. Münchener Medicinische Wochenschrift, 1887, p. 33.

[16] Ueber die Aetiologie von Erysipel und Puerperalfieber. Archiv für Hygiene, Band vii., 1887, pp. 83-229.

[17] Ein Fall von allgemeininfection mit Streptokokken in Folge von Erysipel. Zeitschrift für Hygiene, Band xii., 1892, p. 517.

[18] Ueber den Kampf der Zellen gegen Erysipelkokken. Virchow's Archiv, Band cvii., p. 209.

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the latter class of infection the cocci apparently enter the blood stream directly, giving rise to an endocarditis with secondary lesions in the spleen, kidneys, and liver, the part played by emboli seeming to be slight, as the resulting abscesses are usually small and miliary, although septic vegetations on the cardiac valves may cause typical embolic infarctions. In addition to the purulent deposits caused by the streptococcus pyogenes, putrefactive and gangrenous processes may be superadded—true septico-pyæmia.

Puerperal fever, puerperal pyæmia, and puerperal septicæmia.—In the great majority of cases of what is termed "puerperal fever" the cause is the infection of some part of the genital canal by the streptococcus pyogenes, but its action may be aided by other pyogenic cocci (staphylococci), and recent research has demonstrated that a puerperal fever may be set up by the gonococcus (Krönig[19]), bacillus coli communis (Maromrek,[20] Eisenhart,[21] Kleinknecht,[22] and others), the Talamon-Fränkel coccus (Czemetschka[23]), and a capsulated bacillus (Chiari[24]). The primary point of entry of the streptococcus may be in the vulva, vagina, or uterus, resulting in an inflammation and ending in necrosis of the tissue. The necrotic part sloughs and a "puerperal ulcer" remains. The further invasion of the system by the pyogenic organisms may take place by way of the lymph vessels or by the bloodvessels. Hence arise the two main forms of puerperal fever—the phlegmonous and the pyæmic. They have marked points of difference, yet the one may become the other, or both may be found coexisting. In phlegmonous puerperal fever the uterine mucous membrane is inflamed, the discharge has often a foul smell, and actual gangrene of the uterine wall may ensue; the lymphatics of the uterus are soon involved, the lymphangitis spreading to the loose connective tissue of the pelvis and to the broad ligaments, while later the lymphatics connecting the pelvis with the abdomen become similarly affected, peritonitis generally supervening. Pleurisy may follow, and if the progress of the disease is not arrested general infection sets in. The starting-point of pyæmic puerperal fever is usually a pyogenic metro-phlebitis at the site of the placental attachment. Thrombi are formed and sooner or later soften and break down; particles infected by chain-cocci are drifted off as emboli into the general circulation, and at the points of their arrest in the viscera metastatic abscesses are formed. A third form, bearing a strong resemblance to the rapidly fatal forms of non-metastatic general strepto-mycosis seen in rabbits after inoculation with highly virulent streptococci, may also be recognised. In cases of this class the macroscopic lesions are slight, although bacteriological methods demonstrate the fact that all the organs are teeming with specific cocci. In the primary genital lesion and in the various lymphangitides and metastatic foci chain-cocci were found by Waldeyer,[25] Orth,[26] Doleris,[27] and others. In the phlegmonous form it may be given as a general rule that the coccic distribution is limited to the parts inflamed, while in the pyæmic form they can be demonstrated in the blood at an early stage (Birch-Hirschfeld,[28] Hahn,[29] Ott,[30] and others). The severity of cases of puerperal fever seems to a large extent to depend upon the virulence of the cocci, and, as in erysipelas, the epidemic form is more severe than the sporadic. For the physician it is of extreme importance to determine if possible the source and nature of the infecting organisms. The researches of Döderlein,[31] Bumm, and others show that the uterine secretions of normal lying-in women are germ-free. In the vagina, however, various schizomycetes are present, and among them streptococci, but the latter are attenuated forms. The cause of this attenuation, according to Döderlein, is to be sought in the acid reactions of the secretions. To the already existing streptococci in the vagina may be due the strepto-mycoses occurring during pregnancy itself, but in the majority of cases the pathogenic streptococci are exogenous. Putrefactive organisms of themselves will not cause a puerperal pyæmia, as recently asserted by one of our most experienced gynæcologists. They may aid the streptococcus, the result being a combination of a pyogenic process with a putrid intoxication—septico-pyæmia, usually running an acute fatal course. In some cases the putrefactive organism isolated has been the proteus vulgaris of Hauser. The necrofactive action of the streptococcus probably aids the local development of the proteus. As a rule, however, puerperal fever is a pyogenic process caused by the streptococcus pyogenes only, and would, therefore, be better named "puerperal strepto-mycosis."

In a large number of diseases of the respiratory system streptococcus pyogenes plays a *rôle* of supreme importance. Claissé[32] has shown that it is responsible for many cases of bronchitis. In the lobular pneumonia following measles (Mosny,[33] Netter[34]), typhoid fever (Neumann[35]), scarlet fever (Babés[36]), and diphtheria (Prudden and Northrup[37]) the streptococcus is the organism almost exclusively met with. In the pathogenesis of certain cases of croupous pneumonia it is to be regarded as the primary cause (Finkler). The streptococcus described by Weichselbaum as the streptococcus pneumoniæ is, according to Mosny, identical with the streptococcus pyogenes. Harbitz[38] has recently described five cases of non-typically coursing croupous pneumonia, in four of which he found the streptococcus in pure culture. It is also a frequent associate of other specific organisms in lung diseases. In influenza it is of so frequent occurrence that it was described as the cause of the disease before Pfeiffer's classical researches (Finkler,[39] Ribbert,[40] Laveran,[41] Bouchard,[42] and others). As a rule, its association with the bacillus of Pfeiffer occurs in the more severe forms, and a fatal termination is not infrequent.

In cases of pulmonary tuberculosis the association of the streptococcus pyogenes with the bacillus of Koch is of enormous importance. It has been the subject of important researches by Cornet,[43] Petruschky,[44] Babes,[45] Spengler,[46] Pasquale,[47] Wunscheim,[48] and others. In twelve out of twenty cases Cornet demonstrated streptococci both during life and after death. In the hectic fever of phthisis the remitting temperature curve has been described as the "streptokken kurve." Although Petruschky has affirmed that streptococci from post-mortem phthisical material possess slight pathogenic attributes experimentally, still it is known that a general strepto-mycosis may follow (Canon[49]). Certainly the coccus is very frequently seen in the sputum of phthisical individuals, and Jakowski[50] has demonstrated it in the blood in the hectic fever of phthisis.

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19 Gonorrhoe im Wochenbett. Centralblatt für Gynäkologie, 1893 Band viii., p. 157.

20 Loc. cit.

21 Puerperal Infektion mit tödlichem Ausgang verursacht durch Bacillus Coli Communis. Archiv für Gynäkologie, Band xlvii., 1894, p. 190.

22 Beitrag zur Frage der Mischinfection bei Puerperalerkrankungen, Strassburg, 1895, inaugural dissertation.

23 Zur Kenntniss der Pathogenese der Puerperal Infektion. Prager Medicinische Wochenschrift, 1894, No. 19.

24 Ueber einen als Erreger einer Pyohaemie beim Menschen gefunden, Kapselbacillus. Prager Medicinische Wochenschrift, 1895, Nos. 24 and 27.

25 Archiv für Gynäkologie, Band ii.

26 Untersuchungen über Puerperalfieber. Virchow's Archiv, Band lviii., 1873, p. 437.

27 La Fièvre Puerpérale et les Organismes Inférieurs. Thèse, Paris, 1880.

28 Lehrbuch der Pathologischen Anatomie, Band ii., 1895.

29 Zur Leichendiagnose der Septischen und Pyaemischen Prozesse. Virchow's Archiv, Band cxxiii., p. 1.

30 Ein Casuistischer Beitrag zur Lehre von Puerperal Sepsis. Prager Medicinische Wochenschrift, 1892, Band xiv., p. 145.

31 Ueber das Vorkommen von Spaltpilzen in den Lochien. Leipzig, 1892. Das Scheidensecret in seiner Bedeutung für das Puerperalfieber. Leipzig, 1892.

32 Les Infections Bronchiques. La Semaine Médicale, 1893, No. 38, p. 297.

33 Étude sur la Bronchopneumonie. Paris, 1891.

34 Étude Bactériologique de la Bronchopneumonie. Archiv de Medecine Experimentelle, tome vi.

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37 American Journal of the Medical Sciences, 1889.

38 Om Atypiske Krupöse Pneumonier Specielt om Streptokokpneumoni. Festskrif i anledning af Prof. Heiberg, 25 aars jubilacum, 1895.

39 Infektionen der Lunge durch Streptokokken und Influenzabacillen, Bonn, 1895. Influenzapneumonie, Deutsche Medicinische Wochenschrift, 1890, p. 84.

40 Anatomische und Bakteriologische Beobachtungen über Influenza. Deutsche Medicinische Wochenschrift, 1890, p. 61.

41 Le Bulletin Médical, No. viii., 1890.

42 Recherches Bactériologiques sur la Grippe et ses Complications La Semaine Médicale, 1890, p. 35.

43 Ueber Mischinfektion bei Lungentuberculose. Wiener Medicinische Wochenschrift, 1892, p. 737.

44 Tuberculose und Septicaemie. Deutsche Medicinische Wochenschrift, 1893, p. 317.

45 Sur les Associations Bactériennes de la Tuberculose. Premier Congrès pour l'Étude de la Tuberculose, Paris, 1889.

46 Lungentuberculose und Mischinfektion. Zeitschrift für Hygiene, 1894, Band xviii., p. 343.

47 Die Streptokokken bei der Tuberlose-Infektion. Centralblatt für Bakteriologie, 1894, Band xvi., p. 114.

48 Die Lungentuberculose als Mischinfektion. Prager Medicinische Wochenschrift, 1895, Band xx., pp. 16-18.

49 Bakteriologische Blutuntersuchungen bei Sepsis. Deutsche Medicinische Wochenschrift, 1893, p. 1038.

50 Beitrag zur Frage über die sog. Mischinfektion der Phthisiker. Centralblatt für Bakteriologie, 1893, Band xiv., p. 762.

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The conclusions of Spengler from a series of fifty cases carefully examined bacteriologically probably express the true state of affairs—viz., that in ordinary lung tuberculosis only a small percentage of the cases are uncomplicated. The majority are polymicrobic infections, the principal agents being tubercle bacilli and streptococci. The latter penetrate the parenchyma of the lung, generally setting up inflammation. As a rule, bronchiectases and vomica formation are associated with the presence of a large number of streptococci in the sputum.

In the etiology of diseases of the nervous system and its membranes the streptococcus pyogenes is important. While the diplococcus pneumoniæ is the most common cause of epidemic cerebro-spinal meningitis, a few cases are on record (in small epidemics) where streptococci have been found (Bonome,[51] Oebke,[52] &c.). The identity of these with the streptococcus pyogenes is, however, still a matter of doubt and requires extended study. Certainly sporadic cases of suppurative meningitis are often caused by the streptococcus pyogenes (Neumann and Schaeffer,[53] Netter.[54] and Beck[55]). The point of entry of the cocci in these cases is doubtful. Some of them may probably follow primary unrecognised lesions in the middle ear, antrum, and nasal cavities. The lymphatic connexions which have been demonstrated by Axel Key and Retzius to exist between the nasal mucous membrane and the subarachnoid lymph space afford a possible channel for the passage of the infecting organisms. In suppurative meningitis following influenza a suppuration in the region of the foramina cribrosa and the ethnoid cells was present in one case (personal observation). In Beck's case a streptococcic meningitis appeared to be set up by a primary tonsillar infection of similar origin. In a case of Landry's paralysis, which was a secondary complication of variola, Oettinger and Marinesco[56] found streptococci in the bloodvessels and also in the cells of the cord.

The cavity of the mouth is one of the chief regions for streptococcic lesions, monomicrobic and polymicrobic. The recent researches of Lemoine[57] have shown that the commonest cause of *all* the forms of non-diphtheritic angina is the streptococcus pyogenes, which can usually be isolated in pure culture from the deeper parts of the tonsil. The association of the streptococcus with the Klebs-Löffler bacillus is one of the best known and most completely studied. Apart from the buccal cavity the streptococcus was not believed to be a pathogenic agent in the alimentary tract except in the case of typhoid, where its association with Eberth's bacillus gives to the cases a high degree of severity (Vincent[58]). Recently, however, several writers (Tavel, Eguet, and de Cérenville[59]) have described a very severe form of streptococcic enteritis, in which some of the cases presented acute choleraic symptoms with final septico-pyæmia, while on post-mortem examination enormous numbers of streptococci were found in the stomach and along the length of the intestine. In certain cases of icterus Sabrazes and Mongour[60] isolated by puncture streptococci from the liver during life. They think that in such cases the streptococci wander into the bile ducts from the duodenum where they are normally found (Gessner). Buhl has described typical acute yellow atrophy of the liver following severe general strepto-mycosis, and more recently Babés[61] has examined similar cases of acute hæmorrhagic strepto-mycosis accompanied by complete degeneration of the liver. In three out of four cases a gangrenous or putrid tonsillitis seemed to have been the starting point of the hæmorrhagic septicæmia. In the fourth case a streptococcic infection of the intestinal mucous membrane seems to have been the starting point.

The streptococcus pyogenes has frequently been found in suppurative pleuritis and in peritonitis. It has been isolated from cases of acute osteomyelitis (Fischer and Levy[62]). Netter[63] and Raymond[64] have found it a cause of so-called "pseudo-rheumatic fever," which in many cases is really a cryptogenetic strepto-mycosis. Widal affirms that it is a frequent cause of phlegmasia alba dolens. In cases of elephantiasis nostras it has been isolated in pure culture by Achalme and Sabourand.[65] Unna[66] has described a special form of acute exanthem under the term "phlytænosis streptogenes." In certain cases of primary acute nephritis it has been isolated (Mannaberg[67]). In scarlet fever it is so frequently found that some have maintained it to be the cause of the disease, but most regard it merely as an associate. It has been found in the various forms of angina, bronchopneumonia, phlegmon, nephritis, otitis, pyæmia, complicating this disease.

In variola the suppurative stage of the eruption is caused by the secondary introduction of pyrogenic cocci—amongst them the streptococcus pyogenes. A metastatic strepto-mycosis in variola is not uncommon (Vagedes[68]). Marinesco[69] has also found streptococci in the central canal of the cord in a person dead from variola. To continue, however, the enumeration of the diseases in which the streptococcus pyogenes plays a part would be futile. Enough has been written to point out the vast field which is opened up for specific serumtherapy. One word, however, remains to be added on the transmission of streptococcic disease from animals to man. As yet observations are few. Holst[70] has recently recorded an account of four epidemics of acute gastro-enteritis, probably caused by drinking milk from cows suffering from contagious mammitis, a disease also caused by a streptococcus form (Nocard and Mollereau).

In a future communication I propose to deal with the question of the immunisation of large animals against streptococcic infection, work which has been carried on for many months by Dr. Ruffer and myself in conjunction with Mr. W. Robertson, M.R.C.V.S., of the British Institute of Preventive Medicine.

Sudbury, Harrow.

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[52] Ueber Meningitis Cerebro-spinalis. Berliner Klinische Wochenschrift, 1891, p. 1015.
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[58] Annales de l'Institut Pasteur, 1893, vii., p. 141.
[59] Contribution à l'Étude du Streptocoque et de l'Entéritet Streptococcique. Annales Suisses des Sciences Médicales, 1895, Série 2, livre xi.
[60] Deuxième Congrès Français de Médecine Interne. Vide Centralblatt für Bakteriologie, 1895, p. 335.
[61] Ueber die durch Streptokokken bedingte Acute Leberentartung. Virchow's Archiv, Band cxxxvi., p. 1.
[62] Deutsche Zeitschrift für Chirurgie, Band xxxvi., pp. 1 and 2.
[63] Un Cas de Pseudorheumatisme Infectieux à Streptocoques. La Semaine Médicale, 1892. No. 7, p. 48.
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[68] Mittheilungen ueber eine Pockenepidemie. Deutsche Medicinische Wochenschrift, 1896, p. 37.
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VITALITY.

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II. Evidences of Vitality.[1]

Every living organism and every particle of living matter, however minute, affords evidence of the continual operation during its life of an active power or agency—vitality; and all the tissues of living organisms have been formed from matter which previously to formation had been under the direct influence of this vital power. There is not a piece of solid bone or tooth or shell, whether taken from an organism recently alive or from a fossil which lived thousands or hundreds of thousands of years ago, that does not bear evidence of its origin from living matter as distinct as that afforded by a piece of hair or horn or nail or feather formed within a few months and removed but yesterday from a living organism. In short, the matter of these and other tissues was once in the living state, and if only the microscopical structure, or even a cast of it, should have escaped destruction by violence or by chemical disintegration, it can generally be identified as having formed part of a living organism. In some instances special characteristics are so marked that the structure or its impression can be recognised as having belonged to a particular

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species. Such results of vital action cannot easily be mistaken for products of mechanical or chemical action. The minute silicious remains of recent and fossil diatoms and the spicules of sponges are as clearly the result of past vital action as is a piece of fresh muscle or nerve.

The vital movements of the actual structureless living matter of an organism, the growth of living matter, its powers of analysis and synthesis, or of preparation for the last, and its derivation from pre-existing living matter, proclaim the existence of a power widely different from any mechanical, chemical, or other properties of non-living substances; and unless we admit the operation of vitality it will be found as impossible to account for the characteristics of the lowest, simplest organism, though it has been held to be nearly related to the inorganic as to explain the formation, structure, and action of the most complex organ of man himself. The powers or properties and the action of the simplest bacterium afford evidence of the operation of vitality as convincing as that afforded by the living matter concerned in the highest mental operations of man. Although it has been declared again and again that living things are machines, not one of the many advocates of mechanical doctrines of life has been able to point to one machine that has *grown* or to a living organism that, like every machine, has been made in separate pieces, afterwards put together, and then set in motion, to say nothing of repairing itself while working without intermission.

All attempts to prove, and they have been many, that this vitality—this special endowment of all life—is a kind of force or mode of energy have failed. Life cannot be included among forces and forms of energy. Neither can it be shown to be correlated with any of these. Vitality is not a mere name applied to certain phenomena, the true nature of which is to be elucidated in the time to come; nor is it reasonable to regard vitality as one of a number of unsolved and possibly insoluble mysteries of the universe, and therefore not a subject for scientific investigation. Vitality is certainly capable of being more accurately defined, and though it may remain a mystery as regards its origin the study of the results of its action and the consequences and effects of its operation upon material particles will almost certainly lead to more correct views concerning its nature. Vitality exhibits nothing in common with any so-called properties or activities in nature. Vitality stands absolutely alone, but in its action through nature, in the case of the very lowest as well as the highest organisms, there is much in common. It is always in very close relation with the matter it influences and it cannot act upon particles of matter even at a very slight distance from the seat of its activity, and it acts in a way in which no other force or power in nature is known to act upon matter. No vital action can be imitated, and the vitality of the lowest forms of life is as far removed from any known physical or chemical change as the highest and most complex form of vital action. Living and non-living actions belong to different categories and have nothing in common. The growth and multiplication of particles of living matter may be studied in the lowest organisms or in an elementary part or cell of any of the higher animals or man himself, and these vital forms of increase and multiplication are distinct from every kind of aggregation, coalescence, or process akin to crystallisation or deposition, of which as yet we have knowledge or experience.

But if, as I have endeavoured to show, a general survey of various organisms in widely separated classes of living nature furnishes convincing evidence of the constant operation in all living things of a marvellous and special power not to be isolated, tested, analysed, or transformed, to which the vital phenomena of each form of living matter must be referred, the more minute examination of any of the constituent elementary parts or cells of any one organism brings us, as it were, very much nearer to the actual seat of operation of this wonderful agency, and we are even enabled to realise to some extent the character of the changes effected in the non-living pabulum when it comes under the influence of matter already living. We can distinguish the living matter from the surrounding material, be it cell wall, tissue, or fluid, in which no vital changes occur. By the use of very high magnifying powers and successful illumination we may have under actual observation the minute particles of matter in which vital changes are actually proceeding. If, however, as seems very possible, we should be able to double or treble the highest magnifying powers now at our disposal, and if in many ways we may render still more perfect our methods of examination, we should still be so very far from discerning the actual particles of matter undergoing atomic rearrangement by the direct influence of vitality that we should not be able to add to our knowledge. Nor is there at present any hope of our being able to form an accurate idea of the precise manner in which the changes in position of the atoms is accomplished. Here, then, is the mystery, the solution of which must, it is to be feared, be put off till the time when new and important discoveries shall have been made concerning the analytical and synthetical operations proceeding in the living matter.

Let us look at the problem from another point of view—the minute structure and formation of any tissue or organ—and let us try whether we can suggest anything in the non-living world or anything that has been designed and made to act by man with which the life-made structures will compare. Think also of the means of repairing, and even of renewing, some structures during life without any disturbance of the action of the greater part of the adjacent tissue. Where in non-life can we find anything parallel? Every particle of the tissue of a living organism was once in the state of living matter before it manifested any tissue characters whatever. The arrangement of its component elements, the properties it exhibits, its internal structure, are all due to the changes brought about when the matter of which it consists was in the living state. Is not this, again, evidence of the operation of a peculiar power which acts in every living organism in every department of nature? Think over the characteristics and form of various organisms and their adaptation to the conditions under which they are placed, and the fact of the transmission of the characteristic features, even in minute detail, through countless generations—in some cases without modification, in others with limited changes, while in some, many centuries may have passed without all the possible changes in the characters of a species being exhausted. And yet, notwithstanding striking departures and in many different directions from the primitive form, each divergent variety still retains the wonderful capacity of reverting to the original type in a few generations. Such facts are, it need scarcely be said, peculiar to the living world and absolutely due to the operation of vitality.

As regards certain vital phenomena which can be studied only by the use of very high magnifying powers, I shall endeavour to show how far our real knowledge justifies us in looking forward at this time, and I shall try to indicate precisely where the mysterious and so far inexplicable vital changes are effected. The mysteries connected with physiological and pathological phenomena I hope to reduce to a small number, to indicate and limit the seat of operation of the real mystery of life and discuss in what the mystery consists. Some vital phenomena can now be actually recognised and subjected to investigation—indeed, I feel that we are approaching very near to some knowledge of the actual particles of matter which undergo vital change, that is, to a point beyond which it has not been possible to carry investigation—in fact, to the region of mystery common to every form of life that is, that has been, and that is to be. It is in this region that wonderful chemical changes far indeed removed from any that can be produced under laboratory conditions take place. By what means the changes in question are effected by vitality is at present unknown and may be unknowable. This part of my subject I shall venture to discuss when the change of the non-living nutrient matter which undoubtedly passes into the very substance of the living matter comes under consideration.

Living matter is also directly concerned in the production of the various secretions of glandular organs. The characteristic substances present in the secretion are not merely *separated* from the blood, but are actually *formed* by the so-called secreting cells. The living matter of each cell or elementary part takes up nutrient materials for the most part in solution and causes certain of these to live. The elements of the matter in the living state are rearranged under the influence of the vital power and caused to take up new relations in respect to one another, so that when the living particles pass into the non-living state the substances peculiar to the secretion are formed. In some secreting elementary parts or cells it is even possible to see some of the less soluble substances that have been formed, in the matter of which the outer part of the cell consists. For example, embedded in the soft material of the liver elementary part, oil globules, biliary matters, and other substances may

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be detected on microscopical examination, while glycogen, urea, and some other substances may be shown to be present by chemical analysis. Not only so, but the quantity and the relative proportions of the respective constituents may be caused to vary by alterations in the food constituents. This is a matter of great interest to us, for when an organ is deranged by injudicious feeding we can in some cases, by a change in the diet for a sufficient period, and by the help of certain medicines, promote an increase or reduction in the amount of the constituents of which there may have been deficiency or excess, or we can encourage the removal of some substances from the organism and promote the retention of others. The different classes of substances formed in varying proportions such as proteids, fatty matters, salts, and carbohydrates, also vary according to the conditions under which the organism for the time lives. In some cases an organism may be caused to produce and to accumulate fat to an enormous extent, and it may more than double in weight within a short time, or, on the other hand, the animal may be kept lean and highly active—in fact, its muscular and nerve power may be increased and thus it may be made to perform work which would have been impossible if a large proportion of adipose tissue existed. But neither of these processes—the formation of fat or its removal—could be brought about in the absence of a special power operating in living things only, the increase of adipose tissue as well as its removal being effected by living matter. And we must bear in mind that the too rapid removal of the fat of adipose tissue by great changes in diet may endanger life.

Physiological and pathological phenomena include vital actions and depend upon vitality. They are not to be imitated or to be adeqately explained by physics or chemistry in the present state of knowledge. We must in all cases admit the operation of a power communicated by pre-existing living matter to non-living matter of a certain composition and in a certain condition. Thus has the earth been peopled by successive generations of countless living forms of the most different kinds, all of which and at every period of existence have been dependent upon vitality, being also subject to pathological changes and various forms of disease.

TWENTY-FIVE CONSECUTIVE CASES OF STRANGULATED HERNIA; ONE DEATH.[1]

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DURING the last few years it has fallen to my lot to operate on 25 cases of strangulated hernia, of which only 1 died as a direct result of the operation. To simplify this paper I have appended a table of the cases. Twelve occurred in men, and 13 in women. The ages varied from twenty-six to seventy-eight years, 6 being over sixty and 3 over seventy years. The period of strangulation varied from ten hours (cases Nos. 11 and 22) to five days (case No. 16). The bowel in 1 case (No. 16) was greenish and had a putrid smell, but retained its shiny appearance. The omentum was gangrenous in Case 20 and the fluid in the sac, of course, decomposed and was very offensive, although the bowel looked alive, and recovered. The bowel alone was present in 9 cases; the bowel with omentum was present in 12 cases; and the omentum alone was present in 2 cases. Omentum was removed in 11 cases; the portion removed varied from a "mere tag," in Case 18, to a pound, in Case 10. Omentum formed a complete sac, adherent universally to the peritoneum, in Case 24, an umbilical hernia, and contained a large loop of strangulated small bowel. In Case 14 there were 3 hæmorrhages in the omentum, one of which looked at first sight like a knuckle of intestine. In Case 15 there was diffuse cellulitis of the abdominal wall, with sloughing of the convexity of the sac; all the sloughs were cut away, and the tissues swabbed with pure carbolic acid (the bowel being protected) before dividing the constriction, so that neither putridity nor acid could enter the abdominal cavity. This was of course a very serious complication, but the woman recovered with a fæcal fistula. The bladder was present alongside a strangulated right inguinal hernia in Case 25, a very rare occurrence. Up to 1893 only 59 cases had occurred in surgical literature,[2] and Macready[3] had only been able to collect 36 cases.

Details of procedure.—Chloroform was used as an anæsthetic in every case, although in Case 10 only a few whiffs were given, the patient being deeply cyanosed from a very acute attack of bronchitis. His knees were strapped down and his hands held whilst the skin incision was rapidly made. He was by no means "under chloroform." The anæsthetic was laid aside and the remainder of the operation conducted with the man conscious, and he experienced no pain during the necessary manipulation of the sac, intestine, and the removal of a pound of omentum; but when the sutures were being passed through the skin his language was "frequent and painful and free." In Case 20, an old man aged seventy-six years, with chronic bronchitis and emphysema, was operated upon propped up in bed with four pillows. Mr. Caregan administered a few drops of chloroform; with my left elbow I kept the patient's knee down and held a dissecting forceps in my left hand, the knife being in the right. The operation was quickly completed; it necessitated the removal of two pieces of gangrenous omentum, the return of the bowel, the ligature of the sac, and the introduction of only one suture in the skin. Both these cases recovered without a bad symptom. In all the operations speed was particularly cultivated and I believe had much to do with the happy result.

Treatment of the contents of the sac.—Investigations have demonstrated the poisonous nature of the fluid found in the sac of strangulated hernia. I need only quote Nepveu and Garré,[4] who found bacteria, and these did not appear to bear any relation to time or degree of strangulation (putridity apparent to the sense of smell being no guide). Clado[5] inoculated animals with fluid from the sac of a strangulated hernia. The animals died, and the organisms were found in the blood, spleen, lungs, and the serous cavities. He considers death in strangulated hernia due to the introduction of organisms from the intestinal tract into the general circulation. This position is strengthened when we bear in mind that about 10 per cent. die when the strangulated hernia is reduced by taxis. Benno Schmidt[6] considers the field of operation in strangulated hernia already septic. Bearing in mind these and similar statements by many investigators, special attention was paid to disinfection of the sac contents as soon as opened and before any attempt at reduction. This was always carried out by freely washing the fluid away with hot 1 in 40 carbolic lotion, until every shred of lymph and blood-stained material was thoroughly removed from amongst the coil or coils of intestine and the interstices of the omentum when present. When it was decided to remove omentum a fresh portion was dragged down and this ligatured and divided, when the piece in the sac, being now deprived of its blood-supply, could be forcibly torn away, if adherent, without risk of hæmorrhage. This method materially aids rapidity of procedure.

Radical cure.—In the worst cases, and in the old people, Czerny's radical cure, simple ligature of the neck of the sac, was performed, Macewen's method being used in the younger patients and in those cases where urgency was not so imperative and a more certain radical cure indicated. Two cases (Nos. 4 and 17) had congenital inguinal sacs, and the portion cut off for a tunica vaginalis was closed with a continuous catgut suture.

Treatment of wound.—Silkworm gut sutures, double cyanide gauze under wood wool tissue, and a suitable bandage or binder were used. In only two were there wound complications—Case 15, where a fæcal fistula formed, and Case 25, where the wound suppurated, necessitating the reopening of the inguinal canal. This was due to contamination with ammoniacal urine from a hernia of the bladder, which complicated the case. It occurred in a man aged fifty-nine years, who was admitted into the infirmary for strangulated hernia, and operated upon at once (11.30 P.M.). He

[1] A paper read at the Liverpool Medical Institution on Jan. 30th, 1896.

[2] Deutsche Zeitschrift für Chirurgie, Leipzig, 1893, p. 301.
[3] Ruptures, Macready.
[4] Centralblatt für Chirurgie, No. 50, p. 869.
[5] Revue de Chirurgie, 1889, p. 967.
[6] Berliner Klinische Wochenschrift, 1883, p. 308.

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TWENTY-FIVE CONSECUTIVE CASES OF STRANGULATED HERNIA.

No.	Age.	Sex.	Where operated, and date.	Doctor's case.	Variety of hernia.	Strangulated time.	Contents of sac.	Condition of bowel.	Details of operation.	Result.
1	58	M.	Ormskirk Workhouse, Dec. 19th, 1891.	Mr. Anderton.	Right scrotal.	2 days.	8 inches of bowel and omentum.	Dark purple.	4 oz. of omentum removed; Ball's radical cure.	Cured.
2	30	M.	Liverpool Royal Infirmary, Nov. 12th, 1892.	—	Right inguinal.	?	Loop of the bowel.	Dark purple.	Ligature of the neck of the sac.	Do.
3	76	M.	Wavertree, Nov. 26th, 1892.	Dr. O'Hagan.	Left scrotal.	2 days.	4 inches of bowel, omentum congested and hæmorrhagic, blood-stained serum 2 oz.	Dark purple.	The ring was incised; neck of the sac ligatured.	Died.
4	26	M.	Liverpool Royal Infirmary, Jan. 8th, 1893.	—	Right scrotal.	19 hours.	6 inches bowel; congenital sac strangulation by external ring; bowel in canal normal.	Dark purple.	The sac was divided; the tunica vaginalis was sutured for testicle; the neck was ligatured.	Cured.
5	69	F.	Private house, June 5th, 1893, 12.30 A.M.	Mr. Edwards, Anfield.	Left femoral.	3 days.	"Large knuckle" (no omentum).	Dark purple.	Gimbernat's ligament was incised and the neck of the sac ligatured.	Do.
6	36	M.	Liverpool Royal Infirmary, June 25th, 1893.	—	Right inguinal.	3 days.	About 4 inches of bowel.	Dark purple.	The sac was ligatured (funicular process).	Do.
7	61	F.	Liverpool Royal Infirmary, July 28th, 1893.	—	Left femoral.	Obstructed, going on to strangulation, 1 week.	Knuckle of bowel, mass of omentum.	Dark purple.	Gimbernat's ligament was nicked. The neck of the sac was ligatured and omentum removed.	Do.
8	78	F.	Private house, Oct. 20th, 1893.	Mr. Laing, Burscough.	Left femoral.	2 days.	Knuckle of bowel, flakes of lymph.	Dark purple.	Reduced without incision of the neck; ligature of the sac.	Do.
9	30	F.	Liverpool Royal Infirmary, Oct. 28th, 1893.	—	Left femoral.	—	5 inches bowel and adherent omentum.	Dark purple.	Removal of omentum.	Do.
10	43	M.	Liverpool Royal Infirmary, April 14th, 1894.	—	Umbilical.	2 days.	4 inches small gut and omentum.	Dark purple.	1 lb. of omentum removed; neck of sac tied.	Do.
11	34	M.	Liverpool Royal Infirmary, April 23rd, 1894.	—	Right inguinal.	10 hours.	—	—	—	Do.
12	58	F.	Liverpool Royal Infirmary, April 12th, 1894.	—	Left femoral.	24 hours.	2½ inches of intestine and omentum.	Dark purple.	Removal of omentum; ligature of the neck.	Do.
13	39	M.	Liverpool Royal Infirmary, April 29th, 1894.	Mr. Dunn.	Right inguinal.	12 hours.	3 inches of intestine.	Dark purple.	Macewen's radical cure.	Do.
14	52	F.	Liverpool Royal Infirmary, May 6th, 1894.	—	Left femoral.	2 days.	Omentum only, with 3 blood cysts (simulated bowel).	—	3¾ oz. of omentum removed; adherent around two-thirds of the orifice.	Do.
15	53	F.	Liverpool Royal Infirmary, Oct. 8th, 1894.	—	Umbilical.	3 days.	Loop of large bowel, omentum.	Odorous but shiny, omentum sloughy.	Portion of the sac removed; sloughy cellular tissue of abdomen suppurating, constriction divided, omentum removed, sac tied.	Do.
16	52	F.	Liverpool Royal Infirmary, Dec. 3rd, 1894.	—	Umbilical.	5 days.	Loop of bowel and omentum.	Dark purple.	Operation rapidly performed; bowel pushed back.	Died same night.
17	55	M.	Liverpool Royal Infirmary, Dec. 9th, 1894.	—	Left inguinal.	12 hours.	Congenital sac, large loop of bowel.	Dark purple.	Tunica vaginalis made and sutured for testicle. Macewen's radical cure.	Cured.
18	45	F.	Liverpool Royal Infirmary, Jan. 14th, 1895.	Dr. McGibbon.	Left inguinal.	2 days.	Omentum only.	—	Large amount of inflamed extra-peritoneal fat removed; sac treated *à la* Macewen; tag of omentum removed.	Do.
19	50	F.	Private House, March 8th, 1895.	Mr. Laing, Burscough.	Right inguinal.	12 hours.	Knuckle of bowel and tag of omentum adherent to sac.	Dark claret.	Omentum removed; neck of sac ligatured.	Do.
20	76	M.	Private House, June 16th, 1895.	Mr. Caregan, Ormskirk.	Left inguinal.	2 days.	Knuckle of bowel; sloughy omentum; stinking blood-stained serum.	Dark purple, shiny.	Omentum was removed; the sac was well purified; ligature around neck; one suture in skin.	Do.
21	64	F.	Liverpool Royal Infirmary, June 30th, 1895.	Dr. Samuels.	Right femoral and left femoral.	Left; 24 hours.	Knuckle of bowel.	Dark purple.	Gimbernat's ligament was nicked; Macewen's radical cure; right hernia chiefly extra-peritoneal fat; nothing in sac.	Do.
22	46	F.	Liverpool Royal Infirmary, Sept., 1895.	Dr. Mercer, Ditton.	Right femoral.	10 hours.	3 inches of bowel adherent to omentum, bloodstained fluid.	Dark purple.	Gimbernat's ligament was nicked: Macewen's radical cure.	Do.
23	58	M.	Liverpool Royal Infirmary, Sept. 26th, 1895.	Dr. Blackledge, Tuebrook.	Right inguinal.	2 days.	2 loops of about 8 inches each, 1 loop twisted and strangulated.	Dark purple.	Macewen's radical cure.	Do.

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TWENTY-FIVE CONSECUTIVE CASES OF STRANGULATED HERNIA—*Continued.*

No.	Age.	Sex.	Where operated, and date.	Doctor's case.	Variety of hernia.	Strangulated time.	Contents of sac.	Condition of bowel.	Details of operation.	Result.
24	38	F.	Liverpool Royal Infirmary, Sept. 29th, 1895.	—	Umbilical.	25 hours.	Large loop of small bowel with omental sac.	Dark purple.	Omentum was dissected away off sac; ligatured vessel by vessel; the sac was ligatured.	Cured.
25	59	M.	Liverpool Royal Infirmary, Oct. 21st, 1895.	Mr. Dudgeon.	Right inguinal through internal ring.	24 hours.	Loop of bowel; large hernia of bladder through back wall of inguinal canal into scrotum, adherent to sac of hernia of bowel.	Dark purple.	Macewen's radical cure on sac of hernia; the bladder was replaced.	Do.

REMARKS.—Case 1: Slight recurrence of the hernia 6 months afterwards. The patient was a chronic bronchitic, and uses a light truss now (1895). Case 2: The notes of this case are mislaid. Case 3: All the symptoms were relieved, and the patient took food. He had an enlarged prostate, cystitis, and incontinence, also ammoniacal urine requiring frequent catheterising. He died on the 6th day from coma (uræmia). The wound was clean. Case 9: Slight recurrence of hernia in April, 1894; controlled by light truss. Case 10: The man was deeply cyanotic from bronchitis. Only a smell of chloroform was given to dull sensation for the skin incision. He was fully awake and talking with us during the remainder of the operation. Case 11: The notes of this case are mislaid. Case 12: 3 weeks after operation suffered from attacks of colic, which yielded to starvation and opium. Case 14: Omental hernia with marked strangulation symptoms. Case 15: Recovered with fæcal fistula; 6 months later after failure of attempt to remove the "spur" Murphy's button was used, but the patient died from shock of the operation the same night. Case 18: Patient had feculent vomiting for 24 hours before admission; her pulse could hardly be felt the collapse was so marked, but it was considered advisable to attempt the operation. Case 17: Troublesome bronchitis. Case 18: Although no bowel was found during the operation, there had been absolute constipation and incessant vomiting for the 2 days. Case 20: The wound was left practically open. The patient was so ill from bronchitis that he could not lie down, he was in a semi-sitting position and only partially placed under chloroform. Six months later he died suddenly while out walking. Case 21: Left hernia only strangulated, but the existence of an irreducible lump on the right side necessitated its exploration. Case 22: On the third day there was some distension of the abdomen and tenderness which yielded to saline purge. Case 25: The bladder hernia was as large as a fist and surrounded by a layer of cellular tissue which formed a sac for it and which was ligatured in a bunch after reducing the bladder which had been emptied through a puncture; this puncture was closed by two rows of Lembert sutures.

In the above table 25 cases of strangulated hernia are given:—In Nos. 14 and 18 omentum only was found in the sac. Males: Inguinal right, 8; inguinal left, 3; and umbilical, 1. Females: Femoral left, 7; femoral right 2; inguinal right, 1; inguinal left, 1; and umbilical, 3. The ages of the males were 26, 30, 34, 36, 39, 43, 55, 58, 58, 59, 76, and 76 respectively, and those of the females 30, 38, 45, 46, 50, 52, 52, 53, 58, 61, 64, 69, and 78 respectively. There were two deaths (one directly after operation). The first was from cystitis, nephritis, and coma on the sixth day; he had been troubled with enlarged prostate for years; the bowel symptoms had been entirely relieved and the wound was healthy; this patient was a male aged 76 years (No. 3). The other was from collapse; the patient was in such a desperate condition that allowing her to die unrelieved was thought of; this patient was a female aged 52 years (No. 16). No. 15, a female, died six months afterwards from an attempt to repair a fæcal fistula.

was suffering from severe vomiting and pain, there being an irreducible swelling in the right groin and scrotum. On exposing the swelling it was found to consist of two parts: (1) a smaller, evidently escaping through the internal abdominal ring; this was opened and found to contain a knuckle of acutely nipped bowel, which was reduced and the sac treated *à la* Macewen; and (2) a larger, the size of a man's fist, which occupied the scrotum and the lower half of the canal; it evidently contained fluid; this was explored by making a tiny puncture, when out shot ammoniacal urine. It was therefore apparent that a portion of the urinary bladder had herniated. The edges of the puncture were at once clamped, a catheter passed per urethram, and the bladder and this pouch emptied. There was now seen a thin sheet of fibrous tissue stretched over the bladder hernia which was continuous with the back wall of the inguinal canal. It was dissected up and a finger passed between it and the bladder wall into the abdominal cavity and pelvis to separate tissues and prepare a place for it. This portion of bladder had no peritoneum over it and had escaped through the usual place of a direct inguinal hernia, quite three-quarters of an inch to the inner side of the internal abdominal ring. The sides of the puncture were closed by two rows of Lembert sutures, and after some manipulation the portion of bladder returned, the fibrous sac covering which was ligatured flush with the posterior wall of the inguinal canal. The wound suppurated as before mentioned and a slough formed, which was treated by rubbing with pure carbolic acid; after this the case ran an uninterrupted course.

Treatment of cases after operation.—After the first 2 cases morphia (or opium) was not allowed. This drug, although useful for relieving pain, acts directly on the intestinal wall, paralysing it, and thus preventing the bowel acting and relieving itself of flatus and "banked-up" contents. The routine administration of opium appears to rest on the assumption that the loop of bowel after return becomes inflamed. This is of course pure theory. Acting on the idea that if the bowel is fit to return it may be left absolutely to nature unhampered by any "paralyser," I have had no reason to regret it. In only one case (No. 22) did the patient complain of pain, which came on the third day, accompanied by distension and tenderness of the abdomen. This yielded at once to the action of a smart saline purge. Complications that may arise, such as peritonitis, enteritis, and persistence of strangulation, will be materially masked by opium, which eases pain, prevents diarrhœa and vomiting, and causes distension of the abdomen.

Diet.—For the first twenty-four hours sips of warm water only, ice being prohibited, for patients and nurses say that enough ice cannot be given to quench thirst; this is probably due to the dryness and hardness of the tongue produced by the abstraction of heat to melt the ice. If flatus be not passed by the end of this time the same starvation is indulged in until it does. After the passage of flatus half a pint of beef tea is granted during the next twenty-four hours; then, if all goes well, half a pint of milk is added the next day, increased by half a pint daily until two pints of milk and half a pint of beef-tea are reached, generally by the sixth or seventh day. The patients are kept on this until the bowels act. If by the ninth or tenth day no action of the bowels has taken place a dose of compound liquorice powder is given (sometimes an enema). The diet is now increased by the addition of fish, then beef tea, and, some of the milk being discontinued, chicken and a chop on successive days, and generally, unless any contra-indication, common diet by the end of the second week. The cases that recovered were all kept in bed for six weeks to allow of a firm cicatrix forming. In some of the older patients, particularly when much collapsed, a teaspoonful of brandy in a little warm water was given every hour for the first day, and continued if considered necessary in modified doses.

Results.—One patient died the night of the operation, and Case 16 from collapse. She had a large strangulated umbilical hernia, and was so reduced from fæcal vomiting that her pulse was hardly perceptible at the wrist; still, it was not considered right to allow an individual to die with bowel unrelieved. The operation lasted only a few minutes; there was no attempt at radical cure, merely two sutures passed through the skin and sac to close the aperture. Case 3, a man aged seventy-six years, died on the sixth day from coma gradually coming on from kidney mischief. He had enlarged prostate and cystitis with ammoniacal urine, and needed frequent catheterising. The bowel symptoms were all relieved. He was partaking freely of milk. The wound was healthy. With the usual leniency accorded to operators, this death not being counted, we can, I think, fairly place the mortality as 1 out of 25 cases—fortunately a very low figure when it is remembered that 6 were over sixty years of age (3 over

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seventy years). I conclude with the belief that the prompt recognition of the condition and early operation, without the old-fashioned savage attempts at taxis (10 of the cases were operated upon within twenty-four hours), had much to do with the low mortality. When the operation is undertaken, rapidity, thorough antiseptic cleansing of the sac contents, no undue delay over so-called radical cure, and judicious starvation without opium can be relied upon to keep the deaths down to a small percentage.

Liverpool.

VENTRO-HYSTEROPEXY.

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DURING the past twelve months I have performed abdominal fixation of the uterus for prolapse eight times, and I wish to bring more fully under the notice of the profession the ease and certainty with which this operation may be executed, also the advantages of fibro-serous approximation, so ably advocated by Mr. Greig Smith. Quite recently I had an opportunity of realising the danger in anyone attempting to fix the uterus to the anterior parietes without opening the abdominal cavity. I particularly refer to a method of intra-uterine ventro-fixation recommended by Mr. Shober. On opening the peritoneal cavity, the omentum covered anteriorly the lower abdominal viscera in all directions, notwithstanding the fact that my two-inch incision extended to within half an inch of the pubes. If I had attempted to fix the uterus by a needle passed through the womb without opening the peritoneum, I certainly would have included the omentum; therefore with this experience—and I have seen the same in other cases—I have strong objections to working in the dark. In each of the eight cases there has not been the slightest post-operative complication; all united by first intention, in no instance did the temperature exceed 100° F., and no recurrence of the trouble has been reported, and, although I never order an abdominal belt to be worn afterwards, no ventral hernia has occurred. To my mind the latter mishap is due to deficient care in suturing the parietal wound. Of course a short period only has elapsed, therefore these latter observations can only be tentative. In a way I feel thankful that I have not as yet been afforded the opportunity of examining the class of adhesion that takes place, nor have any of my patients, so far as I know, tested the same by becoming pregnant. As some of them are young doubtless the test will be applied.

The operation is carried out as follows: The patient, having been "acclimatised" to hospital life for a fortnight, during which time sundry repairs are undertaken—curetting the endometrium, excision of the cervix, and colpo-perineorraphy, the bowels, if necessary, being well cleared out with repeated doses of magnesium sulphate—the day before the operation the pubic hair is shaved off and the skin of the abdomen scrubbed with soda, soap, and hot water, then washed with turpentine, and a large piece of lint soaked in a 1 in 500 solution of corrosive sublimate applied and fixed on for the night by antiseptic wool and a bandage. On the morning of the operation a large soap and water enema is given, and immediately before the patient is brought into the operating-room the urine is drawn off. The patient having been chloroformed the night's dressing is removed and the skin all round the field of operation is again scrubbed with a sponge soaked in turpentine and lastly thoroughly washed with Watson Cheyne's strong solution:—1. An incision two inches in length is made in the median line and extending to within half an inch of the pubes. All bleeding must be stopped before the peritoneum is picked up with a pair of dissecting forceps and opened; a few pressure forceps are attached to the cut edges of the peritoneum—these help greatly in after manipulations. 2. The left index-finger is passed down below the intestines and omentum to the uterus, with palmar surface, hooking the former upwards. With the tip of the finger steadied on the womb I pass down a Muzeux forceps on the dorsal aspect of the finger, seize the uterus, and pull it up to the wound. 3. An assistant now takes hold of the forceps and the presenting surface is scarified with the point of a scalpel; some trifling oozing takes place, which is easily arrested by sponge pressure. 4. At the lower angle of the wound a curved needle threaded with silk is passed from without inwards through the rectus muscle and transversalis fascia. The peritoneum being retracted by pressure forceps (previously applied) the needle is then passed for at least a quarter of an inch in depth into the uterus and made to emerge about half an inch from the point of entry. The peritoneum on the opposite side is next held back while the needle is passed from within outwards through the transversalis fascia and rectus muscle. In this manner three sutures at intervals of a third of an inch are inserted. Any bleeding from the needle punctures is arrested by sponge pressure. 5. The peritoneum is again held back on each side and these sutures are tied firmly and the ends cut off. (Care must be taken not to tie too tightly lest the silk sutures should cut through the uterus; firm approximation is all that is necessary.) In this manner the serous covering of the uterus is brought into intimate connexion with the transversalis fascia and recti muscles for half an inch in width and one inch in length. 6. Before closing the upper inch of the wound it is desirable to pass a small sponge held by torsion forceps into the peritoneal cavity in order to remove any blood or clot that may be present. The peritoneum is next closed by a continuous fine silk suture. It is well to pass the first stitch through the peritoneum on the side next the operator, then through the uterus, and, lastly, through the peritoneum on the opposite side. In this way the peritoneum is brought into accurate apposition with the serous coat of the uterus and prevents a subsequent site for ventral hernia. The recti muscles in the upper portion of the wound are then brought together by another continuous fine silk suture and the skin wound closed in the same manner. Iodoform gauze is applied. The first dressing is removed on the eighth day and the suture on the twelfth day. The patient is allowed out of bed on the fourteenth day.

There is one essential in the closure of this or any abdominal wound, and that is that no pocket must be left for the accumulation of serum or blood, for where these factors are thither staphylococci and other micro-organisms gather together—nay, more, thrive.

Buenos Ayres.

A CASE OF AXIAL ROTATION OF THE TESTIS.

BY ALFRED SHEEN, M.D. ST. AND.,
SENIOR SURGEON TO THE CARDIFF INFIRMARY.

A YOUTH aged eighteen years jumped over a hedge after a tennis-ball on July 5th, 1895, but felt no ill-effect at the time. On the 6th at 3 A.M. he awoke with severe pain and swelling in the testicle, it being all right when he went to bed. I saw him on the 9th in consultation, when the testicle was found to be considerably enlarged and somewhat tender. The temperature was normal although it had been up to 103° F. I advised immediate incision into the tunica vaginalis to relieve tension, and this was done at the Private Hospital at Cardiff on the 11th. On operation I found a dark-red mass like blood-clot, but not removable, and the testicle was swollen to the size of a small orange, globular in shape. All antiseptic precautions were carried out. The case pursued an aseptic course, the temperature being normal throughout. The stitches, however, gave way and a hernia of the testis resulted; there was no pain. The dead tissue was dry and was cut away with scissors. There was no sensation, common or testicular. It was obvious that the testicle was useless and it was removed on Aug. 9th; on the 20th the wound was dressed for the first time and the stitches were removed, the parts being nearly healed. The patient got up for a time day by day, was out for the first time on the 28th, and went home to London about the middle of September.

The specimen was sent up to the Clinical Research Association and they returned the following report:—"The specimen is an example of that rare condition described as *torsion of the testis*. The substance of the body of the testicle is healthy in itself; there are no signs of chronic inflammation, syphilis, or tubercle. Section of the epididymis shows an abundant extravasation of blood into its tissue, but there is no other lesion. This hæmorrhagic infiltration is due to twisting of the spermatic cord and

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vessels (the result of injury) and gives rise to acute swelling and pain so that the cases have been mistaken for herniæ."

There was no question of hernia in this case. My diagnosis was hæmorrhagic orchitis. I had never seen a case of axial rotation, and that possibility did not present itself to my mind. Had the condition been recognised when first seen the cord might perhaps have been untwisted, as was successfully done in a case which is recorded by Mr. G. Nash.[1] A year or two ago Mr. Edmund Owen read a paper dealing with this subject. At a meeting of the Medical Society of London[2] he brought together references to fourteen cases which have been recognised during the past few years, and said that, as a rule, "it is only the unhappy possessor of an undescended testicle that gets into this very peculiar kind of trouble. It is almost as if nature herself, disappointed with her imperfect work, was anxious to cast it down a Tarpeian rock." Mr. Bryant, in reporting a case, surmises that certain cases of atrophied testicle have been examples of axial rotation, the nature of which has been originally overlooked. Twisting the cord in the lower animals is the French method of producing atrophy of the testes and sterility.

Cardiff.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

A CASE OF MALIGNANT STRICTURE OF THE ŒSOPHAGUS; PERFORATION OF THE AORTA; DEATH FROM HÆMORRHAGE.

(Under the care of Dr. FREDERICK TAYLOR.)

IT is, happily, rare to find a carcinomatous ulceration of the œsophagus perforating the walls of an artery of large size; it is still more rare to find it perforating the aorta. In the references given by Dr. Taylor in his paper in the Guy's Hospital Reports the investigations of Altmann in perforation of the thoracic aorta from the œsophagus are detailed. The comparative rarity of the occurrence is shown, as it happened only four times in 6886 cases, a percentage of 0·058. In 38 instances death was due to hæmorrhage, in only 12 of these was the wall of the artery invaded by cancerous growth and the aorta was involved in only 4. It is not possible to say whether epithelioma is more likely to penetrate than other forms of growth or not, as the microscopic examination is not given in every instance. We have published in our columns[3] the notes of a case of perforation in a female lunatic where there were no symptoms of the presence of a growth manifested until the vomiting of about two ounces of blood. Afterwards the patient swallowed the blood and large quantities were passed per anum. The fatal ending does not seem in any case to have been induced by the passing of bougies or tubes. For the notes of the case we are indebted to Dr. L. A. Parry, house physician.

A man aged fifty-two years was admitted into Guy's Hospital under Dr. Taylor on Feb. 20th, 1895, for difficulty in swallowing. His family and previous history have no bearing on the case. His present illness dated from November, 1894—that is, about four months—and commenced with dull, aching pain in the lumbar and interscapular regions and frequent attacks of heartburn. In December, 1894, he began to have difficulty in swallowing, at first solids, then liquids; the food he got down into his œsophagus he quickly regurgitated; the dysphagia rapidly became worse, he lost a great deal of flesh, and he was admitted into the hospital on Feb 20th. He was then unable to swallow any solid food, and liquids only with effort. A medium-sized bougie met with definite obstruction thirteen inches from the teeth (seven inches down the œsophagus), but a small one was passed through the stricture right into the stomach. It was felt to hitch half way, and it was therefore thought that a pouch was present into which it had slipped. The patient was fed daily by means of a tube and on March 22nd an attempt was made to pass a Symonds's short tube. However, this could not be accomplished, and Mr. Symonds, thinking the cause of failure was probably due to the stricture being sinuous, suggested passing an ordinary feeding-tube and allowing that to remain *in situ* for thirty-six hours, thus hoping to straighten the stricture. This was done and the short tube (Symonds's No. 12, 6 in.) was then placed in position without any difficulty. The patient was able to swallow liquids freely and easily, the tube was not touched, and all went well till April 4th, eleven days later, when the patient suddenly collapsed, became very pale, brought up a large quantity of blood, and died in a few minutes.

Necropsy.—This was made by Dr. J. H. Bryant. There was found to be recent pleurisy at the right base and there were some old pleuritic adhesions over the front of the right lung; both lungs were emphysematous. There was a patch of septic broncho-pneumonia in the right lung, which was adjacent to the œsophageal growth, the bronchial glands were enlarged from deposit of secondary growth, and there were some patches of early atheroma in the ascending aorta. Seven inches from the commencement of the œsophagus was a carcinomatous growth which involved two and a quarter inches of the length of the tube; it was hard and had thickened the wall of the tube. The internal surface of the growth was ragged and ulcerated and the ulceration had extended through the coats of the aorta two and a quarter inches from the commencement of the descending aorta. The œsophagus was dilated above the stricture and the walls were thickened; in the mucous membrane at the upper part there were a few nodules of secondary growth. The stomach was distended and filled with a large blood clot.

Remarks by Dr. FREDERICK TAYLOR.—The above rapid termination of cancer of the œsophagus is sufficiently rare to make a case of its occurrence worthy of record. In 1885 I had a similar instance under my care which I published among some cases of malignant disease of the chest and abdomen,[4] and I took the opportunity of referring to eight other recorded cases. On May 20th, 1895, Stadelmann reported to the Berlin Society of Internal Medicine two cases of carcinoma of the œsophagus opening into the aorta; and at the same meeting Professor Ewald stated that in from forty to fifty cases of carcinoma of the œsophagus he had only known one to perforate the aorta.[5] Little, if at all, do the symptoms of cases differ from others of œsophageal cancer before the occurrence of the fatal hæmorrhage, but in a few there have been preliminary bleedings described as vomiting of blood. Generally the event is quite unforeseen. In most of the cases alluded to in my paper the opening in the aorta was in the lower part of the arch or the upper half of the thoracic aorta; in Stadelmann's two cases the cancers were situated respectively four inches and six inches above the cardiac orifice of the stomach. Any successful or even palliative treatment is, of course, out of the question.

GENERAL HOSPITAL, BIRMINGHAM.

A CASE OF INTRA-PERITONEAL RUPTURE OF THE URINARY BLADDER IN A WOMAN SUCCESSFULLY TREATED BY ABDOMINAL SECTION AND SUTURE.

(Under the care of Mr. GEORGE HEATON.)

THERE is at the present time no doubt as to the treatment required for intra-peritoneal rupture of the bladder due to injury. The rent should always be sutured and the peritoneum cleansed, provided it be possible to carry out the necessary procedure. The two conditions which are most likely to prevent a surgeon from adhering to this rule are excessive nervous shock and a hopeless state of the patient from urinary infiltration or as the result of peritonitis. Blum operated successfully on a patient forty hours after the accident, and healthy urine may remain in contact with peritoneum for some days without exciting fatal peritonitis, but success is most likely to be attained if operation be performed soon after the infliction of the damage, inability to make a diagnosis alone justifying delay. One of the most

[1] Brit. Med. Jour., April 9th, 1893.
[2] THE LANCET, Nov. 18th, 1893.
[3] THE LANCET, March 20th, 1880.
[4] Guy's Hospital Reports, vol. xlix., 1892, p. 123.
[5] The Medical Week, May 29th, 1895, p. 253.

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important contributions to our literature on intra-peritoneal rupture of the bladder, that by Le Sieur,[1] contains a summary of 34 cases which had been submitted to operation. Of these, 14 recovered and 20 died, but we may expect a much better record in the future. It is probable that one of the chief difficulties in making a diagnosis has been met with because it is not recognised that the symptoms vary greatly in different cases, according to the nature of the injury, the condition of the bladder at the moment when the rupture occurred, the size and age of the patient, and the time which has elapsed since the injury was inflicted. Then, again, intra-peritoneal rupture of the bladder is known to be a very fatal injury, and it is difficult sometimes to understand that the healthy-looking patient who has walked up to the hospital and complains of inability to pass urine and a constant desire to micturate, is suffering from a ruptured bladder. Yet it may be so. Shock is one of the most fallacious signs in abdominal injury, and no reliance can be placed on the complete absence of discolouration of the skin. Rupture of any of the abdominal contents may be found without evidence of contusion of the parietes. Reliance must be placed on the history of the case, the result of examination of the abdomen, and the passage of a catheter. These points are well exemplified in the following case. For the clinical notes of the case we are indebted to Mr. S. Gill, house surgeon.

A housewife aged twenty-eight years was admitted into the General Hospital, Birmingham, on Aug. 19th, 1895, suffering from abdominal pain and inability to pass urine, the result of an accident. About 10 P.M. the previous evening she was "romping" with her husband in the sitting-room when he tripped and fell heavily on her. She was at the time lying on her back on the floor of the room, and he fell across her abdomen. She was at once seized with a severe burning pain in the lower part of the abdomen and had a severe attack of vomiting. With the pain she had a great desire to micturate, but found that she was quite unable to do so. A medical man was summoned and passed a soft catheter, drawing off a quantity of urine deeply stained with blood. The removal of the urine by the catheter relieved the straining efforts at micturition, but the pain gradually extended all over the abdomen and the vomiting continued at frequent intervals all that night. The patient had passed urine two hours before the accident occurred. She had an infant twelve months old whom she was still nursing. On admission into the hospital at 10 A.M. she complained of much abdominal pain and an intense desire to micturate. She was not actually sick, but complained much of nausea. The abdominal facies was well marked. There was much tenderness all over the abdomen, but chiefly in the hypogastrium and the right iliac region. Abdominal respiratory movements were absent in the lower half of the abdomen. There was some dulness in the left flank, but the right flank was resonant and the dulness did not alter with change of position. There was much muscular resistance to palpation in the hypogastrium. The temperature was 100° F. and the pulse 84, small and wiry. A soft catheter was passed and four ounces of urine deeply blood-stained were drawn off. At 1 P.M. Mr. Heaton passed a large silver catheter. This could be passed its entire length without meeting any resistance and could be plainly felt high up in the abdominal cavity beneath the abdominal wall. No urine appeared until it was withdrawn within three inches of its end, when four ounces of bloody urine escaped. Mr. Heaton and Mr. Haslam (who saw the case in consultation) agreed that there was in all probability a large rupture of the urinary bladder into the peritoneal cavity and advised an abdominal section without delay. At 1.45 P.M. (that is to say, fifteen hours after the accident) the patient was removed to the operating theatre and anæsthetised with a mixture of ether and chloroform. The abdomen was opened in the middle line below the umbilicus. On opening the peritoneal cavity a large quantity of blood-stained fluid welled up and escaped. On examining the pelvic organs with the finger a large ragged opening could be felt on the upper surface of the bladder. The incision was enlarged downwards and the bladder pulled up into the wound. A rent with torn edges from which the mucous membrane protruded was then seen on its upper and posterior aspect, extending from the summit backwards and slightly to the left. It measured three and a half inches in length. Some small portions of the everted mucous membrane were cut away and the rent sutured. The finest Chinese twist silk was used for suturing. The rent was first of all closed by a row of Jobert sutures passed through the serous and muscular coats about a quarter of an inch from the side of the rent and issuing on the torn muscular surface. A large number of these were passed about an eighth of an inch apart and tied. A second row of sutures was then passed after Lembert's method, passing through the serous and muscular coats on each side of the previous row of sutures. These were in like manner inserted an eighth of an inch apart, tied, and cut short. A third row was inserted in places along the rent where the union seemed to be at all weak. Some twenty or thirty sutures were passed in all. The bladder was then distended with warm water and found to be quite water-tight. The abdominal cavity was finally flushed with large quantities of water, previously boiled, at a temperature of 110° until the washings returned quite clear. The cavity was sponged as dry as possible and the abdominal incision closed with stout Chinese silk sutures. No drainage-tube was employed. The wound was dressed with iodoform gauze and absorbent wool, and a No 11 soft red-rubber catheter was left in the bladder. The patient bore the operation, which lasted nearly one hour and a half, very well, and suffered but little from shock. She vomited once at 10 P.M. that evening and again at 5 A.M. the next day, but she slept well after having a fifth of a grain of morphia injected subcutaneously. The symptoms gradually disappeared and on Sept. 2nd the urine was free from blood. No power of voluntary micturition returned until the 11th, and a catheter was passed every six hours until then. The bladder at times would distend so as to hold as much as twenty-eight ounces and yet the patient be unable to pass any urine unaided. A small hæmatoma formed in the sheath of the left rectus muscle which somewhat delayed the final closing of the abdominal wound, but this was soundly healed on the 20th, and on the 25th she was allowed to get up. She left the hospital on Oct. 3rd wearing an abdominal belt to support the operation scar. Micturition was quite normal and painless, and she could hold her urine without difficulty for eight hours.

Remarks by Mr. HEATON.—Abdominal section and suture of the rent for rupture of the urinary bladder, an operation which was first put into practice by Mr. Alfred Willett, has now been performed successfully some fifteen times. The accident, however, is of sufficient rarity to justify the publication of every attempt made, whether successful or unsuccessful, to avert what, if left alone, is invariably a fatal issue. This case is, as far as I can ascertain, the first recorded in which the lesion has been successfully dealt with in a woman, all the successful cases hitherto reported having been in males. This is doubtless due to the extreme rarity of the accident in women. The operation was a tedious and laborious one owing to the large size of the rent and the depth from the surface of its posterior angle. The insertion of a double instead of a single row of sutures, though it adds to the length of the operation, more firmly and securely closes the rent and so lessens the risk of leakage which has been one of the commonest causes of failure afterwards. In any future case I should be disposed to use two rows of Lembert sutures rather than an inner row brought out through the torn muscular surface. The slight attack of cystitis which my patient had during convalescence I consider to be probably due to one or two of my inner row of sutures having become exposed to the contact of urine in the bladder. I must take this opportunity of acknowledging the care and attention devoted to the case by Mr S. Gill and the nurses in charge of the case, to whose efforts the successful issue was in no small part due.

[1] Archives Générales de Médecine, Paris, 1894, vol. i., p. 290.

ROYAL MICROSCOPICAL SOCIETY.—The next meeting of this society will be held on Wednesday, April 15th, at eight o'clock.

THE BRISTOL ROYAL INFIRMARY.—The annual meeting of the subscribers of the Bristol Royal Infirmary was held on March 24th, under the presidency of Mr. C. D. Cave (president and treasurer). The report showed that 3103 in-patients and 33,536 out-patients had been treated during 1895. The average daily number of in-patients was 199·3, and the cost of each was £3 4*s.* 10*d.*, the average stay in the infirmary being 23·4 days. The ordinary expenditure for the year amounted to £12,575 and the extraordinary to £2347. The balance due to the treasurer, which stood at £6962 at the end of 1894, was £8755 on Dec. 31st, 1895.

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Medical Societies.

BEDFORD MEDICAL SOCIETY.

President's Address.—Diphtheria.—Exhibition of Specimens.

THE first meeting of this society was held on March 26th at the Bedford Infirmary, Dr. G. P. GOLDSMITH, the President, being in the chair.

The PRESIDENT, in his opening address, described the objects of the society and laid stress on the advantages to be derived by members from a society whose chief objects are the reading of cases and exhibition of specimens.

The President read a paper on Acromegaly and showed a woman aged thirty suffering from this disease. For two years she had suffered from amenorrhœa and had noticed a gradual enlargement of her hands and feet. The lower jaw was also enlarged and there was marked exophthalmos. There was no headache or evident affection of vision. The skin was usually clammy. There was no apparent affection of the thyroid gland.

Dr. WILLMER PHILLIPS and Mr. KINSEY read notes of a severe case of Diphtheria treated by Antitoxin Injections and Tracheotomy and showed the patient.

Mr. KINSEY read notes of another case of Diphtheria which recovered under antitoxin treatment.

Dr. ROWLAND COOMBS read notes of a case of Carcinoma involving the Lesser Curvature of the Stomach and the Pancreas and showed the specimen. The patient, a man aged thirty-five, had an infiltrating mass in the epigastric region, with slight fever and progressive loss of flesh. Vomiting was practically absent. There was an enlarged gland in the left groin, and post mortem the iliac, mesenteric, lumbar, and mediastinal glands were found to be enlarged. The liver was not affected.

The following specimens were shown :—

Dr. COOMBS : Kidneys and Heart from a case of Chronic Nephritis.

Mr. COLBY SHARPIN : Periosteal Sarcoma of the Lower End of the Femur through which a fracture had occurred from a slight cause.

Dr. HARVEY GOLDSMITH : (1) Heart with extensive Calcification of the Mitral Valves ; (2) Brain with Symmetrical Tumours of the Frontal Lobes ; and (3) Two Spinal Cords showing Ascending Degeneration.

Mr. KINSEY : Carcinoma of the Rectum.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—The Possible Dangers of treating Extensive Burns with Boracic Ointment.—Hæmorrhagic Salpingitis.

A MEETING of this society was held on March 12th, the President, Dr. PORTER, being in the chair.

Dr. MAUNSELL (Rotherham) showed three patients (who were related) suffering from Congenital Onychatrophia and other malformations of the fingers and toes. A detailed family history was given, tracing back the abnormalities through several generations.

Mr. CUFF showed a Larynx embedded in the substance of the arytenoid muscle of which was a circumscribed, non-encapsuled Tumour. The growth, which was about the size of a pea, was of a greyish pink colour, and that part abutting upon the arytenoid cartilage was breaking down, a sinus leading from the posterior end of the laryngeal sacculus directly backwards into this softened tissue, at the bottom of which was the exposed and bare cartilage. The tumour was believed to be a gumma. The patient, who had had syphilis and also later ague in India, came under treatment for splenic anæmia. Œdema of the larynx supervened. On laryngoscopic examination great tumefaction and redness of the whole glottis were revealed. The swelling was more marked on the right side. On the upper surface of the epiglottis an irregular ulcer with a yellowish base and injected margin was to be observed. The diagnosis of syphilitic perichondritis was made from the history and the laryngoscopic appearances.

Dr. ARTHUR HALL read a short paper on the Possible Dangers of treating Extensive Burns with Boracic Ointment. The case which formed the text of the paper was one of a boy who was admitted, with extensive burns, into the Sheffield Royal Hospital under the care of Dr. Sinclair White. He was treated as usual with unguentum boracis. On the fifth day he developed an extensive erythematous eruption over the limbs, trunk, and face, for which Dr. Hall was asked to see him. During the next few days he gradually became worse and died on the ninth day. At the necropsy nothing was found to account for death, and previously to the eruption the boy was doing very well. There were no throat symptoms whatever ; there was delirium at night ; the rash developed more each day. Dr. Hall quoted many recorded cases of similar groups of symptoms occurring definitely from boracic acid poisoning, and pointed out that the extent of surface for possible absorption was very great, and, although not pressing the connexion between the boracic acid and the symptoms, thought that if there was no connexion between the two, still the occurrence of such fatal symptoms was worthy of more extended inquiry than was at present given with a view to preventing their occurrence by a more rigid antiseptic treatment.

Dr. ANDREW WALKER read a paper on Hæmorrhagic Salpingitis, which was illustrated by numerous microscopic slides and drawings.

The PRESIDENT, Dr. RUTHERFORD, Dr. BURGESS, Mr. PYE-SMITH, Mr. EDWARD BARBER, Mr. CLYDE HAYES, Dr. ERNEST KNIGHT, and Mr. CUFF made remarks.

PLYMOUTH MEDICAL SOCIETY.

Exhibition of Cases and Specimens.

A CLINICAL meeting of this society was held on March 21st, Dr. HINGSTON, President, being in the chair.

Mr. J. MORRIS showed (1) a well-marked case of Pseudo-hypertrophic Paralysis in the second stage in a boy aged eight years, now under the care of Mr. Leah ; and (2) a girl aged seven years with a Bifid Uvula.

Mr. C. E. RUSSEL RENDLE showed (1) three generations in one family, aged ten, thirty-nine, and fifty-nine years respectively, with well-marked Lamellar Cataract—he also showed the "family tree" ; and (2) a Bony Plate perforated by the Central Artery of the Retina found in the choroid of an eye removed from a woman aged forty-three for panophthalmitis.

Mr. LUCY exhibited (1) an old Fracture in the outer fourth of the Right Clavicle in a male aged fifty-six years ; and (2) a haulier aged thirty years with marked Prominence of each Acromial End of his Clavicles and Lax Acromio-clavicular Joints, allowing of apparent luxation of the latter.

Mr. WOOLLCOMBE exhibited (1) Photographs of a man aged fifty years whose Posterior Ulnar Ridges presented three Symmetrical Nodes (there was a history of two attacks of acute rheumatism but no peri- or endo-cardial mischief) ; and (2) a Slide of Tuberculous Tissue prepared and exhibited by Dr. Webber. The deposit occurred on the dorsum of the hand of a woman aged forty-five years and was found to occupy pits on either side of the head of a metacarpal bone.

Dr. PETHYBRIDGE showed (1) a Slide of Diphtheritic Membrane showing Löffler's Bacilli *in situ*, and (2) Slide of Bacteria of the Mouth.

Mr. HAMILTON showed a case of Necrosed Phalanx with Fracture of the Distal End, apparently caused by a splinter of wood which at the same time set up destructive suppuration in the finger removed.

Mr. E. SQUARE exhibited a specimen of an Eye showing Retinal Detachment and a Plate of Bone in the Choroid in a male aged fifty-five years.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.

A MEETING of this society was held on April 3rd, Mr. H. E. CLARK being in the chair.

Dr. T. K. MONRO showed a boy who had suffered from Symptoms of Intracranial Tumour, but who was now in good health except that he was almost blind as a result of optic

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nerve atrophy. The knee-jerks were entirely absent. The history of severe headache, vomiting, and subsequently slight strabismus and failure of sight dated back nearly two years. The symptoms followed a fall on the forehead. There was some evidence of tubercle in the family history and in the patient himself. There was also distinct enlargement of the cervical lymphatic glands. It was suggested that the tumour was probably tuberculous and situated in the cerebellum.—Dr. Monro also showed a specimen of a Myxomatous Tumour found in the cerebellum of a man who had died, aged sixty-three years, from cancer of the pylorus, and related the history of the patient as bearing on the previous case. At sixteen years the patient had a severe illness which lasted for fully twelve months, was accompanied by pain in the head, and was followed by loss of sight in both eyes. He had been at the time of his death an inmate of the Blind Asylum for thirty-three years, and had during his residence enjoyed good health. When examined there was extreme atrophy of each disc; the gait was unaffected and the knee-jerks were normal. Post-mortem examination revealed the tumour in the left lobe of the cerebellum with atrophy of the optic nerves and chiasma.—Dr. Monro also read notes of a case of Melæna Neonatorum. The child had died on the third day after birth, and on post-mortem examination the stomach and intestines were found filled with blood. The blood appeared to have escaped from a small linear ulcer situated close to the cardiac orifice of the stomach.—Dr. WM. RUSSELL described two similar cases, in one of which, however, the patient survived.

Dr. W. K. HUNTER showed Cultures and Microscopic Specimens of a Micro-organism which he had observed in the blood of two patients suffering from Beri-beri. Inoculation experiments are to be undertaken with a view to determine whether the micro-organism is or is not the cause of the disease.

Dr. BELL TODD read notes upon the Varieties of Oil of Eucalyptus at present used in Medicine and exhibited a large number of specimens. He discussed the various botanical sources of the oils and pointed out that numerous specimens at present on the market were quite destitute of eucalyptol, though their antiseptic properties were undoubted. He had found the internal administration of the oil of value in gonorrhœa as an agreeable substitute for sandal-wood oil, &c., and he had successfully treated several cases of tape-worm by ordering oil of eucalyptus.

Dr. A. N. MCGREGOR showed the Brain and Right Lower Limb removed from the body of a boy the subject of marked unilateral hypertrophy; photographs of the patient were also exhibited. The boy at the time of his death was twelve years of age, and whilst the right lower limb had always been "weak" definite enlargement had been observed for six years. Latterly the size of the limb had caused him so much annoyance and so seriously interfered with his freedom in walking that the parents and the boy himself solicited amputation. This was decided on and the limb was amputated above the knee. The operation was attended by troublesome hæmorrhage and the boy subsequently became very excited; vomiting became troublesome and was attended by hæmatemesis, and in the end he succumbed forty-eight hours after the operation. Post-mortem examination revealed some enlargement and thickening of the optic chiasma and considerable increase in size of the right optic thalamus by a new growth the exact nature of which has yet to be determined; the pituitary body was normal in appearance. There were some evidences of tubercle in each lung, otherwise the viscera were healthy. Dr. McGregor drew attention to the special feature of the case—viz., the association of a tumour in one side of the base of the brain with a unilateral hypertrophy—and remarked upon the existence of this tumour without any symptoms pointing to its presence.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

The Testing of Drinking-water for the Bacillus Coli.

A MEETING of this section was held on March 13th, Mr. CONOLLY NORMAN, President, being in the chair.

Dr. M'WEENEY gave a demonstration of Some Recent Methods of testing Drinking-water for the Bacillus Coli. When outbreaks of typhoid fever were traceable to drinking-water it was seldom that perfect demonstration of Eberth's bacillus in the water was effected, for the period of specific contamination was often at an end before the water was examined. All hygienists, however, agree that the presence of the bacillus coli possesses a high significance as affording evidence of the possibility of specific contamination. He then showed the results of three modern tests—Parietti's, Von Frendenreich's, and Abba's—which had been applied to three samples of water. Each sample consisted of half a litre of Vartry water drawn off into a clean flask forty-eight hours previously. To flask No. 1 there was added a trace of typhoid fæces obtained by once dipping a straight platinum needle into the fæces and then into the water. To flask No. 2 there was added a trace of pure culture of the bacillus coli, *var. lactis aerogenes*, from the fæces of a suckling infant. The water in flask No. 3 was left untouched. After twenty-four hours Parietti's test was performed, half a c.c. of each water being added to a series of tubes containing broth acidified with hydrochloric acid and mixed with phenol in various proportions. The tubes were then shown after twenty-four hours' incubation, when it was at once seen that those corresponding to the infected samples were turbid, whilst the uninfected were limpid and showed no signs of growth. Von Frendenreich's and Abba's methods depend on the ability of the bacillus coli to develop at blood heat in solutions containing lactose. Von Frendenreich causes this to take place in a fermentation-tube (as originally recommended by Th. Smith of Washington), and observes whether gas has accumulated in the closed side at the end of twenty-four hours. The present samples showed that one-third of the fluid in one tube (that corresponding to the typhoid sample), and nearly two-thirds in the other (the bacillus coli sample), had been expelled from the closed limb by gas. The pure sample had not evolved the smallest bubble. Abba's method consists in converting the whole sample, or one litre of it, into a nutrient solution by the addition of 100 c.c. of a concentrated solution of peptone and lactose, then adding a little phenolphthalein and imparting a rose colour with soda. After twenty-four hours' incubation the samples inoculated with the typhoid stools and the bacillus coli were completely decolourised and turbid, whilst the pure sample showed but little growth and was not in the least decolourised, as was shown by comparison with an unincubated portion. The bleaching of the two infected specimens was, of course, caused by the neutralisation of the alkali by the lactic acid developed from the fermentation of lactose by the action of the bacillus coli. All three methods yielded, on plating out the fluid, abundant colonies of bacillus coli. Whilst Parietti's method permitted only quantities under 1 c.c. to be used and Von Frendenreich's about 5 c.c., Abba's method placed the analyst in a position to detect colon bacilli in a litre of the water. Too much importance ought not, however, to be attached to the presence of small numbers of bacillus coli in water. The originally sterile intestine of the breast-fed infant comes to contain this organism in millions a few days after birth, a fact pointing to its universal diffusion through the air. It was only when present in large numbers, and associated with organic matter capable of affording it pabulum, that its presence could cause the condemnation of the water.—Dr. O'SULLIVAN asked what was the time limit of the changes diagnostic of the bacillus coli communis, for other bacilli—the diphtheria bacillus, for instance—also caused acidity of the medium in which they grew.—Dr. PARSONS pointed out that the tests were tests not for the typhoid bacillus but for the bacillus coli communis. Formerly, from a bacteriological point of view, water was considered bad which contained a great number of micro-organisms. Now, if the bacillus coli communis was present in large numbers the water was rejected, as it showed probability of the water having been contaminated. If only a few were found it was not looked upon as impure. He wished to know whether the tests they had seen would show the typhoid bacillus in the urine; also whether the bacillus coli communis was present in the urine of typhoid fever patients.—Dr. M'WEENEY, replying, said with reference to the time limit no attention should be given to any result that took over twenty-four hours to develop. It was true that other organisms made the medium acid, but they were distinguished from the bacillus coli communis by their not developing in a solution containing a large quantity of lactose. He could not, however, speak with certainty of the diphtheria bacillus. Two of the tests were not for the typhoid bacillus, but Parietti's

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test reacted to both it and the bacillus coli communis, and by plating out it was easy to know which was present. He did not believe that there was an essential distinction between the typhoid bacillus and the bacillus coli communis. The four characters which distinguish them—viz., the growth on potato, the mobility, the fermentation of lactose, and the coagulation of milk — are all mutable. As regards the fermentation, however, he had only found it to occur with the colon bacillus. There are clinical facts which show that auto-infection from one's own bowels may take place, and the bacillus coli communis may set up inflammation in Peyer's patches, and toxic substances may be absorbed giving rise to symptoms the same as in typhoid fever. He did not know whether a rash would be present or not. Parietti's tests would enable the typhoid bacillus to be found in the urine, but in any catarrhal or inflammatory condition of the urinary tract the bacillus coli communis would also be present.

Reviews and Notices of Books.

Diseases of the Nose and Pharynx. By J. B. BALL, M.D. Lond., M.R.C.P. Second Edition, with 49 Illustrations. London: Baillière, Tindall, and Cox. 1894.

Diseases of the Throat, Nose, and Ear: a Clinical Manual for Students and Practitioners. By P. MCBRIDE, M.D., F.R.C.P. Edin. Second Edition, Revised and Enlarged, with Coloured Illustrations from Original Drawings. London and Edinburgh: Young J. Pentland. 1894.

A Treatise on Diseases of the Ear, including the Anatomy and Physiology of the Organ, together with the Treatment of the Affections of the Nose and Pharynx which conduce to Aural Disease. By T. MARK HOVELL, F.R.C.S. Edin., M.R.C.S. Eng. London: J. & A. Churchill. 1894. Price 18*s*.

Diseases of the Ear: a Text-book for Practitioners and Students of Medicine. By EDWARD B. DENCH, Ph.B., M.D. With 8 Coloured Plates and 152 Illustrations in the text. London: Henry Kimpton and Hirschfeld Brothers. 1895. Price 21*s*.

OF these works the books of Dr. Ball and Dr. McBride are second editions, while those of Mr. Hovell and Dr. Dench come before the profession for the first time. We propose to review them in the order of their publication. The first edition of Dr. Ball's book, published in 1890, was limited to the nose and naso-pharynx, the second includes the pharynx also. The first thirty-five pages are devoted to anatomical and physiological descriptions, and might, we think, be omitted with advantage as they are not full enough to be of real value to the student and nothing in the way of original observation has been contributed. The chapter on General Diagnosis is fairly good, but more might with advantage be added concerning palpation of the pharynx. In the chapters on Inflammatory Conditions of the Nasal Cavities the directions for treatment are concise, but the variety of methods mentioned show no accentuation—they are all put in line before the reader; very rarely does the author indicate his preference for a particular mode of treatment, and still more rarely does he give his reasons for so doing. There is, moreover, a needless subdivision of headings, as the remarks on acute and chronic naso-pharyngitis might well have been incorporated with the preceding chapters.

A clear description of adenoid vegetations is given, but under physical examination we fail to see the necessity of insisting on posterior rhinoscopy in addition to digital palpation in a well-marked case in a child. For removing the growths Dr. Ball prefers Rualt's forceps with the patient chloroformed, the head hanging down over the edge of the table and the neck not over-extended. He considers local after-treatment unnecessary.

The treatment of hay fever is fully discussed, and with regard to local measures Dr. Ball writes that "intra-nasal treatment is not necessarily to be discarded from consideration because no gross pathological changes are present, for since the attack is immediately determined by the application of an irritant (pollen) to the nasal mucous membrane, any treatment which has been found to destroy the irritability of the mucous membrane, such as the destruction of hyperæsthetic areas with the galvano-cautery, is rational." The author's remarks on the treatment of nasal polypi are sensible and up to date. He prefers the cold snare to the galvano-cautery. In discussing the treatment of suppuration in the antrum of Highmore we think that sufficient emphasis is not laid on the advantages of the dry method of treatment by way of an aperture made through the canine fossa. The work closes with some chapters devoted to the consideration of diseases of the pharynx, which, in view of recent advances of our knowledge in this direction, will require radical revision. The most disappointing part of the work is the illustrations. These are forty-nine in number. No less than thirty-eight of them are from instrument-makers' catalogues, and with a few typical exceptions these might be omitted. Of the remaining eleven, nine are illustrations of the anatomical portion of the work, eight of these being acknowledged copies from well-known text-books. This leaves two illustrations for the whole volume of diseases of the nose and pharynx. One of these will be found to be a copy of a diagram in Mr. Butlin's work and the other is a portrait of a boy with adenoids. In a future edition we hope the author will reproduce from his note-books at least half-a-dozen original pictures of the many morbid processes he describes. The book is well got up and of a handy size for the reader.

Dr. McBride's work is, we think, still the best before the medical public both for student and practitioner. In the matter of illustrations, compared with Dr. Ball he has gone to the other extreme and has omitted instruments altogether. We have already said that we think one type of each instrument, recommended by the author from experience, would assist a general practitioner considerably in his choice, though a good answer to this is that the illustrated catalogues of all the instrument makers are always at the disposal of any intending purchaser. The pictures in Dr. McBride's book are all original and are well reproduced, if we except one or two in the division of the work devoted to nasal diseases, upon which we remarked when criticising the first edition in 1892. Dr. McBride's strong point throughout the work is his energetic advocacy of general treatment in all the local lesions he discusses, a point so often overlooked altogether by specialists. In removing enlarged tonsils he prefers Renier's instrument, though we imagine that most surgeons are content with Mackenzie's simpler guillotine, which is so much easier to clean. In the section on Chronic Infective Diseases of the Pharynx we see no reason for describing tubercle and lupus under separate headings. The chapter on Laryngeal Phthisis is well written and the criticism of some recent methods of modern treatment judicious and not at all too severe. Dr. McBride is unable to speak decidedly as to the advisability of attempting to extirpate malignant disease of the larynx by the endo-laryngeal operation.

The chapter on the Remote Effects of Nasal Disease, with special reference to Nasal Reflex Neuroses, has been rewritten and the position taken up with regard to this difficult subject is a sound one. We agree with Dr. McBride when he says that the danger to the middle ear from the employment of the nasal douche has been over-estimated. In dealing with nasal polypi, in common with most modern rhinologists, he employs the cold steel wire snare, and as after-treatment he advises the employment of a spray of rectified spirit twice daily for a month and afterwards to repeat it on the slightest indication of "stuffiness." Dealing with

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adenoid vegetations of the naso-pharynx he prefers Gottstein's curette, with the patient under chloroform and the head hanging over the edge of the table. He employs no after-treatment. In discussing the methods of examination for ear disease the author states that he has as yet seen or read nothing which has convinced him that in really doubtful cases either Weber's or Rinné's experiments can be considered of any real value. In the treatment of eczema of the meatus he recommends strongly the application of a solution of nitrate of silver in spirit of nitrous ether. With regard to aural exostosis, it is held that operative treatment is only justified when the other ear is deaf or when there are symptoms pointing to retention of pus. The chapter on acute inflammation of the middle ear is well written and the author is in accord with most authorities on the subject when he says that the insufflation of powders should not be practised in the case of small perforations of the tympanic membrane. Stacke's operation and its modifications are discussed fully, and the author states his preference for chisels and gouges for opening the bone while the burr is the better instrument for the deeper work. In discussing the subject of chronic non-suppurative inflammation he relates the operative achievements of the American and continental schools, but adds that he does not follow them in this direction beyond section of the posterior fold of the membrana tympani. We think that the attitude here taken up will be supported by the great majority of English otologists. We base our confidence in recommending this work to the general reader who requires information about the throat, nose, and ear on the facts that the book is an eminently practical one and that the directions for treatment are stated with clearness and conciseness. The arrangement and printing of the work are excellent, but it would be a great improvement if marginal references were introduced.

Mr. Mark Hovell's volume is, as the preface tells us, addressed particularly to those members of the profession who feel themselves drawn to give special attention to a department the importance of which, he regrets to say, is still only partially recognised. There are eighty-five pages devoted to anatomical and physiological remarks on the organ of hearing, and, as we have stated above, we think that readers might have referred for this information to current text-books on these subjects. The chapter upon the examination of the ear and the determination of the hearing power is well written. Mr. Hovell prefers Brunton's otoscope, believing that it gives a better view than with simpler apparatus, but we doubt if even for diagnostic purposes he will find the majority of aural surgeons at one with him on this point. He refers to Rinné's test as a means of distinguishing between affections of the middle ear and disorders of the auditory nerve, provided that it be considered in connexion with the degree of deafness as regards speech and with altered perceptive capacity for various notes. Very precise directions are given for the passage of the Eustachian catheter, and the use of Eustachian bougies is condemned, as he believes that they are capable of causing serious mischief. The chapter on Hæmatoma Auris has for its alternative heading "Vascular Tumours of the Auricle." This is surely an objectionable title, for a vascular tumour is a distinct pathological entity, an angeioma and not a hæmatoma. The chapter on Eczema of the Auricle and Meatus is well written, but it seems to us a needless task to subdivide, as of old, dermatitis of the external ear into the eczematous, the circumscribed, the diffuse, the croupous, the diphtheritic, the parasitic, and the syphilitic varieties. The account of new formations of the external ear is full and precise, but under the head of angeioma of the auricle we miss any reference to treatment by injection of carbolic acid; and in discussing the removal of exostoses, though a full account is given of various operative methods, no mention is made of the simple process of removing the exostosis by taking away the portion of the meatal wall from which it grows, a procedure far more easily accomplished than is the rule where the drill is used, as the bone of the meatus is so much softer. Some of the commoner diseases of the nose and naso-pharynx are described, and the author, in enumerating the various modes of treatment, pronounces, too strongly we think, against the use of the nasal douche. He prefers, with the majority of surgeons, to use a snare for the extraction of nasal polypi, but he is perhaps a little too severe upon those who still use the forceps. It is certain that after cocaine nasal polypi can be painlessly removed by forceps, and that surgeons who constantly practise this method acquire a tactile skill in the application of the forceps unknown to those who are not accustomed to it. Mr. Hovell prefers to perform tonsillotomy without an anæsthetic, and gives his adhesion to Mackenzie's instrument as the best. He mentions that to check hæmorrhage after tonsillotomy he has found excellent results follow rubbing firmly against the bleeding surface a hard paste made of three parts tannic acid and one part gallic acid, with a few drops of water. He recommends sucking ice or lozenges after the operation, but we would join issue with him here and prefer that the patient should avoid suction and keep the mouth open. In cases where enlarged tonsils and adenoid growths are associated Mr. Hovell prefers to remove the tonsils at a first sitting. For removal of adenoids he directs that a general anæsthetic should be administered, the patient being placed on his back with the head slightly extended, and the growth removed with a forceps which he has modified from Löwenberg's pattern. After the operation he sprays a weak antiseptic solution through the nostrils into the naso-pharynx several times daily.

In discussing the question of excision of the ossicles in chronic adhesive catarrh of the middle ear Mr. Hovell rightly doubts whether such severe measures are really justifiable while the indications for their adoption are so imperfectly defined as they are at present. He looks upon artificial perforation of the tympanic membrane as more useful for diagnostic than remedial purposes, and he refers to division of the tensor tympani as an operation of very doubtful benefit; any advantage is but slight, and its results are not infrequently mischievous. The subjects of acute and chronic suppurative inflammation of the middle ear are fully dealt with, and in the article on Persistent Perforation the author, after referring to the best of so-called artificial membranes on the market, states that, on the whole, the best substitute for the natural tympanic membrane is a cotton ball or pellet impregnated with boric acid, salicylic acid, or thymol, and then moistened with diluted glycerine.

In the treatment of aural polypi the author rightly places the removal of the cause before the removal of the polypus itself, the latter being effected by the snare and curette. In dealing with caries of the tympanic roof the method of operating devised by Stacke is described and the various methods of operating in mastoid disease are fully given. The cerebral complications of ear disease are clearly related, and the origin of general tuberculosis and tuberculous meningitis from mastoid and tympanic tuberculous deposits are supported by the observations of Dr. Barr upon these points. The work closes with chapters upon the abstruse subject of internal ear disease and with a useful article on diseases of the ear in relation to life insurance. The whole book is well got up, with large type very clearly printed. With regard to the illustrations, these are 122 in number; 19 of them are copies of anatomical plates and 71 are pictures of instruments. Of the remaining 32, 24 are original drawings by the author, chiefly of morbid conditions of the tympanic membrane and of sections of polypi. The

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work is a readable and trustworthy representative of English opinion on otology.

Dr. Dench's textbook is addressed to practitioners and students of medicine and is of rather smaller size than Mr. Hovell's work. In his preface he takes up a defensive attitude with regard to his advocacy of operative procedures upon the middle ear, and suggests that the favourable outcome of his operations has depended upon a judicious selection of suitable cases. The work is illustrated by eight coloured plates and 152 illustrations in the text. Of the coloured plates those illustrating the vascular and nervous supply of the ear are ingenious and useful; the reproductions of the tympanitic membrane are particularly good, but the last two plates, intended to represent the mastoid operation and operations for intracranial complications, are crude in colour and drawing. Of the illustrations in the text 58 are pictures of instruments, 32 are anatomical drawings, and 62 illustrate the subject clinically. Of the anatomical drawings, 17 are original, and the majority of these are beautifully produced photogravures of the author's own specimens. They of themselves are an ample apology for the introduction of an anatomical section into the work. Of the clinical illustrations, no less than 54 are original, many of these being faithful reproductions of common lesions in disease of the middle and external ear. They derive additional advantage from being made of life-size and showing in section the auricle, meatus, and middle ear in the same drawing. In some cases, however, where the desire is to exhibit an operation upon the middle ear, the author would have produced a more intelligent picture if he had enlarged it. The chapter on Physical Examination is full and trustworthy. Preference is given to pure silver as the best material for a Eustachian catheter on account of the ease with which its curve can be moulded without diminishing its lumen. Under the head of Functional Examination, when discussing the value of Rinné's test, the author points out that the accumulation of clinical evidence from the investigation of a large number of cases has convinced those interested in otology that in many instances it cannot be relied upon to indicate the site of the lesion. In his efforts to be thorough Dr. Dench frequently becomes diffuse. Surely it is not necessary, when dealing with the subject of boil of the meatus, even if it be labeled "otitis externa circumscripta acuta," to devote more than eight pages to its description and diagnosis and follow with ten closely printed folios of treatment—treatment by heat and treatment by cold, with leeches natural and artificial—and then remark towards the end of all this what ought to have been stated at first—namely, that early incision is the best mode of dealing with the affection.

The same charge of unnecessary prolixity may be brought against the chapters on Diffuse External Otitis. In the treatment of the chronic form of this affection mention is made of the value of the application of boric acid and other powders to the surface, and it is added "these measures should not be trusted to the hands of the patient, but should be carried out by the surgeon, at first daily, the interval being increased as the case progresses." We cannot too strongly deprecate this advocacy of the constant attendance of the medical man, at great expense to the patient, to carry out a detail of treatment which can be quite safely entrusted to the patient himself. It is certainly not necessary for the surgeon himself to syringe away epithelial débris and insufflate boric acid every day in these cases, any more than it is wise or just so to conduct a case of furuncle in the ear that the surgeon himself must see the patient *twice* daily.

Dealing with the subject of Impacted Cerumen Dr. Dench insists that the collection should be removed at the first sitting, because the instillation of an alkaline solution with a view to soften the mass may cause it to swell and produce intense suffering from the great pressure exerted upon the walls of the meatus. The treatment of foreign bodies in the canal and of exostoses is fully described, and the recommendations are practical and good. In cases of tubal catarrh where the tube cannot be opened by inflation Dr. Dench uses a bougie, either employing a special bougie catheter or a piece of No. 5 piano wire passed through an ordinary catheter and armed at its roughened extremity with a pledget of cotton. This method of treatment which is here described without any attempt at advocacy has never found favour amongst English otologists. It appears to us that the chapters on tubal congestion and tubo-tympanic congestion might well have been included under the description of otitis media which follows. In dealing with otitis media we feel bound to call attention once more to the fact that the chapters might be reduced to one-third of their bulk without the omission of a single important fact. Chronic hypertrophic otitis media is described as to its etiology, pathology, symptomatology, diagnosis, prognosis, and treatment in twenty-two pages, and then follows chronic hyperplastic otitis media, similarly dealt with at length in fourteen more pages. Considering that if pus should be present a new affection, chronic purulent otitis media, is established, and twenty-eight further pages are devoted to this, while the results of former attacks receive, under the title of Otitis Media Purulenta Residua, a further fifteen pages, the question arises if every patch of mucous membrane in the body were similarly honoured how many volumes a work on general surgery or medicine would run to. Surely there is no essential difference between the mucous membrane of the middle ear and of other parts, and the tendencies of chronic inflammation of it are the same, whether towards simple resolution, towards chronic catarrh and repair with fibrous thickening, or towards suppuration and resulting cicatrisation. It is obviously inaccurate and unscientific to differentiate the pathological accidents on the path of cure and elevate them into separate diseases with a separate etiology and pathology.

The variations in structure of the mastoid are well described, and this is followed by a description of the course and treatment of mastoid inflammation and its results.

A separate chapter is devoted to Middle-ear Operations. It is very full, and as Dr. Dench has elsewhere fully published his results, and they have been already much criticised, we will content ourselves with adding that he is a warm advocate of these intra-tympanic measures, not only for cases where there is actual perforation with purulent discharge, but in cases with whole membrane accompanied by deafness where the hearing has failed to improve under less radical measures. He candidly tells his patients of the experimental nature of the operative measures and recommends an exploratory tympanotomy. We can only add that the good results he details have not been generally obtained in this country, in spite of a very careful selection of cases, and we venture to hope that Dr. Dench will later collect the whole of his cases, giving full details of the former condition of hearing, the nature of the operation, the after-history as to pain and discharge, and the present state of the hearing. It is only by good results recorded in such a manner that these operations can deserve to come into favour. The closing pages of the work deal with Inflammation of the Labyrinth and its Treatment, the Effect of Acute Infectious Diseases, the Various Affections which are Complicated by Aural Trouble, and Deaf-mutism. A few words at the end are devoted to Diseases of the Nose and Naso-pharynx, and these might with advantage have been a little fuller.

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For removal of adenoids he prefers general anæsthesia, the head of the patient being thrown backward over the edge of the table, and the growth removed with forceps, any small masses left being swept away by the curette.

In conclusion, we may say that Dr. Dench has made a painstaking effort to place the whole subject of aural surgery before the profession, that there are many good qualities in his work, and a judicious revision of another edition, while greatly reducing its bulk, would tend in other directions to make the work a more acceptable guide for the use of the profession at large.

LIBRARY TABLE.

Annales de l'Institut Pasteur. Edited by M. E. DUCLAUX. Vol. X., No. 3. March, 1896. Paris: G. Masson.—This number contains several articles of great general interest. The first is by M. Duclaux giving the results of a very prolonged and patient research on the chemical action of sunshine at different altitudes in different states of weather and at different times of year. He employed a solution of oxalic acid for estimating the chemical change, as this solution is not acted on by thermal rays, while under the influence of light it absorbs oxygen and is converted into carbonic acid with a negligible trace of formic acid. By estimating the acidity by titration before and after exposure to light the amount of oxalic acid consumed can be accurately measured. The results showed that in wet, cloudy weather there was little chemical reaction. On the days in which there was active chemical change there was sometimes bright sunshine, but often better effects were obtained when the sky was covered with fleecy clouds. Every photographer knows that these latter days are also best for printing from negatives. M. Duclaux suggests that these variations are due to the greater quantity of aromatic oils and other odorous vapours present in the air on fine clear days and asserts that they obstruct the actinic rays. This seems to require more proof than is given in the paper. Dr. de Haan of Java gives an account of the method he has employed for obtaining abundant lymph for vaccination by inoculating heifers from the arm of the human subject. He has inoculated monkeys (Macacus sinicus) from the heifers and subsequently from one another, and obtains pustules which run an exactly similar course to those in man. He has not considered it justifiable at present to inoculate from the monkeys to children. Dr. Hankin sends a very important preliminary note on the effect that the water of the Jumna and Ganges has in destroying the cholera bacillus. Water taken from the stream, or even from a corpse that has been macerating some time in the river, destroys the bacilli in pure cultures in the course of an hour or two. Dr. Hankin believes this action to be due to the presence of certain volatile acids, for the bactericidal power of the water is destroyed by boiling or even by allowing it to filter through the soil into shallow wells. The bacilli will flourish in boiled river water. There is also a preliminary report by Dr. David Bruce on the disease caused by the tsetse fly. He believes that the fly itself does not secrete the poison, and that its bite is only harmful by conveying parasites from another animal suffering from nagana, as the disease is called. He states that nagana can also be communicated by direct inoculation from one animal to another.

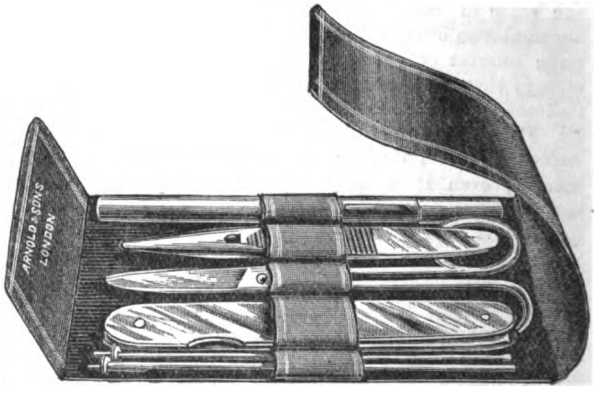
New York County Medical Association: Register of Members and Manual of Information. New York: Published by the Association. 1895.—This volume not only supplies in a clear and well-arranged form a large amount of information relative to medical organisations in the State of New York, but is practically a medical directory for the city. The association was founded in 1884, and in June, 1895, it consisted of 1056 members, whose addresses in New York, together with the description and dates of their qualifications, are published in full; a supplementary list gives the names and addresses of about 1780 well-recognised New York practitioners who are not members of the association. The main objects of the association are the maintenance of a high standard of professional ethics and the cultivation of medical and sanitary science. It is affiliated to the American Medical Association and meets every month. The secretaries are Dr. Nathan Gross Bozeman, 9, West Thirty-first-street, and Dr. P. Brynberg Porter, 150, West Eighty-fourth-street, New York, U.S.A.

No. 3 of *Architecture*, the new monthly magazine of architectural art, well maintains the excellent quality of its predecessors, being both profusely and well illustrated. The article on Westminster Abbey, No. 1 of the series on the Abbeys and Cathedrals of the World, is concluded, and the several pictures of the various parts of the historic building will doubtless be prized by many. At the moderate price of 1*s.* per month the magazine deserves well of all interested in architectural art. It is published at Talbot House, Arundel-street, Strand.

New Inventions.

IMPROVED POCKET CASE.

MESSRS. ARNOLD AND SONS of West Smithfield have made a pocket-case for me which has some advantages over those generally used. The ordinary case is far too bulky to be constantly carried. Most miniature cases consist of at least three thicknesses of stiffened leather with side flaps and a clumsy fastening. They do not fold well and contain instruments so small as to be practically useless. The case shown in the drawing is made of flexible morocco leather. It is four inches long, two inches wide, and about a third of an inch



thick. It contains: (1) scissors, one point sharp and the other blunt; (2) dissecting forceps, with spring catch, so as to act as artery forceps; (3) knife handle, with sharp-pointed scalpel and gum lancet; (4) probe, director, and exploring needle; (5) needles, ligatures, &c.; and (6) thermometer. The instruments are tools, not toys, being four inches long. The case can be carried in the watch pocket as constantly and with as little consciousness of its presence as an ordinary card-case.

T. H. WARD, M.D.

Paignton.

THE CHELTENHAM GENERAL HOSPITAL.—The annual meeting of the subscribers of the Cheltenham General Hospital was held on March 18th, under the presidency of Colonel Croker-King. The report showed that during 1895 the out-patients had numbered 4176, being 281 in excess of those of the previous year, and 997 in-patients had been treated, an increase of 104 compared with the number in 1894. The average daily number of in-patients was 59. The total expenses amounted to £5687, being £951 in excess of the income.

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THE LANCET.

LONDON: SATURDAY, APRIL 11, 1896.

THE report issued last week by the Metropolitan Asylums Board on the results from the use of antitoxin in diphtheria shows that during the year 1895 there were 3529 cases of diphtheria treated in these six metropolitan asylum hospitals, of which 796, or 22·5 per cent., proved fatal; in 1894 the number of cases treated was 3042 and the deaths 902, showing a mortality equal to 29·6 per cent. Thus the proportional case-mortality was 7·1 per cent. lower in 1895 than in 1894. This marked decline in the mortality of hospital-treated cases of diphtheria in 1895 naturally suggests an inquiry as to the cause of the decline, and the six medical superintendents, on the ground that the average severity of the cases was, "in their opinion, about equal" in the two years, have arrived at the conclusion that the decline was due to antitoxin treatment in nearly 62 per cent. of the cases in 1895. It is true that the case-mortality of diphtheria cases treated in the Metropolitan Asylum Hospitals in the seven years, 1888–94, did not once fall below 29 per cent., whereas in 1895, when antitoxin treatment was first generally adopted, it fell to 22·5; on the other hand it should be noted that during the seven years referred to above the case-mortality almost continually fell from 50 per cent. in 1888, when the numbers were small, to 29 in 1894 when the maximum number of cases was under treatment. While, therefore, we admit that the reporters were apparently, in the absence of other known cause, justified in attributing the decline of the case-mortality from diphtheria in 1895 to antitoxin treatment, it seems but prudent to recognise the possibility of this decline being partly due to a continuance of the decline that prevailed during the seven years 1888-94 and partly to a decreased severity in the type of the disease in 1895, since it is a fact that the rate of mortality from diphtheria in London, which was 0·76 and 0·63 per 1000 of the population in 1893 and 1894, further declined to 0·53 in 1895. It is, however, undoubtedly true that the decreased proportion of diphtheria case-mortality in these hospitals in 1895 implied the recovery of 250 cases that would have been fatal had the proportional case-mortality been the same as it had been in 1894. We scarcely feel justified, however, in assuming that the whole of this saving of life was due to antitoxin, neither does any satisfactory basis appear to exist for estimating what proportion of these saved lives may be credited to this cause. The report tells us that of the 3529 cases of diphtheria treated in these hospitals in 1895 62 per cent. were treated with antitoxin, and it follows that 38 per cent. were not so treated. It might have been hoped that a comparison of the observed results in these two series of cases would have afforded a satisfactory means for testing the effect of antitoxin on the proportional case-mortality. Unfortunately, however, the carefully prepared and elaborate tables contained in the report are practically useless for this purpose. The report states that (1) antitoxin was only administered in those cases which were severe or in which the symptoms on admission were sufficiently pronounced to give rise to anxiety, and (2) that no antitoxin was administered in those cases in which the patients were moribund at the time of their admission to the hospitals. It is obvious, therefore, that the two series of cases are incomparable. How futile would be any attempt to compare the case-mortality of the cases treated with antitoxin with the case-mortality of those not so treated the following figures conclusively prove. The proportional mortality of the 2182 cases treated in these hospitals in 1895 with antitoxin was equal to 28·1 per cent.; these included, we should repeat, for the most part the severe cases, exclusive of those held to be practically moribund at the time of admission. The remaining 1347 cases, made up it would appear mainly of mild and moribund cases, showed a case mortality of only 13·4 per cent. It is needless to dwell upon such a comparison. It is impossible, however, not to regret that some other statistical method was not devised that would have thrown more light upon the result of the antitoxin treatment of diphtheria cases in these hospitals, and we venture to hope that it may yet be possible to collect and tabulate facts which will be more helpful in this direction than the report that has just been issued.

It is, however, abundantly clear that the introduction of this method of treatment has had a most marked influence in mitigating the severity of the disease, as shown by the unanimous testimony of all the reporters; and it seems also further evident that the influence for good has been proportionate to the degree to which the remedy was pushed and to the promptness of its application. We may refer, in proof of these assertions, to the somewhat striking figures relating to laryngeal diphtheria. In the first place, be it noted that extension of the membrane to the larynx after admission occurred in a much smaller proportion of cases in 1895 than in 1894, bearing out one of the prominent effects of the injection—namely, that of limiting the degree and extent of the membranous exudation. In the year 1894 there were 466 cases of laryngeal diphtheria with a case-mortality of 62 per cent.; in 1895 there were 543 such cases with a mortality of 42·3 per cent. The degree of laryngeal implication may, to a certain extent, be measured by the number subjected to tracheotomy, and we find that in 1894 there were 56 per cent. so treated; in 1895 there were 45·3 per cent. Again, the proportion of fatal cases after tracheotomy was much higher in 1894 than in 1895; for in 1894 of 261 tracheotomised subjects 164 died, or 70·4 per cent.; in 1895, of 255 tracheotomised subjects 125 died, or 49·4 per cent. There were only 13 of this latter series who did not have antitoxin. This marked improvement in the results of tracheotomy was observed at each of the hospitals, and cannot be ascribed to any accidental circumstance. The medical superintendents further report a general amelioration of the condition of the patients subjected to the antitoxin treatment, noting, among other things, that even in cases which proved ultimately fatal life was more prolonged in those so treated in each of the hospitals except one, and that one where the dose of antitoxin given was on an average much lower than that given at the other hospitals.

On the other hand, there seems to have been a larger

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proportion of complications (notably albuminuria and paralysis) in the cases treated in 1895 as compared with those of 1894, a fact partly explicable, no doubt, by more careful observation, partly also by the greater proportion of recovery of severe cases. Even if it be conceded that albuminuria is more frequent after the use of antitoxin there is no evidence that actual nephritis is more common. Statistics are also given as to the number of cases in which secondary effects—such as rash, joint-pains, &c.—followed the use of antitoxin, but the general consensus is that, in spite of these results of the new treatment, the condition of those so treated contrasted favourably with those formerly observed. The importance of an early recourse to the remedy is shown in a striking manner in the supplementary report on 119 cases of post-scarlatinal diphtheria at the Northern Hospital. Antitoxin was given in 58 cases, with a mortality of 6·9 per cent.; in 12 the treatment was commenced on the first day, none died; in 27 on the second day, 2 died; 8 on the third day, none died; 1 on the fourth day, recovered; 10 on the fifth day and later, 2 deaths. Now as in all like cases occurring in the previous five years the mortality had been as high as 61·9 per cent. it is impossible to avoid the conclusion that so great a difference must be ascribed to the use of the antitoxic serum or to fail to see that as we know more of the dosage and time of its employment the beneficial effects of the remedy will become more and more evident.

IF our voluntary hospital system, with its splendid traditions, is to be preserved it is necessary that its friends should consider how best to compass that most desirable end. None can dispute its claim to the support of all classes of men. We never conceal its liability to abuse or cease to urge precautions against such abuse by shabby persons whose means do not justify their taking gratuitous advice and medicines. But when all allowance on this score has been made the voluntary hospital system of England remains a credit to its humanity that will compare favourably with the State-supported system of foreign countries. If this be true, the best friends of hospitals are those who seek to remedy their faults of administration and distribution, to make them more available for the really poor and more inaccessible to those for whom they were never intended. It is of no use to shut our eyes to the difficulties of such efforts. The hospital is the centre of prodigious forces and of strong interests. Sentiment, charity, science, medical teachers and medical students, the rich and the poor, and all the Churches without distinction of creed gather round them; and all are apt to apply numerical and statistical tests to the prosperity of the particular hospital in which they are most concerned. There has been a tendency of late years even to popularise hospitals and make them attractive. It would be ungracious not to rejoice over every real accommodation and amenity that can brighten the lot of those who are unfortunate enough to need hospitals; but we are of opinion that this is consistent with keeping them in their right place and excluding from them all wrong persons whose diseases and means are such as admit of treatment at home.

We have spoken of the voluntary hospital system. In truth, this word is a little inapplicable. The great danger of the present state of affairs is the want of system. The voluntary principle is an admirable one, but it is jealous of system. It acts locally, impulsively, and irregularly; fails here and succeeds there; it lacks control and organisation and is apt to resent them. Yet these, in truth, are its great defects, by reason of which it comes in often for more criticism than support. If certain needed qualities could be introduced into voluntary hospitals, if they could be brought to regard each other as coöperating for great charitable ends—not merely competing with each other for public subscriptions—if they could be brought to recognise some great common principles of administration, a new era of public confidence and of prosperity would be assured to them. How is this great object to be achieved? Answers to this question differ. The one most generally accepted is, "By the creation of a Central Hospital Board," on which all classes of persons who have shown interest in, or sympathy for, hospitals shall be represented: subscribers, medical officers, the medical profession, the Council of the Hospital Sunday Fund and the Council of the Hospital Saturday Fund. Such a Board was originally suggested by the Charity Organisation Society, and the Committee of the House of Lords on Hospitals adopted the suggestion almost in its entirety. It has been repeatedly urged by the society, and is again to be advocated at a meeting of the Council on April 13th at 4.30 P.M. at the Royal United Service Institution. It must be confessed that there has been no great enthusiasm shown by the public or by the hospitals with regard to this suggestion. Four years have elapsed since a Central Hospital Board was recommended by the Committee of the House of Lords after a searching investigation into the worth of the hospital system, and nothing has been done. The chief explanation of this delay is probably to be found in the jealousy of individual hospitals, particularly of those institutions the *raison d'être* of which is not very demonstrable. It is extremely desirable that those who object to such a Board should reconsider their indifference or their opposition. By such opposition they give enemies of the hospital system reason to believe that they are afraid of the very gentle control operating only through public opinion which such a Board might exercise over obvious faults in the present system, or rather want of system. We cannot think that the true friends of hospitals will be well advised if they longer resist, even by indifference, the proposal for a Central Board. Existing institutions must be accepted and can scarcely fail to benefit from the action of the Board. It would seem to be their obvious interest to combine together for the purpose of strengthening each other and strengthening that public confidence on which the support of hospitals depends. It would be one of the functions of such a Board to discourage the constant multiplication of small and feeble hospitals, which only weaken those already in existence. The constitution of the Board is a detail on which we need not here dilate. There could be no serious difficulty in the general principles to be recognised in its formation. But we impress on all friends of voluntary hospitals that they should give to this proposal most careful consideration. The Board should be formed voluntarily and without the aid of legislation. The glory of the system is the voluntary

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principle; only let its supporters have the courage to see its weak points and to strengthen them. The Hospital Sunday Fund and the Hospital Saturday Fund might, by adopting a definite course of action, have rendered such a proposal unnecessary. However, their constitution is, perhaps, scarcely wide enough for these functions.

THE articles on questions of public health which periodically appear in the *Times* are of great value; they are very widely read and they deservedly carry great weight. This, however, makes it all the more important that when any such article, by reason of its alleged facts or by reason of the inferences which are certain to be drawn from its dicta, suggests that which is not strictly correct attention should be drawn to the subject and misapprehension on the part of the public be as far as practicable avoided. For this reason we find it desirable to advert to one part of an otherwise extremely interesting leading article which appeared in the *Times* on March 23rd and in which the subject dealt with was the recent Milroy Lectures delivered before the Royal College of Physicians of London. In the latter part of that article the question of the diffusion of small-pox around hospitals in which cases of that disease are aggregated was discussed; and, referring to the report of the Royal Commission on Small-pox Hospitals, 1882, the writer stated that the Commission "could only recommend that small-pox hospitals should be placed as far as might be from other habitations." We are unable to find in the report of the Commission any recommendation which seems quite to this effect, and we rather doubt whether this was the view of the Commission because they did make a definite recommendation which was exactly in the opposite direction. This was to the effect that for "400 or 500" metropolitan small-pox cases wards "might be maintained within the precincts of the fever hospitals sufficient in each hospital for thirty or forty small-pox patients," the then existing fever hospitals being known to lie in near proximity to large numbers of human habitations. And, unfortunately, this recommendation was acted on for a series of years, with the result that the small-pox infection was again diffused to the population around the hospitals, the distribution of the infection being graduated according to proximity to the hospitals in precisely the same way as had been the case before the date of the appointment of the Commission. It was, indeed, only in 1886, and subsequently therefore to the new experience to the effect that no administrative efficiency could prevent this diffusion, that the Metropolitan Asylums Board once and for all gave up the attempt to isolate small-pox anywhere within or near the metropolis.

The article to which we refer went on to say that small-pox hospitals have now been on their trial for a considerable period, and that "the mischief, if any, which they have occasioned has been of infinitely smaller amount than that which they have prevented." Clearly provincial small-pox hospitals are not here in question; otherwise such cases as the outbursts around the small-pox hospitals at Warrington, Sheffield, Leicester, &c., would have led to much more guarded language. The metropolis was in the writer's mind, and limited to the metropolis the statement is absolutely correct. But, unfortunately, the metropolitan experience has really no bearing on the subject, for the experience of London since 1886 is concerned with the almost entire absence of any small-pox hospitals, these institutions having been relegated to the provinces, where they were placed at a distance of some twenty miles from the metropolis. Under these circumstances it is very natural that London should have benefited in the matter. But the altogether altered circumstances of London since 1886 do not seem to have been apprehended, for the article goes on to refer to the metropolitan experience of small-pox during the past ten years and to say that "the small-pox which has arisen spontaneously and that which has been disseminated from the hospitals, taken together," has been only one-thirtieth of that which arose spontaneously before the hospitals were established. The statistics are of course correct in so far as the metropolis is concerned; but they have no application to the question under review. For the past ten years referred to the small-pox hospitals of the Metropolitan Asylums Board, as already explained, have not existed in or near London, and hence there has been no small-pox disseminated by them to add to that which has arisen spontaneously in the metropolis. The application of the statistical argument should have been in precisely the opposite direction, for it goes to show that when small-pox is not disseminated to the metropolis by means of hospital aggregations, then the elimination of this artificial element in the diffusion of the disease leads to an enormous diminution in our London small-pox mortality.

This view receives confirmation from the fact that in the provinces where it has not been possible to place small-pox hospitals twenty miles away from the communities using them there has been nothing like the same reduction in the rate of the small-pox mortality; the provincial rate for the same period has, indeed, only been one-fourth, instead of one-thirtieth, of that which it formerly was, and one reason for the lessened rate has been the recurring provincial experience to the effect that where authorities persist in placing small-pox hospitals within or near the borders of their sanitary areas they have again and again had outbursts of small-pox in their communities. It is also noteworthy that these outbursts have rarely been in the poorest and most densely peopled parts of the boroughs or towns concerned, but in the localities which were nearest to the small-pox hospitals.

THE report of the departmental committee, which was appointed in September, 1894, to inquire into the prevailing systems for the maintenance and administration of Poor-law schools in so far as the metropolitan area is concerned, has just been issued, and at a time when the attention of Parliament is directed to the Education Bill now on the table of the House. Its appearance is therefore opportune, seeing that it touches directly, *inter alia*, on the important matter of the education of the inmates of Poor-law institutions in a manner which happily accords with the proposed measure now before Parliament. To sum up the report of the committee in one sentence would be to say that the representative body of experts which constitute it

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have arrived at a very definite conclusion as to the practical failure of Poor-law schools to meet the necessities of pauper infant life as they are seen to arise, and that they propose to bring about the requisite amelioration of the present condition of affairs by relegating to a central and newly constituted body the powers now exercised by central and local authorities—to wit, the Local Government Board and boards of guardians throughout London.

That the recommendations of the committee will have great weight we do not question, coming as they do from persons of acknowledged authority. We have only to look at the names to feel assured of this. The report is signed by the chairman, Mr. MUNDELLA, by Sir JOHN GORST, Mr. LYULPH STANLEY, the Rev. BROOKE LAMBERT, Mr. VALLANCE, Mrs. BARNETT, Mr. NETTLESHIP, F.R.C.S., and Dr. J. G. FITCH, lately chief inspector of schools under the Education Department, names which vouch for the trustworthiness of the document. We are told of fifty meetings, of seventy-three witnesses examined (including Government inspectors, guardians, school teachers, medical officers, and philanthropic experts), and of surprise visits paid by the committee here and there for the purpose of testing the normal working of the school system in individual parishes. In these and in other ways we are assured of the thoroughness of the work detailed in the report. All these facts add weight to the conclusions arrived at. Briefly, it is seen that the "barrack school" system inaugurated fifty years ago, real as was the advance made by the system at the time of its conception, has failed in many respects to recommend itself to the majority of those connected with the work. The medical witnesses have been unanimous in condemnation of the system, not only on the ground of its direct bearing on the health of the children, especially as regards the ever prevailing ophthalmic cases, but also indirectly by reason of the tendency to affect injuriously the mental, moral, and physical growth of those who have been confined to the monotonous round of the school curriculum. Not only on the youthful and involuntary inmates has this effect been noticeable, but officers and teachers have felt in large degree the dull monotony of the surroundings to which they have been more or less restricted. The depression that has resulted has had undoubted effect on the capacity of the children to act the part which is played by their colleagues placed in happier circumstances, and alike in play, in scholastic attainments, in the learning of trades or the exercise of domestic duties the school system has been abundantly proved to have had a baneful effect on those compelled to undergo its ceaseless round. Ophthalmia has become endemic despite every effort to eradicate it, and ringworm and skin complaints in general have been handed on from child to child until the sufferer chanced to be placed in one of the scattered homes, or, better still, boarded out. It is, in fact, this alternative system of "boarding out" of children in the cottage homes of reputable folk that the committee recommend as likely in a large degree to check the evils attendant on the barrack school principle. It has been demonstrated again and again, even apart altogether from the evidence adduced before the committee, that the boarding out of children has had the most beneficial results, both as regards health, physical development, capacity to grasp and retain the teachings of school life, and general mental culture. The children have by this means been removed from the association of pauper existence and have been placed in a position from which they have been grafted into the general social system fitted to their station, and have thus escaped the pauper taint which has militated to such a marked extent against the future chances of their less fortunate fellows.

We do not here touch on the educational phase of the matter, important as it is, nor do we treat of the financial aspects of the question save to state that the results of scattered homes and of boarding out are in favour of the economists; neither have we space in which to set forth the statements of the committee on such points as half-time employment, apprenticeship, and the like. We can only now refer to the specific recommendations at the end of the report. These desire the establishment of a centrally constituted body having full financial and general control of all the London institutions for Poor-law children, with a common expenses fund; the total exclusion of all children over three years of age from the association of workhouses; the gradual abandonment and immediate reduction in scope of the large school system, with increase of scattered homes, and especially an extension of the boarding-out system; the establishment of certified homes, of ophthalmic and other hospital schools, with uninterrupted education of their inmates; the special treatment of the feeble-minded in houses and voluntary homes; the provision of special schools for the tending of vagrant children; improved industrial training; the provision of training ships; the encouragement of emigration; and the appointment of an adequate inspectorial staff, including medically qualified women inspectors. In these and other ways the committee would hope to see the very desirable end accomplished of dissociating the children from pauper surroundings, so that they might take their place in the world untrammelled by their antecedents.

Annotations.

"Ne quid nimis."

THE REMUNERATION OF MEDICAL WITNESSES.

A REQUEST was sent on March 12th to Sir Matthew White Ridley, the Home Secretary, asking him to receive a deputation from the United Kingdom Police Surgeons' Association. Their wish was to confer with Sir Matthew White Ridley on two points: (1) the appointment of police surgeons in districts where none had as yet been made; and (2) the desirability of revising and increasing the scale of fees now awarded to medical witnesses in the police, sessions', and assize courts. Sir Matthew White Ridley has declined to receive the deputation on the grounds that he has already drawn the attention of such police authorities as have not yet appointed police surgeons to the desirability of doing so. With reference to the second point he observed that being fully in possession of the views of the Association he does not think it would serve any useful purpose for him to receive a deputation to discuss it further. The Home Secretary's decision is, we think, to be regretted. Since the reception of the last deputation

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from this association by Mr. Asquith many assizes and sessions have been held bringing with them additional hardships upon police surgeons and other medical witnesses. Mr. Asquith freely admitted that the scale of fees framed by Sir George Grey many years ago and fixing the remuneration of medical witnesses in the sessions' and assize courts at £1 1s. per day was not an adequate one for the loss of time incurred by professional gentlemen. But he naïvely added that all his predecessors in office, although repeatedly appealed to on the subject, had declined the responsibility of revising the scale of fees and that he felt no disposition to burn his fingers. Evidently Sir Matthew White Ridley feels no more desire to go through the finger-burning process than any of his predecessors. But how much longer is this injustice to members of an honourable profession to continue? The duties of medical witnesses for the prosecution of offenders against the law are sufficiently onerous and are attended with inconveniences enough without the additional injustice of not being remunerated at all or even of being actually out of pocket. That this is no exaggeration has been repeatedly shown in THE LANCET and will probably appear again. In Scotland medical witnesses receive two guineas for each day they are cited to appear in the circuit court of the town in which they are residing and three guineas if the court is held at a distance. There are also, we believe, allowances for travelling and other expenses. Very different is the scale of fees and allowances in England and Wales. However distant the assize town or city may be the fee is the same—one guinea per diem, one railway fare there and back (not always first class), and two shillings per night! Even this last item, which was a positive insult to professional gentlemen, has, we are informed, been discontinued. We would urge all medical witnesses, whether they be police surgeons or not, to send full details of their most recent experiences at assizes, especially at a distance from their own homes, showing, on the one hand, the expenses they were compelled to incur during their absence from home, including the services of a locum-tenent, and, on the other hand, the exact amount of the inadequate remuneration they received. Members of the medical profession are proverbially long-suffering, especially on the subject of fees, but there is a limit even to their endurance and there are manifest indications that this limit has now been reached. If the authorities in England and Wales decline to remunerate medical witnesses with at least some approach to a reasonable acknowledgment of the value of their services they must not be surprised if the duties of medical witness for the Crown come to be declined by many who now undertake them.

THE PERILS OF PRACTICE.

AT the Liverpool Assizes, on March 17th, a claim was made against a medical man named Wright, practising in Wigan, for £250 damages for injuries to the plaintiff arising from his alleged negligence as a medical man. The case was heard by Mr. Justice Vaughan Williams and a special jury. The plaintiff was a club patient of the defendant, and at 5 A.M. on May 1st, 1895, was taken to his surgery with a contused wound of the right hand, in which the tissues were lacerated to the bone longitudinally over the fourth metacarpal bone for about two inches. The defendant took great pains with the treatment so as to prevent cellulitis, and the hand progressed well, but owing to some contraction of the tendons the patient's mother wished him to see another medical man. On May 31st he consulted Mr. Mitchell Roocroft, who told the patient, so the plaintiff and his witnesses said, that the bone in the hand was broken or had been broken and he would require to give him chloroform and refracture it and put it right. Mr. Roocroft treated it till early in July, when he thought the plaintiff was fit for work. The operation which the defendant proposed to perform was to break down the adhesions, but he denied that there had ever been any fracture. The hand was now a success so far as it could be after such a wound, but the action arose from the alleged negligence in failing to discover the fracture. The defence was that there never was a fracture, therefore there was no negligence. The case appeared to rest for some time on the statements of the plaintiff and his witnesses as to what this medical man said and what the defendant said in reference to the injury. Mr. Southam, surgeon to the Manchester Royal Infirmary; Mr. Robert Jones, surgeon to the Liverpool Royal Southern Hospital; Mr. Berry, senior surgeon to the Royal Albert Edward Infirmary, Wigan; and Dr. Robert Prosser White, also surgeon to the Royal Albert Edward Infirmary, all testified to the fact that there was no evidence now of there ever having been a fracture, Mr. Jones telling the jury he had never seen a fracture specimen in a museum in which some evidence had not been left of its having been a fracture. The plaintiff's advocate stated in opening the case that they could not afford to pay for medical evidence. Later, however, he announced that Mr. Roocroft was present, and the judge and jury wishing to hear him the defendant's counsel consented that he should go into the box. He stated that he found an ununited fracture, and he broke down adhesions and placed it on a splint for two or three weeks. He handed a notebook to the judge which contained notes of the case, which the judge read, and after the address of the counsel for the plaintiff he asked Mr. Roocroft when he made the entries in his book, and Mr. Roocroft replied that they were made about a week or two ago from his notes taken at the time, but his lordship observed he should like to have seen the original notes. His lordship, in summing up to the jury, said it was a very interesting case, and made the humorous remark that fortunately before he was made a judge he belonged to a profession and whether he was negligent or not no action could be brought against him. He told the jury they could decide the case without deciding whether there was a fracture or not. The question was whether the defendant treated the case skilfully and whether they were satisfied on the medical evidence that the medical man was guilty of negligence. The jury, without leaving the box, found for the defendant. This case is a very important one and shows the risks run in surgical practice. We sympathise with Mr. Wright in the annoyance and anxiety he has suffered and congratulate him on his successful defence of the action.

THE REPRESENTATION OF EDINBURGH AND ST. ANDREW'S UNIVERSITIES IN PARLIAMENT.

WE understand that owing to the coming elevation of Sir Charles Pearson to the Bench a vacancy will occur in the Parliamentary representation of the Universities of Edinburgh and St. Andrew's. The tongue of rumour has been busy with the name of Sir James Crichton Browne as a candidate for the seat, but we are able to state with certainty that he will not offer himself for election. Strong efforts will, we believe, be made to secure the seat for Mr. Dickson, who, it is probable, will be the next Solicitor-General for Scotland. The representation has been practically confined of late years to members of the legal profession; in fact, three gentlemen holding the office of Solicitor-General have in succession represented the Universities. In the case of the representation of a university in Parliament it is, we think, a thousand pities that mere politics or party considerations should prevail. A university consists of men of science and learning in various faculties, and it is only fair that no one faculty should monopolise the privilege of sending a representative of the whole university to Parliament. There can surely be little difficulty in finding

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amongst the graduates of the distinguished Universities of Edinburgh and St. Andrew's a man of medicine or a man of science who would do honour to the representation of his Alma Mater. Among medical graduates mention has been made of Sir William Priestley, M.D., as a candidate, while as a man of science Mr. John Murray, LL.D., whose scientific investigations in connexion with the *Challenger* Expedition are known and appreciated all over the world, has been suggested. We echo what is we know the feeling of a large body of the graduates in expressing the hope that the link which has so long bound the representation of the Universities to a government office will on this occasion be broken; and we are in a position to state that Sir William Priestley is willing to accede to the request that he should allow himself to be nominated for the seat. His election would make no change in the balance of parties.

HEALTH IN THE POST OFFICE SERVICE.

UNDER this heading[1] we recently commented on the unsatisfactory nature of the statistical information supplied by the Post Office officials relative to mortality statistics in connexion with the Departmental Committee which has been inquiring into Post Office matters. We first called attention to the matter on Aug. 31st, 1895, and it is regrettable that nothing should have been since done to make the statistics more reliable. We sincerely trust, therefore, that a resolution which is to be proposed at the Annual Conference of the Postal Telegraph Clerks' Association at Exeter on May 29th next will be passed unanimously and that the authorities will lose no time in carrying out its recommendations. The resolution runs as follows:—

"This Conference expresses its regret that the immense and invaluable opportunities afforded for the collection of reliable statistical information relating to many important questions in economic science and public health which are afforded by the large bodies of men and women employed by the Post Office are not utilised, and urges upon the Postmaster-General the desirability of taking steps towards the collection and periodical publication of statistical information relating to postal employés, which shall be easily accessible and readily comparable with the statistical information now collected and tabulated by the Board of Trade, the Registrar-General's, and other public departments."

STREET NOISES.

AN American journal recently published a cartoon representing an Italian organ-grinder plying his itinerant vocation in Africa with King Menelek flying in the distance from the discordant strain of "Sweet Marie," and underneath the legend, "The Italians should have stuck to their regular weapons." This is, perhaps, too ridiculous, but it, at any rate, shows an intelligent appreciation of one class of hideous noise with which civilised nations are afflicted. The enormity of the evil has now become so great that hardly a day passes without some long-sufferer writing to the daily press to complain of his torture. A Bill, to which we have previously alluded, is now before Parliament, but a few such cases as that which was heard at the Thames Police Court on March 31st last will do much to stop the nuisance in the meantime. A restaurant keeper requested a man who was "playing" an organ a short distance from his restaurant to "go away," and on his refusing to do so gave the man into custody. Mr. Mead, before whom the man was brought, imposed a fine of 10*s.* or in the alternative committal for seven days with hard labour. In the course of his remarks Mr. Mead said he quite appreciated the justice of the complaint and expressed his willingness to do all he could to help the prosecutor and others in the matter. The particular section which dealt with street music was not the only remedy for dealing with the nuisance, as persons could be prosecuted for creating an obstruction. If any one person was annoyed by an organ playing he had a right to interfere. The same remarks applied to the Salvation Army, who could be summoned if they refused to go away. The applicant thanked the magistrate for his advice, and remarked that he might have occasion to trouble Mr. Mead again. We hope he will should the nuisance be continued. Mr. Charles Fox of 104, Ritherdon-road, S.W., the honorary secretary of the Association for the Suppression of Street Noises, is collecting evidence as to the baneful effects of street noises on the patients of medical men, and we shall be glad to hear from any of our readers who can speak of the harmful effects of such noises on their patients.

CONTAGION FROM KISSING.

IF there is one thing more than another calculated to rouse the funny man of the lay press it is the mere idea of the suppression or regulation of osculation from its undoubted capabilities as a medium for the spread of contagious disease. Dr. Coleman, reporting as to the health of Surbiton, states that he has not been able to find an atom of evidence of local defects of sanitation to account for certain cases of fever, and goes on to refer to the danger of "slight" cases of diphtheria, for, as he says, being so mild they are not always treated with the extreme care that experience warns us that such attacks when mild require. Many cases, he points out, are not recognised; no medical man is called in and the individual meanwhile by personal contact is capable of spreading the disease; and of all means the most personal and at the same time the most natural and probable is kissing. It should be a rule, he says, in all houses to never let a child or grown-up person with a sore throat, no matter what it may be called or be supposed to be, kiss or be kissed by another. He also suggests obvious precautions as regards spoons, cups, and such-like articles.

SHEFFIELD AND ITS HEALTH OFFICER.

WE recently commented[1] on the action of the city council of Sheffield in refusing to endorse the recommendation of its Health Committee to raise the salary of the medical officer of health, Dr. Harvey Littlejohn, from £500 to £750 by annual increments of £50. For so important a city as Sheffield this emolument of £500 a year is felt by all who appreciate the services which Dr. Littlejohn has rendered to the city to be totally inadequate. Whatever may be the feeling of the inhabitants in regard to the matter—and we do not think it is the feeling reflected in the action of the council—the medical profession in Sheffield is practically unanimous in the opinion that Dr. Littlejohn's salary should be increased. This has been shown in an effective manner by the presentation of a memorial signed by more than a hundred local practitioners, among them being Mr. Wm. F. Favell, J.P., consulting surgeon to the Sheffield General Infirmary and president of the Sheffield School of Medicine; Dr. William S. Porter, president of the Sheffield Medico-Chirurgical Society and honorary physician to the Sheffield General Infirmary; Mr. James H. Keeling, senior surgeon to the Jessop Hospital and consulting surgeon to the Sheffield Royal Hospital; Dr. Wm. Dyson, senior physician to the Sheffield General Infirmary and consulting physician to the Sheffield Royal Hospital; Mr. Simeon Snell, ophthalmic surgeon to the Sheffield General Infirmary; and Dr. W. T. Cocking, physician to the Sheffield General Infirmary. They also entertained Dr. Littlejohn at dinner at the Victoria Hotel. In a letter read from Mr. William F. Favell occurs the passage, "A first-rate medical officer of health is a great

[1] THE LANCET, Feb. 29th, 1896.

[1] THE LANCET, Feb. 22nd, 1896, p. 502.

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power for good in a community such as ours, and an incompetent one a great power for evil." It is needless to comment on this passage, and the memorial, excerpts from which we append, speaks for itself:—

"MEMORIAL.

"Sheffield, February, 1896.

"DEAR DR. LITTLEJOHN,—We, the undersigned members of your profession, resident in Sheffield and the vicinity, have observed with regret the refusal of the city council to grant an increase of your stipend. ..... If the services of a competent officer are to be retained it will, in our opinion, be necessary to raise the remuneration attached to the office of medical officer so as to bring it more in accord with that found in other important towns in the kingdom, and which shall bear a better relative proportion to the (by no means more important) positions held by other city officials. ..... The notification of diseases, which is so liable to occasion friction, has been carried out by you with such courtesy towards your professional brethren that not only has the city been a gainer, but your relations to your *confrères* have been most cordial and harmonious."

TETANY TREATED BY THYROID EXTRACT.

IN a recent number of the *Archives of Pediatrics* Dr. John Thomson of Edinburgh records a case of tetany in a rickety child fifteen months old who was treated unsuccessfully with thyroid. The condition of tetany had become established four days before the child was seen, and Dr. Thomson was induced to try the thyroid extract from remembering the frequency with which tetany has been said to occur in cases in which the thyroid gland has been excised. No change was made in the diet for some days and thyroid tabloids were given. The child, however, continued steadily to get worse, but rapid improvement took place when a suitable dietary was instituted. Dr. Thomson alludes to the remarkable results obtained by thyroid treatment by Dr. Bramwell and also by Dr. Gottstein and he points out that there are probably very essential differences between the idiopathic tetany of adults and the commoner form in children so frequently, if not invariably, associated with rickets. Yet from the similarity of the symptoms it might be expected that what was beneficial in one would be beneficial in the other. Dr. Thomson's case, however, does not indicate this, although it must be confessed that the trial was not quite a conclusive one.

TAKING THE OATH.

AMONG the many reforms relating to the health of the public which THE LANCET has strenuously advocated the question of swearing with the uplifted hand has occupied a prominent place. It is a question of momentous importance to every person who has to enter the witness box, inasmuch as on it may depend the health not only of themselves but of everyone who is near and dear to them. To recapitulate the arguments which have been brought forward and the proofs which have been given to demonstrate the evils which may arise from the form in which the oath is generally administered in English courts is unnecessary, as we have done so repeatedly, but the following piece of testimony, which we extract from a paper on the Administration of Oaths in British Courts of Law and elsewhere in Great Britain, read before a recent General Chapter of the Guild of St. Luke by Mr. Frederick Lowndes, and printed in the Monthly Paper of the Guild for March, should be attentively perused by all whose duty involves the necessity of taking the oath. Says Mr. Lowndes:—

"Personally, nothing can be more distasteful to me than to appear singular or different from other witnesses, whether they be or not my professional brethren. Let me give briefly my reasons and my experiences. Nearly twelve years ago I gave evidence at the police-court before the grand jury and in the Crown Court, the case being one of rape. The first witness, a girl aged fourteen, was suffering from constitutional syphilis, and all the other witnesses, myself included, were sworn on the same Testament. Again, since that date I have had to appear as a witness very frequently—on one occasion five times in one day. For the reasons I have already given I must, on grounds other than those which may be called sanitary, prefer the Scotch oath."

Will not such testimony as this break down the bias of the judges and magistrates who stand in the way of a necessary reform? We have raised our voice again and again against the practice of kissing the book, and there must be but few of the general public who do not know that they need not kiss the book when taking the oath. At the end of January last it gave us pleasure to refer to the praiseworthy example of his Honour Judge Emden, who had notices posted up in his county court calling attention to the fact that the book need not be kissed when taking an oath. The officers of the court were also instructed to tell witnesses when being sworn that they need not kiss the book unless they liked. Who among our officers of the law will follow his example

THE CHALYBEATE WATER OF HAARLEM.

HAARLEM, the Dutch city famous among many other things for the great organ in the cathedral and known everywhere for the cultivation and exportation of tulips and other flowering bulbs, possesses a chalybeate spring which promises to give that part of Holland a reputation as a health resort. It is stated that iron is present in the water in a large, though not excessive, amount, each litre containing 11 centigrammes of oxide (= about 7 grains per gallon) as well as 3·24 grammes of sodium chloride and a small proportion of manganese. The temperature of the spring is 11° C. (= 51·8° F.). It has been named the Wilhelmina Bron, no doubt after the youthful Queen of Holland. A handsome pump-room has been erected, and there is a bathing establishment in which chalybeate baths at any temperature, with or without the addition of carbonic acid, may be had. There are also rooms for sulphur baths, salt baths, mud baths, douche baths in all possible forms, vapour baths, and a gymnastic department with appliances for every kind of exercise. A description of these necessary adjuncts has been written in English by Dr. C. E. Daniels of Amsterdam, who adds numerous medical testimonials as to the utility of the water and its non-liability to produce constipation. Haarlem is a city of about 59,000 inhabitants, and it is, of course, very easy of access.

OUR ROADS.

SOME eighteen hundred years have passed since our forefathers were taught the art of road-making by the armies of Cæsar, and it might have been thought that this period was sufficiently long for evolution to have produced the most perfect type of *via*. Unfortunately this is not so, as all who travel much on our great highways (and notably medical practitioners) must know, and we agree with the author of a pamphlet issued by the Roads Improvement Association when he says "we as a nation have failed to keep abreast of the times, while our neighbours across the Channel ..... give us a long start." No doubt the advent of railroads has much to answer for as regards our apathy in this respect, but good roads are a fundamental necessity for a country like England, which owes not a little of its greatness to the arteries of commerce commenced by the Romans and recorded in the "Itinerary of Antoninus." With the advent of the horseless carriage the roads of England are likely to prove of even greater importance in the future than they have done in the past, and the work of the Roads Improvement Association,

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whose address is 57, Basinghall-street, deserves encouragement. The Association is doing good work by directing the attention of the various surveyors and other highway officials throughout England and Wales to the system of road-making and repairing advocated by the Association, which appears to be much appreciated not only by the public in general and by cyclists in particular, but by the various authorities who have charge of our highways and who in many instances have adopted its principles and circulated its instructions amongst their men. Although the services of the committee of the Association and those of its secretary are given voluntarily the expenses attaching to the distribution of a large quantity of literature are necessarily great, and the support of the public is needed.

THE SMALL-POX OBJECT LESSON AT GLOUCESTER.

APPEALING for donations in aid of the small-pox stricken community at Gloucester the Very Reverend H. D. Spence, the Dean of that city, in a letter to the *Times*, concludes with the following remarks: "If the serious object-lesson which Gloucester now presents be laid to heart by those cities of England who are content to rest upon the dilatory proceedings of the Commission on Vaccination appointed some seven years ago, and in consequence are neglecting the one precaution, vaccination, which it has been proved by overwhelming evidence can alone save our people from the horrors of this fatal malady, the sufferers for whom we plead so earnestly will not have suffered in vain." These are words of wisdom, and we hope that the cities referred to will no longer delay the enforcement of the one prophylactic which can prevent epidemics of the deadly scourge.

A CENSUS FOR EGYPT.

ALTHOUGH it is quite true that the reform record in Egypt is, as Lord Cromer puts it, one of "steady and unostentatious progress," there are, nevertheless, some matters to which we venture to think a sufficiency of attention has not as yet been directed. In the first place it is absolutely necessary that an accurate census of the people should forthwith be established. This very elementary step towards civilisation should have been taken long since; but, on the principle of better late than never, we trust that no more time will now be lost. The sanitary department makes laudable efforts to furnish vital statistics, but for lack of a reliable basis to work on the results are shorn of half their value. There is not a civilised State in the world in which the rulers do not regard a correct census as a matter of the utmost importance, and it little becomes Englishmen to allow the country they are reforming to be behindhand in this respect. In Egypt the cost of a census would not be great, for a good deal of the machinery is already in existence, and the Sheikhs and Omdehs are said to be thoroughly alive to the beneficent intentions towards them of their English controllers. Now that the finances of Egypt are so marvellously prosperous it is surely not unreasonable to ask, in the interests of hygiene and demography, that steps should be immediately taken to establish a trustworthy census throughout the country.

VAGRANTS.

THE part played in the dissemination of infectious disease by persons of the vagrant class and particularly just now the interest centred in the West of England and South Wales by reason of an extending small-pox outburst render the issue of the latest Parliamentary return of the numbers of vagrants relieved in England and Wales more than usually important. As compared with the first day of 1891 the vagrants relieved in the several unions on Jan. 1st, 1895, showed an increase of from 4960 to 8810. These numbers were made up of 4204 adult males, 553 adult females, and 164 children under sixteen years of age in 1891; and of 7631, 879, and 297 respectively in 1895. Speaking of proportions, the adult females have not largely increased their numbers, but the disparity between them and the males in actual amount remains enormous and has continued to be increasingly great. In London the aggregate of 754 vagrants relieved in 1891 has grown to 1211, and in the groups of counties comprised in the South Midland, West Midland, North Midland, and Welsh divisions the totals have more than doubled themselves in the four years. Taking as an example the county of Gloucester, where small-pox now rages, we find that on the first day of each successive half-year since January, 1893, the vagrants relieved have been 69, 134, 134, 56, and on Jan. 1st, 1895, as many as 146. This increase, however, has no relation to the vagrants treated in the city workhouse, which on the latter date were only 3 in number. Increases in Yorkshire and the counties still further north have been relatively small.

INTERESTING GIFT TO THE BRITISH MUSEUM.

MR. E. WHEELER, a druggist of Clifton, has recently presented to the British Museum an accurate and scientific register of the actual form and colouring of 2500 of the 3000 specimens of fungi which occur in the British Isles. The work is the labour of many years and consists of twelve volumes of water colour drawings. In acknowledging this handsome gift Professor Flower says: "The trustees desire me to assure you of their high appreciation of the extreme accuracy and beauty with which you have delineated the character of the originals, and to return you their cordial thanks for so munificent a donation to the national collection of natural history."

THE RECENT OUTBREAK OF ILLNESS AT TWYFORD SCHOOL.

DR. FREDERICK W. ANDREWES, in his report on the recent epidemic of sore-throat at Twyford School, gives it as his opinion that the outbreak depended solely on the introduction of diphtheritic poison from outside the school, and that its spread was not affected in any way by lack of proper sanitation. His investigations show that the ventilation, water-supply, and milk-supply were and are most satisfactory. The drainage in a few minor instances might be improved.

THE next annual meeting of the Medico-Psychological Association of Great Britain and Ireland will be held in London, at the rooms of the association, 11, Chandos-street, Cavendish-square, W., in the latter part of July. Notice of the dates and other particulars will be issued in due course, and the council confidently hope that a large gathering of members will be present to show their interest in the work of the association, to read papers, and to take part in the discussions.

THE Huxley Memorial Committee will strike a medal, among other purposes, for award by the Royal College of Science, London. The committee desire designs for this, and particulars will be furnished by the honorary secretary of the Huxley Memorial Committee, Professor G. B. Howes, Royal College of Science, South Kensington, S.W.

THE next meeting of the Odontological Society of Great Britain will be held on Monday evening next, at eight o'clock, when papers will be read by Mr. A. Marmaduke Sheild, Mr. Storer Bennett, and Mr. Charles Tomes, F.R.S.

MR. CHAPLIN, President of the Local Government Board,

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will receive a deputation from the Workhouse Infirmary Nursing Association on Wednesday next, April 15th, at 2.30 P.M., at the House of Commons.

THE Prince of Wales has fixed Wednesday, June 10th, for the festival dinner at which he will preside at the Imperial Institute in aid of the re-endowment of Guy's Hospital.

ON THE ORIGIN AND HISTORY OF SOME DISEASE-NAMES.

BY WILLIAM SYKES, M.D. DUNELM., F.S.A.,
A CORRESPONDENT OF THE NEW ENGLISH DICTIONARY.

WHILE the New English Dictionary is working out in an exhaustive manner, and on historical lines, the origin, development, and use of every word in the English language, it will not be amiss for members of the medical profession to review their own terminology, both as a small contribution to this monumental work and as an independent attempt to discover the principles on which certain medical terms have come into existence originally. This, again, may not be without use in settling the lines on which they may be most usefully formed and developed in the future. Our vocabulary must, in the first instance, be sought out in the medical literature of all ages: not in the systems of nosology which have been so abundantly produced from the time of Cullen to the present day. The language of a profession is formed from the words actually spoken, written, and read by its members, just as the language of a country consists of the words used and understood by the people, not of the inventions, suggestions, emendations, and alterations of a few scholars in their studies. The subject, indeed, under consideration is the vocabulary of the science of medicine as employed by English writers in English medical works. One cannot help noticing in the first place that, however much Latinised or Grecised the names of diseases may have been in the past, medicine has really collected her vocabulary out of every language under heaven and from every age. Folk-speech dealing with rough objective symptoms has given us no mean proportion of our disease names, folk-adaptation from neighbouring peoples many more, folk-degradation of the language of the learned a few, while the deliberate coinage of writers has of course added largely to the list. In many instances we are able to trace the history of a medical word from its first inception and to decide at once to which of the above classes it belongs; in others we can even name the original birthplace of a word, say from what language it has been adopted, and give almost the exact date of its actual employment in our literature, yet at the same time be unable to perceive the reason of its adoption. The word "scarlatina" is an example of this difficulty. We believe the term to have been first used in English medical literature by the great Sydenham in his "Observationes Medicarum," published in 1676.[1] We also know that the word is of Italian origin, having been actually employed by an Italian writer in 1527,[2] and that it is derived from the Italian "*scarlatto*" (scarlet) in allusion to the colour of the patient's skin; but why Sydenham, who, with the doubtful exception of a period of study at Montpellier, had never been abroad, should have inserted an Italian name amidst a Latin list of maladies is difficult to explain; indeed, we have little to offer beyond conjecture. Could Sydenham's friend, John Locke the philosopher, having seen a case of the disease in his company, have suggested to him the name bestowed upon such abroad? We know that Locke was at Montpellier about the time of the publication of this very work, and we also learn from one of Sydenham's letters[3] that Locke "had troubled himself in visiting with Sydenham very many of his variolous patients especially." May it have been in some communication from him at Montpellier, or elsewhere abroad, that Sydenham received an account of the malady with its name? We know, however, from that quaint but most excellent writer, James Cooke of Warwick, that the English term "scarlet fever" as applied to this very disease was in provincial use in Sydenham's own time. The first edition of Cooke's "Mellificium Chirurgiæ, or Marrow of Surgery," preceded that of Sydenham's "Observationes Medicarum" by a year, while its fourth edition, from which I quote, appeared only nine years later. In what edition the passage I extract was first inserted I cannot, in the absence of the earlier editions, at present ascertain. In his fourth edition, however, Cooke describes a disease he calls "rosalia,"[4] as showing "red, fiery spots which break out at the beginning of the disease all over the body, as if it were a small *erysipelas*, though the tumour is hardly discernible." "They sometimes," he continues, "break not forth till the fourth or fifth day; in the progress of the disease they sometimes possess the whole body, so that it looks as though it were all on a red fire, which colour is again changed into spots as at the beginning, which vanish upon the seventh or eighth day, the cuticle falling off in Scales or great Fleaks. The first and last of these [i.e., small-pox and rosalia] were at Warwick," he says, "at the writing hereof, the last going under the name of scarlet fever." It is possible, if Sydenham originally wrote his works in English, as has been stated, and was indebted to Dr. Mapletoft or another hand for his Latin translation, that he used the English term "scarlet fever" and owed the Italian "scarlatina" to his translator. It is at any rate a curious fact, as Dr. Mason Good notices on Dr. Willan's authority,[5] that "scarlatina" was first used by British writers — as indeed has continued to be the case ever since—although Dr. Good remarks[6] that "in saying that the denomination scarlatina was first applied to the disease by British writers Dr. Willan can only mean that it was by British writers first applied *technically* and introduced as a professional term into the medical vocabulary; for the term itself is Italian and was long a vernacular name in use on the shores of the Levant before it was imported into our own country." Be the reason of its adoption what it may, "scarlatina" affords an excellent instance of the uselessness of attempting to supplant a widely-accepted disease-name by some more elegant or scholarly synonym. Dr. Mason Good, in his day a great nosologist and classifier of disease, made a deliberate attempt during the early third of the present century, when his works were in vogue, to replace "scarlatina" by the old term "rosalia." He wrote[7] that "scarlatina is a barbarous and unclassical term, which has unaccountably crept into the nomenclature of medicine upon the proscription of the original and more classical name rosalia," which he states it to be his intention to restore. "It will not," he says, "be the fault of the present author if the correction so universally called for in the case before us should be postponed to another age, or the error complained of be charged upon future nosologists." He goes on to mention De Haen, Morton, Huxham, Heberden, and others as objecting to the use of the term "scarlatina," and, although he mentions Dr. Willan as employing it, he declares that even he considered it necessary to apologise for its continuance on the ground "that, however offensive the term might be to a classical ear, having been first employed by British authors, it could not well be displaced, having obtained admission into all the systems of nosology." Yet, in spite of this consensus of the opinions of great men, we find the word "scarlatina" as commonly used to-day as when Dr. Mason Good wrote, while the suggested amendments of himself and his authors are entirely forgotten in favour of the popular term, which has become so naturalised in our language that its employment is quite as usual as its English equivalent "scarlet fever," which is looked on by the poor as the name of a severer malady, the question being frequently asked whether a patient be suffering from "scarlet fever" or only scarlatina.

Another disease-name of Italian origin is influenza, the exact date of whose introduction into British medical literature is a little uncertain. It was established in both popular and medical use during the epidemic of 1782.[8] Mr. Huxham, who wrote in 1758 an account of the previous epidemic of 1743, says: "This fever seems to have been exactly the same disease as that which in the spring was rife all over Europe,

[1] Sydenham: Opera Omnia, Greenhill's edition, lib. vi., cap. ii., p. 243. Published for the Sydenham Society in 1844.
[2] Hirsch's Handbook of Geographical and Historical Pathology: New Sydenham Society's Translations, vol. i., p. 172 (note 10).
[3] Latham's Translation of Sydenham's Works (Sydenham Society's edition), vol. i., Life, p. 72.
[4] Mellificium Chirurgiæ, or Marrow of Surgery, fourth edition (1685), part vi., section ii., p. 214.
[5] Dr. J. Mason Good: "Study of Medicine," fourth edition, 1834, vol. ii., p. 318.
[6] Loc. cit., p. 318.
[7] Ibid., p. 317.
[8] Thompson's Annals of Influenza, Sydenham Society's edition, p. 118 et seq.

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termed the influenza"; while Dr. George Baker, in describing the immediately preceding epidemic of 1762, writes: "At Norwich ..... according to the testimony of the distinguished physician William Offley ..... a much greater number fell victims than were destroyed by a similar pestilence in 1733 or by the more severe visitation, called influenza, in 1743." Dr. Watson, in a letter to Dr. Huxham dated Dec. 9th, 1762, states that "it is nearly the same disease which was at London in April and May, 1743, and *then called influenza*, the name applied to it in Italy." We may from this evidence assume that the term was first introduced into England during the epidemic of 1743, unless, indeed, Häser's statement, quoted by Dr. Creighton,[9] that the word was used in the title of an Edinburgh graduation thesis in Latin as early as 1703, be more than a clerical error. "Influenza," then, is a term directly imported into England from Italy and imposed on our medical terminology by popular approval. It is not quite plain, however, what the original Italian word indicated in reference to the disease. Zuelzer[10] says that it refers to the assumed influence of the atmosphere or climate, or—from the further signification of the word as something fluid, transient, or fashionable—to a name commonly used in the epidemic of 1709—viz., "die Galantrie-Krankheit" or "das Modefieber."[11] Dr. Creighton, however, remarks[12] that, while the word is usually taken to mean the influence of the stars, and may even have got that sense by popular usage, the original etymology was probably different. He points out that as early as 1554 the Venetian Ambassador in London called the sweating sickness of 1551 an *influsso*, which is the Italian form of *influxio*. The latter is the correct classical term for a humour, catarrh, or defluxion, the Latin *defluxio* itself having now a special limited meaning. It was therefore not astrology, but humoral pathology, that brought in the word *influsso* and *influxio*, out of the former of which word Dr. Creighton suspects that "influenza" grew, rather than out of any notion of influence rained down from the heavenly bodies. All this is, however, little more than conjecture, and can only be set at rest by a resort to Italian literature of the seventeenth and eighteenth centuries, an inquiry conducted on those historical lines which the "New English Dictionary" so well advocates and exemplifies. Curiously enough, the same popular caprice which placed the name "influenza" in the list of specific diseases almost succeeded in finally degrading it into a synonym of a common cold. The great epidemics of the disease in 1833 and 1847 fixed the association of the word so closely in connexion with a catarrhal condition that an influenza cold became an admitted term for an ordinary cold or coryza, especially if attended with sharp fever.[13] It was only the present cycle of outbreak, commencing in 1889, which disassociated the name with any form of catarrh.

In or before 1782 popular favour established the name "la grippe" in as firm a condition of acceptance in France as its rival, "influenza," in England. In this, folk etymology probably assisted. "La grippe" is, according to Joseph Frank,[14] derived from the Polish word *chrypka* (raucedo), but was at once in France referred for its etymology to the French verb *agripper* (to seize), the sudden onset of the attack in those afflicted apparently rendering this derivation a very likely and apt one. A similar instance of transferred derivation took place in the word "dengue," as will be noted directly. Attempts have been made, entirely unsuccessfully, however, to popularise the French *grippe* in England in place of the Italian *influenza*.

With regard to the derivation of the word "dengue," it appears that the term in Spanish means fastidiousness or prudery, also a female dandy; and, as the disease dengue is, on account of neuritic or muscular pain, accompanied by a stiff, ungainly gait and awkward bearing, when it first broke out in Cuba in 1827 no doubt was entertained that its title referred to this peculiarity, as was shown by its immediate translation in the English West Indian possessions into "dandy fever," a name it yet bears. Another popular synonym, "the giraffe," is no doubt referable to the same fact and derivation. Dr. Christie has, however, shown[15] that dengue is really a Swahili word, the full name of the disease in Zanzibar being *ka dinga pepo*, which may be thus construed: *Ka* is a partitive article meaning "a" or "a kind of"; *dinga*, *dyenga*, or *denga* means "a sudden cramp-like seizure"; while *pepo* signifies "an evil spirit or plague." And it was the Swahili *dinga* or *denga* which was confused with the Spanish word *dengue* on the appearance of the disease in the Spanish possessions in 1827. A still more absurd explanation of the meaning of dengue, than the Spanish one in question, has been attempted by some of our own writers. They explain it, by an ingenious method of double beheading, to be nothing more than (A)den (A)gue.

Although the history of the adoption of the French word "diphtheria" in English medical literature, as well as its origin and final alteration, are much better known than that of some of the above terms, yet on account of certain verbal peculiarities which mark its adaptation into English form it is worth recapitulating. In 1821 Brettoneau of Tours read a communication before the then Académie Royale de Médecine on Croup and Malignant Angina, in which the following paragraph occurs[16]: "Let it be permitted me to designate this phlegmasia by the name of *diphthérite*, derived from *διφθέρα, pellis; exuvium, vestis coriacea*." In the same paper the adjective *diphthéritique* also occurs frequently. This new designation for a certain form of croupous inflammation was imported into English medical literature to a somewhat limited extent and in the modified form "diphtheritis." It did not, however, become a part of our terminology and was nearly invariably followed by reference to its French introducers and to French observations. It was accompanied in these instances by its adjective, Englished into "diphtheritic." In 1855 Brettoneau, in a fifth memoir,[17] altered his term *diphthérite* into *diphthérie*. Sir J. R. Cormack[18] asserts that he did this because he had discovered that the disease was not of an inflammatory character. Is it not equally probable that someone had drawn his attention to the fact that his original coinage was made on a mistaken model? It was framed after the example of such words as "iritis," "bronchitis," "laryngitis," &c., where, however, the completed word is composed of two elements, one indicating the region or part affected—e.g., "ir" from "iris" in "iritis"—the other the mark of inflammation, "itis." In Brettoneau's term, however, the primary element of the word dealt with the pellicular result of the inflammation, not at all with the part inflamed. Analysed on the model of the other words ending in *itis*, Brettoneau's coinage resolved itself simply into "the inflammation of a skin or pellicle" instead of into that which he desired to imply—viz., inflammation characterised by the production of a skin or pellicle.

At the same time that Brettoneau, from whatever motive, altered his new substantive from *diphthérite* into *diphthérie* he also amended the adjective *diphthéritique* into the form *diphthérique*. In 1857 a historical epidemic of the disease crossed the Channel from France to England, bringing with it its eagerly adopted French title *diphthérie* in the slightly altered form "diphtheria." Sir J. R. Cormack[19] states "that diphtheria was a word almost unknown in English medical literature till 1859, when the Sydenham Society published a volume of memoirs on the disease," but in this he is quite mistaken; the word made its appearance in the English medical journals as early as 1857, while those of 1858 actually abounded with it, as did the American professional papers for the same year. Its acceptance was widespread and immediate, and it at once became an established member of our language. Not so with the amended form of its adjective *diphthérique*, which a few purists vainly endeavoured to naturalise as "diphtheric." But, with the capriciousness which characterises popular word-adoption, "diphtheric" never became general, and, while Brettoneau's original substantive "diphtheritis" was relegated to the limbo of disused words, its derived adjective, "diphtheritic," was universally adopted in this country, and we have the curious spectacle of a substantive "diphtheria" and a resulting adjective "diphtheritic" which could by no correct method of derivation have been formed from it in a legitimate manner. During the last few months I have noted with some pleasure that a more correctly formed derivative adjective, "diphtherial," has come into vogue, which may, perhaps, in course of time perform that which the equally

[9] History of Epidemics in Britain, 1894, vol. ii., p. 304.
[10] Ziemssen's Cyclopædia of Medicine, English translation, vol. ii., p. 517.
[11] I.e., "Gallantry disease or fashionable fever."
[12] Loc. cit., vol. ii., p. 304.
[13] Creighton: Op. cit., vol. ii., p. 304.
[14] Quoted in Ziemssen's Cyclopædia of Medicine, English translation, vol. ii., p. 517.
[15] Glasgow Medical Journal, September, 1881. See also New English Dictionary, under Dengue.
[16] New Sydenham Society's Memoirs on Diphtheria, 1859, p. 20.
[17] Op. cit., p. 173.
[18] Quain's Dictionary of Medicine, 1883, p. 374, under Diphtheria.
[19] Loc. cit.

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correct "diphtheric" could not do—viz., entirely displace the older and incorrect "diphtheritic."

Croup, the name of a disease which is by some thought to be really diphtheria, was transferred during the last century from the Lowland Scottish dialect into a permanent position in our medical nomenclature. In parts of Scotland "to croup" is a verb meaning to cry hoarsely, to croak as a raven, to make a hoarse crowing sound. It appears to be allied in derivation to the English provincial word "roup," applied to a disease of fowls. The verb was also applied to the sound caused in the disease, a use not yet quite obsolete; in some medical works and in many nurseries a child is still said "to croup" when emitting the brassy, harsh cough symptomatic of the complaint. Afterwards, by extension, the term "croup" was doubtless transferred to the disease itself. It was first used in medical literature by Dr. P. Blair,[20] of Cupar, Angus, in 1718, who in describing a hitherto unnoticed malady gave it its local designation. It was not, however, until 1765, when Dr. F. T. Home,[21] another Scotchman, published his treatise on the malady, that it obtained a permanent place in our nosology as a specific disease under its provincial name.

Measles is an old English disease-name which so-called classical nosologists have vainly attempted to replace by such synonyms as "morbilli" and "rubeola." Dr. Creighton[22] says that originally the term "measles" meant the leprous—first in the Latin form *miselli* and *misellæ* (diminutive of *miser*), and that John of Gaddesden, by haphazard bracketing of the disease of measles and the tubercular nodules of leprosy under the common name of "measles," caused the word to be divorced from its original connexion with leprosy and restricted to its common use. "It can," he concludes dogmatically, "hardly be doubted that we owe the English name 'measles' as the equivalent of morbilli to John of Gaddesden." In this, perhaps from taking too exclusively English a standpoint in his examination of the literature of the subject, Dr. Creighton is probably in error. Dr. Skeat,[23] a remarkably accurate writer, declares, on the contrary, that the word "measles" is wholly unconnected with the Middle English *mesel*, a leper, which merely meant originally "a wretch," from the old French *mesel*, Latin *misellus*, the diminutive of *miser*, wretched. Measles is, he says, derived from the Dutch *maseln* (measles); the disease is also called in Holland *masel-sucht*, the measle-sickness, so translated by an old English writer. The literal sense is "small spots." The original word occurs in the Middle High German *mase*, Old High German *masa*, a spot. Hirsch[24] also states that the English word "measles" corresponds to the German *Maal* and *Masern*, and the Sanscrit *masura*, spots: Doubtless it is to this meaning of spots, hence spotty, that we owe the term "measly pork," as applied to the meat of the pig when infested with scolices of tænia.

Of names deliberately invented by medical scholars of set purpose for the designation of diseases or their symptoms some have taken a permanent place in our language and literature, while many more have sunk back into a merited oblivion. Of the former class many were coined to describe diseases or conditions previously unknown, and passed into common acceptation with the recognition of the existence of the maladies they described. Probably "bronchitis" may be taken as an apt illustration of this class. The word was introduced into use by the English Dr. Badham in 1810,[25] and afterwards by the German J. P. Frank in 1812.[26] The disease itself had been hitherto little recognised or investigated under its old name of "peripneumonia notha," so that the alteration in name not only signalised an improvement in both pathology and treatment, but also accompanied a description of disease which familiarised both practitioners and the people with an easily recognisable and striking affection, very common among the poor, and was thus adopted, once and for ever, in the folk-speech of the country.

Other words of this successful class of deliberate scientific coinage have held their ground simply because they were invented to meet the requirements of the learned in regions which, lying beyond the ken or need of the vulgar, were the sole possession of science. The word "aphasia" is an example of this series, the pathological condition it represents being wholly, and the clinical condition nearly, outside the observation and analysis of laymen. Therefore the word was forged by scholars for scholars, after due discussion and alterations, which would have been impossible in the case of a word which was amenable to the disturbing process of public approbation or disapproval.

Trousseau[27] tells us that "the affection now called 'aphasia' was in 1841 termed 'alalia' by Professor Lordat, and that in 1861 M. Broca changed this name for that of 'aphemia.' But M. Chrysaphis, a very distinguished Greek scholar, and himself a Greek, although accepting the term 'alalia,' proposed as a better one that of 'aphasia,' derived from α, privative, and φάσις, speech. M. Littre, whose authority is so great, and M. Briau likewise preferred the word 'aphasia,' and all three concur in rejecting 'aphemia.'" Trousseau himself had at first adopted the name of "aphemia" after M. Broca, but afterwards, on the authority of the scholars named above, substituted for it that of "aphasia." To complete the transaction the German, Küssmaul, has more lately annexed Professor Lordat's discarded word "alalia," and applied it to stammering, an entirely different disease.[28]

One of the most successful and extensive artificial systems of nomenclature in a kindred branch of science was that of Dr. Barclay. In 1803, being then a teacher of anatomy in Edinburgh, he published a new system of anatomical nomenclature, which was so successful that a number of his suggested terms were at once adopted by anatomists and incorporated in their works. Many of them remain in daily use even now. He recommended about twenty-five new adjectives, or adjectives with new meanings, to denote the various aspects and situations of the organs and limbs, &c. His list includes such useful and common words as mesial, lateral, dextral, sinistral, peripheral, central, proximal, and distal.

Thus we see physicians and scholars forging new names as blacksmiths forge horseshoes, but it is, as noted above, only while these new creations are retained in the calmer atmosphere of science that they maintain their vitality. Once let these word-smiths begin making new names for folk maladies, and their artificial creations immediately crumble to pieces before the more robust denizens of the land. It is doubtful, for instance, if Barclay's system of anatomical nomenclature would have so rapidly commended itself if applied to some more popular science. As it was, the moment Barclay transgressed the genius of our language his proposed alterations were ignored and are now forgotten. This was so in the case of his new system of adverbs, of which he suggested a like number with his adjectives. While the latter ended in "al," the former concluded with "ad," and we had "laterad," "dextrad," "sinistrad," and a score or so more of like monstrosities, a very few of which struggled on in very occasional use for about forty years,[29] and are now quite obsolete. Even when scientific coinages have been adopted into the language of the people it is not always certain that men of fair culture correctly analyse them into their original constituents and real signification. In a recent novel of an American author, Frank Stockton,[30] the following sentence occurs: "She was, in a certain sense, a floraphobist, and took an especial delight in finding in foreign countries blossoms which were the same or similar to the flowers she was familiar with in New England." Here the author has evidently formed his word "floraphobist" on some such imaginary model as hydrophobist, derived from hydrophobia, a well-known disease-name handed down to us from Celsus. But unfortunately the result arrived at is entirely opposite in meaning to what the writer intended. "Floraphilist" was the thing

[20] Miscellaneous Observations in the Practice of Physic, &c. London, 1718.

[21] Inquiry into the Nature, Cause, and Cure in Croup. Edinburgh, 1765.

[22] Op. cit., vol. v., p. 632.

[23] Concise Etymological Dictionary, fourth edition, 1894, p. 276, under Measles.

[24] Handbook of Geographical and Historical Pathology: New Sydenham Society's edition, vol. i., p. 154.

[25] On the Inflammatory Affections of the Mucous Membrane of the Bronchiæ. London, 1810.

[26] Interpretationes Clinicæ, i., 110.

[27] Lectures on Clinical Medicine: New Sydenham Society's Translations, vol. i., lecture vii., p. 218, note.

[28] Ziemssen's Cyclopædia of Medicine, English translation, vol. xiv., p. 633.

[29] A good résumé of Barclay's nomenclature will be found in Wishart's translation of Scarpa's Treatise on Hernia, Edinburgh, 1814, p. xiii. et seq. The latest anatomical work in which I have noted any instances of Barclay's adverbs is Todd's Cyclopædia of Anatomy and Physiology, 1849, &c. The question has been raised whence was the form ending in "ad" derived—in "centrad," for example. The New English Dictionary suggests it as derived from the Greek κεντρα δε, but the words are entirely Latin in construction, and, were, I doubt not, formed by the displacement of the Latin participle "ad" (to or towards) to the end of the new coined name.

[30] A Borrowed Mouth, and other Stories, 1887: Our Story, p. 271.

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the author desired to indicate, but, evidently confusing in his mind the madness of rabies with the last section of the word "hydrophobia," he took it as tantamount to "mania," and deemed that a "floraphobist" was the same as a "floramaniac"—a somewhat unfortunate blunder, well illustrating the contention that mere scientific coinages, however ancient, hardly ever sink into the understandings of the people so completely as native terms do.

When, however, a disease-name of scientific invention has once become welded into the language of the nation it almost invariably holds its own against subsequent attempts of scientists at emendation, just as a folk-name does. Take typhoid fever, for instance. Originally introduced by Louis in 1829 in his classical memoir on the subject,[31] *fièvre typhoïde* has been in general French use ever since, and was widely adopted in England about 1851. From an imaginary possible confusion between the adjective "typhoid," as applied to certain conditions of an asthenic, non-specific nature, and the specific fever itself, Dr. Murchison was led to invent an improved name, "pythogenic"—that is, filth—fever. This was, on the obvious ground of incorrect suggestion, at once objected to, was never very widely accepted, and is now quite obsolete. Dr. Wilks of Guy's Hospital, for the same theoretical reason, proposed "enterica" or "enteric fever" as a preferable term. This has had a more general acceptance unfortunately, especially among medical writers connected with Guy's Hospital, and is frequently to be found in medical reports and works. It has, however, never gained a footing in the literature or language of the people, and will, therefore, when it has produced its only effect, that of confusing the lay mind, finally die a natural death. Meanwhile, even those very purists who object to the term "typhoid" as likely to confuse, agree that "enteric fever" is probably caused by the bacillus typhosus of Eberth. The German "typhus" in connexion with this disease is, in fact, to be retained, while the French "typhoid" is to be sternly rejected.

Beyond such historical interest as this paper may arouse, its aim is to draw attention to the principles on which disease-names have been successfully formed in the past and to offer a few suggestions for their formation in the future:—1. Since medical literature in this country has become essentially English, disease-names which are most in sympathy with the genius and structure of our language or are actually drawn from our speech are most suitable for adoption by us. Since the writing of our literature in Latin has for ever ceased, the attempted classicising of names introduced from other sources ought to be abandoned. It has, for instance, been attempted to Latinise "dengue" into "denguis," an absurd endeavour. 2. A disease-name once generally adopted should never on any pretence be changed. Such alteration only confuses the records of historical medicine. In many of the diseases described by older authors we vainly seek for their real nature under an unfamiliar nomenclature. On the other hand, imaginary disease-names invented in modern days for historical epidemics are equally misleading. The "black death" which ravaged Europe during the years 1348–50 with such terrible results is not to be found in any contemporary literature under that name, which has been shown by Dr. Murray in the New English Dictionary to have had no more recondite a source than Mrs. Markham's "History of England," published no earlier than the beginning of the present century for the instruction of children. 3. It is vain to attempt to replace a folk name or one widely adopted by the people by a new one deliberately coined by scholars, and this for the following reasons: first, whatever names may be accepted by medical men must be translated by them into the vernacular of their patients, and by a resulting reaction the vernacular name comes to be the commoner one with themselves; and, secondly, there is no continuity or unchangeableness in the terms invented by *savants*, which are amended, improved upon, and displaced by the next writer on the subject, or, even more absurdly still, by the very inventors themselves in a subsequent publication. A striking instance of this occurs in that excellent work, "Fagge's Principles and Practice of Medicine." In the first edition, published in 1886, German measles is termed "rötheln," but in the second edition, issued only two years later, it is promoted to the dignity of "rubeola." Meanwhile, some writers call measles themselves "rubeola" and others "morbilli"—a pretty confusion, indeed, for the subsequent historian to unravel. These nosologists are, indeed, like one of Thackeray's characters, Lady Southdown, who having forced her followers to accept Podger's pills and Jowler's religion, had by the time their adherence was secured become herself a doubter and expected them instantly to abjure those heresies, medical and theological, and to accept other prophets equally extreme. 4. All language is the result of natural growth and cannot be artificially created. It is, therefore, more scientific to accept the products of natural development than to indulge in an artificial and therefore ephemeral system of cultivation. 5. All disease-names are only labels by means of which the maladies themselves can be identified, discriminated, and classified, and those names are the best which are simple, distinctive, and express no theories of causation. It is the folk names which most often meet these requirements, and therefore deserve the widest adoption by us in the future.

Gosport, Hants.

[31] Recherches Anatomiques, Pathologiques, et Thérapeutiques sur la Maladie, &c., Paris, 1829.

THE LOCAL GOVERNMENT BOARD TWENTY-FOURTH ANNUAL REPORT (1894-95).

FOOD.

THERE was an increase in the number of the analyses made under the Food and Drugs Act during the last official year amounting to nearly 2300 samples over the number made in the previous period, despite which the returns show that the proportion of adulterated samples was considerably below the average of the past three years—viz., 10·3 per cent., which *is the lowest percentage of adulteration since the passing of the Sale of Food and Drugs Act in 1875*. We take this as a positive proof that with the increase of vigilance on the part of the authorities to exercise their powers there has resulted a distinct decline in fraudulent practices which, during the operation of the Act, is without parallel. We have again and again insisted that a greater number of samples per head of population should be taken, and that in those districts where the Act was inoperative through the inaction of the authorities the Local Government should stir them up to their sense of duty in this matter. And the result has been satisfactory. There is still room, however, for improvement, since the present report shows that in all there were thirty-seven districts with an aggregate population of nearly two millions in which the Acts were entirely or almost entirely ignored. What is it that prevents no less than eleven county councils and the town councils of thirteen boroughs (including Great Yarmouth with a population of 49,334) and the thirteen boroughs including important places like Norwich, Stockport, Northampton, Ipswich, Warrington, and Tynemouth from making the slightest attempt to carry out the Acts which aim at providing a pure food supply for the people? We cannot believe that the food supply of these districts is so free from reproach that the application of the Act would be superfluous. We rather think that it is indifference on the part of the authorities, and steps should be taken to represent to these authorities the important gap they leave unstopped in carrying out their administrative duties. Looking down the list of the various articles of food that were collected for analysis we find that milk as in previous years was the chief subject of adulteration. Of the 16,305 samples of milk analysed no less than 1868, or 11½ per cent., were returned as adulterated. There is little doubt, however, that many samples passed as genuine were probably watered so as to be just within the limits of average quality. Such specimens of milk can only be dealt with by fixing a fair but not too low standard. Bread appears to have been tampered with only to the extent of rather less than 1 per cent. of the samples examined. The percentage of adulterated samples of butter fell last year to 10·4 whereas in the previous report it was 13·7. With the exception of 1888 this is the lowest record since the passing of the Act. Of 1724 samples of coffee examined 180, or 10·4 per cent., were condemned, a result which, compared with previous records, shows a distinct improvement; 29 samples of sugar were condemned out of the 397 samples

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nalysed. This adulteration related chiefly to the use of olouring matter with beet sugar to imitate Demerara rystals. The practice of adulterating pepper to a very onsiderable extent appears to have very sensibly diminished, ince only 10 samples were condemned out of a total of 1609 nalysed; 50 samples of wine were passed except 1, which ras a British sherry proved to contain no alcohol, but com- osed of sugar, a little essence, and bisulphide of soda. The nly claim to sherry was its colour. About 7 per cent. of he samples of beer taken were condemned on account of xcess of salt, and there were cases also in which salicylic cid had been used as a preservative. Notwithstanding that n exceedingly low standard of strength for spirits was fixed y the Sale of Food and Drugs Act there is evidence of nuch adulteration of spirits; 17·7 of the samples were ondemned on this score. The penalties imposed amounted o £524 odd, representing 466 cases in which proceedings were instituted, 404 of which were successful. Of 1116 amples of drugs submitted for analysis, 125, or 11·2 per cent., were unsatisfactory. These were chiefly nitre, rhubarb, cream of tartar, and sulphur. Ten per cent. of the samples of ginger collected proved to be fraudulently mixed with spent ginger. Lastly, it is interesting to note that of the 39,516 samples analysed in 1894, all but 174 were obtained by officers of local authorities. The result showed adulteration to the extent of 10·3 per cent. The result of analysis of samples obtained by private purchase showed adulteration to the extent of 27·6 per cent. The Act is working very fairly well considering the difficulties that are connected with its administration, but we still urge that the results would be even better if there were less apathy on the part of many of our administrative bodies and if more samples were taken per head of the population. We should like to see, more- over, the barrier between Somerset House and the public analyst broken down, the question of standards settled, and an improved system of taking samples adopted. But these are points which we hope will be dealt with by the Select Committee on Food Products Adulteration, who have nearly finished their labours.

WATER.

Recent abnormal seasons, as, for example, a period of unusual drought followed by exceptional cold, have had a large share in bringing the question of metropolitan water- supply into peculiar prominence and have involved, of course, a more expanded treatment of the subject in the annual report of the Local Government Board. Increased storage is the question chiefly affected. Major-General Scott says that if reservoirs were constructed on a large scale for the purpose of impounding the river water during freshets the influence of the minimum or dry-weather flow of the Thames as a factor limiting the capacity of the river for the supply of the metropolis would be to a considerable extent eliminated.

The quantity of water daily abstracted for the use of the metropolis is but a small fraction of the average dis- charge and the withdrawal of the quantity taken by the companies can have no appreciable effect on the *régime* of the river in a general sense. This does not obtain, however, in the case of the Lea, although here also the impounding of water during freshets would avoid any serious reduction in the volume of discharge. On Aug. 8th, 1894, the East London Water Company were compelled to shut off the supply to three-fourths of the houses within their district between 8 P.M. and 6 A.M., which was continued until Oct. 28th, when in consequence of rain the water-supply rose rapidly and the constant supply was reverted to. Inadequate provision for storage was the cause of the failure to keep up the supply. The completion of the reservoirs provided for in the East London Company's Act of 1894 will about double the storage capacity available, but, as Major-General Scott observes, there is no finality in such works with a population increasing in that district at the rate of 20,000 persons per annum, so that the necessity for looking forward and beyond the scope of the authorised works will after a few years become apparent. In any case, all possible con- tingencies—drought and frost—must be provided against, and in adopting a basis for calculation the probable yield of water in normal weather is obviously no datum. All these are interesting observations connected with the projected new schemes for obtaining water further afield. The system of constant supply, we are glad to learn, has been considerably extended during the year and much waste has been prevented by a system of inspection and by the installation of waste indicators. To provide against emergency cisterns must still be employed, but a draw-tap on the supply-pipe should, as we have urged before, be used for drinking and cooking purposes. Interconnexion of the mains of several companies as a provision against the failure of one source of supply has been effected to some extent, but not so fully as is desirable.

Professor Frankland's report on the quality of the supply is full of interesting reading. He finds that the organic matter present in the river waters as delivered in London was to a very large extent of vegetable origin. On the whole, the degree of organic purity has been maintained. The report contains some interesting observations on the conditions most inimical to bacterial life in river water. The number of microbes in Thames water is determined mainly by the rate of flow of the river or, in other words, by the rainfall, and but slightly, if at all, by either the presence or absence of sunshine or of a high or low temperature. It is true that sunshine, as Marshall Ward has shown, is a powerful germicide, but it is probable, Professor Frankland thinks, that the germicidal effect is greatly diminished, if not entirely prevented, when the solar rays have to pass through a comparatively thin stratum of water before they reach the living organisms. He then proceeds to show the efficiency of the system of sand filtra- tion adopted by the water companies, in regard to the removal of organisms. The conditions of highest efficiency are next considered. It was impossible to refer to this subject without alluding to the admirable series of experi- ments undertaken by Mr. G. W. Fuller at the instigation of the State Board of Health of Massachusetts. The results of this investigation, coupled with those of Professor Frankland, are doing great service in demonstrating what really are the laws of water filtration. They afford, as Professor Frank- land observes in his concluding remarks, fairly conclusive data for the guidance of engineers of the London water companies in all ordinary seasons; but the severe weather which prevailed in England a year or so ago has brought to light some entirely novel phenomena affecting the filtration of water which will require to be carefully studied and which are at the present moment engaging his earnest attention. The results will be awaited with deep interest.

THE NILE CAMPAIGN.

ALL arrangements connected with the advance of the Anglo-Egyptian force seem to be progressing favourably, and the news that the force was advancing southward is stated to be already productive of good effects in giving confidence, on the one hand, to those tribes who are friendly and looking forward to being emancipated from the tyrannical rule of the Dervishes, and, on the other, in probably drawing off Osman Digna's force from the beleaguered garrison of Kassala in the directions of Suakim and Dongola. A Dervish force has reached Kokreb, a station fifty miles to the west of Suakim. The telegraph wire between Korosko and Murat Wells has been again cut, and the Dervishes are reported to be in considerable numbers on the Assouan-Berber road threatening the Murat post and probably intending, also, to make an attack on the Egyptian fort Heliab on the Red Sea about 200 miles north of Suakim. The garrison at Suakim has been strengthened, but it appears highly probable that the force at that station must be still further increased, and this could be easily and promptly done by sending there some vessels from the British fleet and a native force from India, which might not only aid in the defence of Suakim, but take part in the expedition in other directions if necessary. Some portions of our Indian army are admirably adapted for a campaign in Egypt; they are well suited for the climate and the work, and thoroughly disciplined and reliable. No doubt a very marked change has been effected in the Egyptian army under the discipline and leadership of English officers, and it may be confidently expected that the Egyptians will give a very different account of themselves under present conditions from what has hitherto sometimes been the case in their fights with the Arabs. Still, it has to be borne in mind that Osman Digna's troops are a very brave and formidable

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enemy, attacking their foes with a daring and fanatical impetuosity which the Egyptians might not be able to resist. The Soudanese portion of the Egyptian force, however, have always proved themselves in point of courage excellent and reliable troops in the field. But a contingent of specially selected troops from the native army of India is specially adapted, as we have said, to the country and this kind of warfare, and with a comparatively small number of English battalions added to the Egyptian force there would be no reasonable doubt whatever of the success of the expedition. It seems possible that an officer of high rank and proved capacity on Egyptian fields may yet be sent out from this country in supreme command of the expedition, and we quite concur with the writer of "Egypt and its Frontier" in the *Fortnightly Review* for this month in his very high estimate of Sir Redvers Buller's special and proved qualifications for such a post. Meanwhile, railway extension works are being actively carried out and very large quantities of railway plant and supplies have been pushed forward. Some engineering experts have also arrived at Wady Halfa *en route* for Sarras in order to examine and report on the work that has been done in this respect. The heaviest task has, of course, during the present stage of the expedition, fallen upon the transport department. The heat has of late been great—unusually great for the season, it is stated—and dust storms have occurred; but the force is in good health and spirits, and generally satisfactory progress has been, and is being, made in all that concerns the expedition. The greatest activity has prevailed at the Royal Arsenal, Woolwich, in fitting out and sending off stores for Egypt and the campaign. From all we can learn as to the efforts that have been made in Egypt and this country the medical and hospital services of the expedition should be well supplied with men and material. The expedition is no doubt an undertaking of difficulty, and altogether, apart from fighting, it may cost much in the way of loss of health and money. But the province of Dongola is a fertile, rich, and paying part of the Nile country, and the rule of the Dervishes is a tyrannical one. It is, after all, by opening out the communications—by means of railways and other facilities for commercial intercourse—between the Nile provinces and Egypt and Cairo that real progress will be made and peace established on a satisfactory basis.

LITERARY INTELLIGENCE.—An English translation of Dr. P. G. Unna's exhaustive treatise on the Histopathology of Diseases of the Skin, at the hands of Dr. Norman Walker of Edinburgh, is about to appear. The German edition, a volume of some 1200 pages, deals in a more exhaustive manner than has hitherto been attempted with the histological changes found in almost every known disease of the skin, and forms a monument to the accuracy, energy, and painstaking industry of the author. It marks a fresh step in the scientific study of skin diseases from an anatomical standpoint. But Dr. Unna's German, though of course good, is not of a kind which is easy to be read by those who are not perfectly familiar with the language. An English rendering of the work will therefore be welcome among English-speaking people. Numerous additional illustrations will be included, drawn from Dr. Unna's collection of specimens.

THE DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—An ordinary meeting of this society was held on March 25th, Dr. P. H. Pye-Smith, F.R.S., President, being in the chair. The following cases, &c., were exhibited:—The President: Photographs of Unusual Warts of the Face limited to the Tract of the Fifth Nerve and complicated by a Nævus which appeared before the Warts, the patient also having similar warts on the mucous membrane of the palate. Dr. T. D. Savill: (1) Morphœa Nigra in a girl aged thirteen years; and (2) (for Mr. Tay) Lupus Verrucosus. Dr. A. Eddowes: Lupus Erythematosus. Dr. P. S. Abraham: (1) Multiple Lupus (for Mr. Bidwell); (2) Prurigo of Hebra; (3) Vesicating Erythema; and (4) Pemphigus in a woman aged eighty years; also three cases for diagnosis. Dr. Eddowes read a paper on Warts on the Feet. Dr. Stowers exhibited microscopic sections of the Skin Eruption of Variola. The President, Dr. Bowles, Dr. Savill, Mr. Hare, Dr. Abraham, Dr. Eddowes, and Dr. Stowers took part in the discussions which followed. It was announced that the next meeting would take place on April 22nd.

THOMAS WAKLEY,

THE FOUNDER OF "THE LANCET."

A BIOGRAPHY.[1]

CHAPTER XV.

The Terrible Accusation of Malpraxis against Mr. Bransby Cooper.—The Style and Matter of the Libel.—Wakley Defends himself Personally.—A Legal Point decided in his Favour.—The Evidence for the Defence.

IN the preceding chapter it was indicated that the summary of the Hospital Reports as given by Wakley and his staff in THE LANCET would be limited to a consideration of the reports printed up to the year 1828. The reason of that limitation is as follows. On March 29th, 1828, there appeared in these columns the report of a case of hospital malpraxis, which led to the most sensational lawsuit that Wakley was ever engaged in, not excepting his suit against the Hope Fire Assurance Company. This was the case of Bransby Cooper *v.* Wakley. The report out of which the case arose was the most outspoken denunciation of a piece of hospital malpraxis possible to conceive. It was written in so sensational and even malignant a style that the harmfulness, nay, the terrible mischief, of sensational journalism was as remarkably illustrated by it as was the power for good of a strong vindication of the rights and usefulness of publicity. It was at once the very best and the very worst that such a report could be. To the public it did the greatest good. To the medical profession it did both good and evil. It inflicted a serious blow upon the prestige of the hospital surgeons. But the widespread repudiation by the rank and file of the profession of the systems that could sanction such treatment as was alleged to have been meted out to Mr. Bransby Cooper's patient did public honour to the feelings of medical men. On the whole the good may be said to have outweighed the evil. To the individuals concerned no half measures were possible. The plaintiff, Mr. Bransby Cooper, was inferentially called a murderer, and the defendant to justify his attitude followed the report by a leading article saying that he cared nothing for the result, but maintained the accuracy of his words, and not only his right but his duty to publish them.

The operation in question took place at Guy's Hospital, and was a lithotomy performed by Mr. Bransby Cooper, then a surgeon to the institution of three years' standing. The patient was a strong, middle-aged countryman, for whom the procedure of cutting for stone should not under ordinary circumstances have had any particularly grave risk. A definite rate of mortality occurred in such cases, and that should have been the measure of the risk. The operation, however, took an enormous time and resulted fatally. Was this time consumed in honest attempt to combat extraordinary difficulties—in which case the unlucky surgeon would have commanded the sympathies of the medical profession and the public alike? Or was it frittered away in unsurgical bungling? The article in THE LANCET left no doubt in the reader's mind what was the conclusion of the writer.

The report was headed:—

THE OPERATION OF LITHOTOMY BY MR. BRANSBY COOPER WHICH LASTED NEARLY ONE HOUR!

A footnote to the title was as follows: "The following passage occurs in John Bell's great work on surgery: 'Lon

[1] Chapters I., II., III., IV., V., VI., VII., VIII., IX., X., XI., XII.-XIII., and XIV. were published in THE LANCET, Jan. 4th, 11th, 18th, and 25th, Feb. 1st, 8th, 15th, 22nd, and 29th, March 7th, 14th, 21st, and 28th, and April 4th respectively.

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and murderous operations, where the surgeon labours for an hour in extracting the stone, to the inevitable destruction of the patient' "; while the opening passages of the report show well the spirit in which it was conceived and written.

"We should," it ran, "be guilty of injustice towards the singularly gifted operator, as well as to our numerous readers, if we were to omit a full, true, and particular account of this case. It will doubtless be useful to the county 'draff' to learn how things are managed by one of the privileged order—a hospital surgeon—nephew and surgeon, and surgeon because he is 'nephew.' The performance of this tragedy was nearly as follows:—"

The account which followed was short but horrible, and its horror was accentuated by the dramatic brevity of the recital. The word dramatic is used advisedly, for the report was cast in dramatic form. It was divided into Act 1 and Act 2, while the result of an examination of the body after the death of the patient was added as an epilogue. The first Act set out the preliminary steps of the operation, which took twenty minutes, and clearly insinuated that the original incision having been wrongly made the operator lost his proper appreciation of the anatomical geography of the region and attempted violently to effect a passage with his forceps where no incision had cleared the way—that, in fact, in his attempts to reach the bladder he made a false passage. The second Act, stated to have lasted half an hour, accused the operator of having hopelessly lost his head. It described him as calling for all forms of instruments, notably for one, a scoop, that must have been useless until the foreign body was actually located; as asking for the assistance of his colleagues and even his dresser; as complaining in front of the patient, of course unnarcotised, of his utter inability to understand the cause of his own terrible failure to extract the stone; and, finally, when at last the operation was over, of attempting to explain the difficulties to the appalled assembly of surgeons and students while the conscious and dying patient still lay bound upon the operating table. No more terrible picture of incompetency, of want of skill, want of nerve, and want of heart could be imagined than the picture that was drawn. The epilogue to this terrible tragedy was in keeping. A brief description of the parts concerned in the operation was followed by the most unmistakable insinuation that the reason why Mr. Bransby Cooper had failed to extract the stone from the patient's bladder was because his forceps had not at first been in the bladder at all.

Although this report was brief it contained a terrible indictment of Mr. Bransby Cooper and also of Guy's Hospital, at that time possessing the first reputation in the kingdom for surgical practice. Stripped of all verbiage and raising every insinuation to the dignity of a statement—which no one could have read the article without doing—the gist of THE LANCET report was as follows: That the authorities of Guy's Hospital had elected Mr. Bransby Cooper upon their staff because he was Sir Astley Cooper's nephew; that he was an unskilful surgeon, and had consequently killed a patient by his gross mistakes during the performance of an operation; that he was so concerned at the public exhibition of ignorance which he felt himself to be making that he behaved with brutal callousness to the unfortunate sufferer. (It must not be forgotten that we are writing of the days when anæsthetics were unknown and when, therefore, a premium was set upon rapidity of operation; while anything like a consultation in front of a conscious patient was held to be grossly unprofessional and a grave confession of weakness.) Nepotism on the part of the management, malpraxis on the part of the officer—these had been Wakley's outspoken and repeated accusations against those responsible for the management of the London hospitals. Time after time he had said that these two factors were working secretly for ill, and equally often he had promised that any mischief so produced should be dragged into the light of day. This was a unique occasion for keeping his word. *One* set of circumstances proved him right in *both* of his recurrent accusations. He printed those circumstances in a shape which could have left no doubt that he believed in the righteousness of his action, and he referred to them subsequently in articles even severer than the original report, and designed to open the eyes of the country "draff," as the metropolitan magnates of those days contemptuously designated their provincial brethren.

Mr. Bransby Cooper had no alternative but to bring an action against Wakley. If he had desired to do otherwise it is certain that those responsible for the medical and administrative management of the charity would not have permitted him, but he never had any doubt as to his course. He felt that his back was against the wall and that if he could not beat off the foe he was a ruined man, for the article in THE LANCET had been widely copied into the lay press, and a storm of popular comment was blowing round the names of Wakley, Bransby Cooper, Sir Astley Cooper, THE LANCET, and Guy's Hospital. The case originally stood to be heard in the Court of King's Bench on Oct. 29th, 1828, but was postponed at Mr. Brougham's request, made on Wakley's behalf, until Dec. 12th, when Wakley announced his intention of defending himself in person.

At half-past nine o'clock on the morning of Friday, Dec. 12th, 1828, the case of Cooper *v.* Wakley came on for hearing in the Court of Queen's Bench before Lord Tenterden and a special jury. The case excited the most intense interest in the public mind. "Long before the sitting of the court at half-past nine o'clock," says the *Times* of Dec. 18th, 1828, "the different avenues leading to the court were so crowded that there was scarcely any possibility of forcing a passage. It was with the utmost difficulty, with the most active assistance of the constables and officers of the court that the counsel, jury, and witnesses could obtain an entrance." On the second day the approaches were still more thronged. At an exceedingly early hour persons were standing without the door anxious to obtain admission into the court. The officers, however, adopting a different course from that of Friday, kept the crowd at the outer door until the counsel, jury, and witnesses were admitted; those who had assembled merely out of curiosity were not allowed to force their entrance. Several contemporary journals, THE LANCET itself, *The Times*, *The Sun*, and *The Weekly Dispatch*, narrate a curious little incident that happened in the crowd without Westminster Hall. A gentleman who was carrying a sword-stick had the case of it crushed by the excessive pressure of the crowd. The point of the sword came out through the bulging rent in the sheath, and was forced into a by-stander's thigh. The tension of waiting and the general imagination of the fevered crowd, which was certainly set upon the consideration of horrors, gave to this small accident a serious importance, and all sorts of stories of attempts at assassination were buzzed about, the excitement not subsiding until at last the court was opened to the public.

The defendant appeared in person punctually, being assisted by Mr. Brougham and Mr. FitzRoy Kelly, while Sir James Scarlett, afterwards Lord Abinger, Mr. F. Pollock, afterwards Chief Baron Pollock, and Mr. Scarlett represented the plaintiff. Wakley brought with him into court the cast of a child representing the position in which a patient is tied when undergoing the operation of lithotomy, the bones of a full-sized pelvis, and specimens of all the instruments alleged in the libellous report to have been used by Mr. Bransby Cooper in the fatal operation. These were placed upon a table in the well of the court.

Mr. Scarlett opened the pleadings by reading the libel, which consisted of the report of the case and the leading article upon it that had appeared in the next issue of THE LANCET. The leading article added nothing to the facts in the report, but was a most damning commentary upon

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the circumstances, setting out the details and calling attention to them with interjections, *nota benes*, and all sorts of verbal pilcrows. The writer, who was Wakley himself, did certainly make a disclaimer of being actuated by any malicious feeling towards Mr. Bransby Cooper, whom he was willing to believe a kind-hearted man justly popular among his pupils; but this concession was followed by a bitter summing up of the case against him. It could not be denied, wrote Wakley, that Mr. Bransby Cooper had taken nearly an hour to perform an operation whose average duration in the hands of skilful surgeons was six minutes. And it could not be questioned that he was indebted for his appointment to the staff of Guy's Hospital to his relationship to Sir Astley Cooper and not to his own skill.

Immediately upon the libel being read an extraordinary discussion followed. Sir James Scarlett rose to open the case, when Wakley insisted that as he had charged the plaintiff with unskilfulness and intended to prove the truth of his pleas he ought to proceed with his case before the plaintiff's case was gone into. Wakley's argument was ingenious and successful. While admitting that in general a plaintiff has the right to open his case and by consequence to have the general reply,

> For courts of justice understand
> The plaintiff to be eldest hand,

he submitted that there were exceptions to this rule and that his attitude of pleading justification only and not innocence placed his case in their category. The cases he relied on as precedents were three. The first was one of trespass, where the defendant admitted his entrance on to the plaintiff's property but pleaded right of way. Here the affirmation of the issue being thrown upon the defendant, Mr. Justice Bayley, a great jurist, and later a Baron of the Exchequer, held that the defendant had the right to begin. The other two were cases of assault and battery, where the defendant pleaded justification without adding "Not Guilty." In each of these cases Chief Justice Best and Mr. Justice Bayley on consultation with brother judges had severally allowed the plea. It was Brougham who supplied Wakley with the legal information necessary to make his representation to Lord Tenterden, but it can be imagined that to hear so technical a point raised by a layman created no little sensation in the court, where the general feeling was rather one of sympathy for Wakley in his foolhardy attempt to conduct his own case against one of the most powerful advocates at the Bar. Sir James Scarlett strenuously opposed Wakley's application. Lord Tenterden, after a few minutes' consultation with two of his learned brothers in the adjoining courts, decided in Wakley's favour, who immediately rose to address the jury, having secured by his successful application the right to a general reply, which, with such an opponent as the Attorney-General to deal with, meant an enormous stride towards victory. Although Wakley obtained his point by relying upon precedents he himself established a precedent while so doing, for the principle that had been allowed to prevail in cases of trespass and assault has never before been quoted as holding good in a case of libel.

Wakley's opening speech was a vindication of the view that it was of the utmost importance to the public that the management of our hospitals should be efficient and that only men possessed of the highest professional skill should be elected honorary medical officers to these noble charities. Solely to maintain a high standard in the management of hospitals and in the skill and knowledge of those empowered to treat the sick and teach the students within their walls, he had published the addresses of hospital lecturers and the reports of clinical and operative procedure at the different theatres. In the ordinary course, and with no special malice whatever, he had received a report of an operation which had taken place at Guy's Hospital on a certain day. The report told so extraordinary a story that he had abstained from printing it until he had personally been assured by the contributor that it was true word for word. He then considered that he had no other course to pursue in his public character than to print the report and take the consequences. He then called his first and, as it turned out, most valuable witness, a Mr. Partridge of Colchester.

Mr. Partridge was a voluntary witness, unknown personally to Wakley, and only asked to give evidence the very day of the trial. In Brougham's brief, a document made interesting by the fact that it has upon it the pencil notes of the eminent lawyer and his exceedingly bad sketches of the anatomical distribution of the parts concerned in the operation of lithotomy, Mr. Partridge's name does not occur, while the names of all the other witnesses are given. Mr. Partridge said that he had practised for fourteen years and was a prominent citizen in Colchester and an alderman of the borough. He had witnessed numerous lithotomies and had performed the operation eighteen times himself. He considered the report of the operation in THE LANCET correct; and he had been sitting immediately behind Mr. Bransby Cooper all the time. The operation lasted nearly an hour. Mr. Cooper appeared perplexed and hurried; he varied his instruments perpetually and irrationally; he expressed his wonder at the delay of extraction in front of the conscious and writhing patient. If the operator had known what he was about, said Mr. Partridge, he would have extracted the stone immediately.

Cross-examination, though severe, quite failed to shake this witness. His professional position was unimpeachable, and his motive for giving evidence could only be a desire to assist what he believed to be the cause of justice, for he was not a member of the staff of THE LANCET and did not know Wakley by sight and scarcely by name until the morning of the trial. Wakley's other witnesses did not turn out so well. They testified to what they saw, and this in each case amounted to a confirmation of the report, which formed the substance of the libel to be justified, but their answer under cross-examination to credit were not satisfactory. The first of these gentlemen, though a Licentiate of the Society of Apothecaries, was found to have put in false certificates to his age that he might obtain the diploma earlier than the regulations allowed. The second gentleman had succeeded Wakley as assistant to his (Wakley's) brother-in-law, Mr. Phelps of Beaminster, and was obviously interested in the issue of the case for reasons other than a desire to see abstract justice done. The third gentleman was found to be intimately acquainted with Mr. Lambert, who wrote the report. It was felt by everybody that had it not been for Mr. Partridge Wakley's selection of eye-witnesses out of a crowd of over two hundred persons would have been very unfortunate.

Mr. Lambert, the author of the report, came next. He maintained that the report was true and rather an understatement than an over-statement of facts. He had attended the post-mortem examination and there observed appearances which he considered bore out the accuracy of his report, inasmuch as they went to show that Mr. Cooper's first attempts at extraction were wrongly directed—that, in fact, he had hopelessly mistaken the anatomy of the region. Mr. Lambert did not come out well on cross-examination. He was made to confess that he had had a personal quarrel with Mr. Bransby Cooper, and that the tone of previous reports from his pen had caused his exclusion from the wards of Middlesex and St. Thomas's Hospitals. He was also revealed as the cousin of the previous witness, who had obtained the Licentiateship of the Society of Apothecaries by making a false statement on oath. As a whole he maintained the accuracy of his report. Sir James Scarlett was not able to shake him in his account of what happened, but

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he was able to prejudice his evidence in the eyes of the judge, and he did so.

Mr. Lambert was followed, fortunately for Wakley's case, by two rather better witnesses, in that their purity of motive was indubitable. Both testified to the length of time occupied by the operation and to the pitiable condition of hurry and perplexity to which Mr. Bransby Cooper was reduced by his ill-success at first. Wakley's last witness was the treasurer of St. Thomas's Hospital, a Mr. Benjamin Harrison. He was a very unwilling witness who appeared on subpœna, and in cross-examination gave Mr. Bransby Cooper an excellent character as a surgeon. While, however, he swore that relationship to Sir Astley Cooper had had nothing to do with Mr. Bransby Cooper's election to the staff of Guy's Hospital, he would not swear that the gentleman who had been passed over, who was no relation to Sir Astley Cooper, but senior to Mr. Bransby Cooper, was not a better surgeon than the plaintiff, who had been preferred to him. Mr. Wakley then closed his case, and the court adjourned until the following day, Sir James Scarlett submitting that he would rather address a fresh jury than a jaded one.

(To be continued.)

THE McEWAN HALL OF THE EDINBURGH UNIVERSITY.

THIS magnificent piece of architecture, which has been in process of erection for several years, is now within a few months of its completion. The hall is part of the original plan supplied by Dr. Rowand Anderson for the new University buildings which have been constructed in Teviot-row and Park-place. For the carrying out of this part of the plan the city and University are indebted to the princely generosity of Mr. W. McEwan, M.P., who in 1888 undertook to defray the entire cost of building this great hall for the use of the University. The Senatus, in a minute passed in 1888, duly expressed their appreciation of the magnitude and splendour of the gift and on the same occasion resolved that for all future time the hall shall bear the name of its donor. The hall, it is expected, will cost not less than £60,000 or £70,000, and will be seated for 3000 persons. On its northern frontage it joins the medical buildings in Teviot-place. Its east elevation, which is semicircular in form, is now seen to great advantage by the demolition of the houses in Bristo-street. The hall stands on the site of what was formerly Park-street. The architect, keeping in view the purposes for which the hall would be used—public ceremonials connected with the University, and the conferring of degrees—has based his design on the form of the ancient Greek theatre, which, it is believed, is the best adapted for allowing the largest number of spectators to see and hear well. The shape of the hall is semicircular, with the flat side of the semicircle to the west, where are placed the organ loft and platform which is provided at the back with a series of oak stalls for professors. The hall has two walls, an outer and an inner, which allow for a corridor between them on the ground floor 12 ft. in width. There are two galleries in the upper stages, the inner wall being opened up to the interior of the hall by a beautiful arcading of thirteen bays, each 15 ft. wide and measuring 48 ft. from the floor to the top of the arch. There is a beautifully carved stone frieze and cornice at the wall-head, with above it a coved clerestory with circular windows 7 ft. in diameter. The dome, which has in the centre a circular light 22 ft. in diameter, is constructed of steel and panelled with wood.

The height from floor to wall-head is 58 ft., and from floor to centre of dome 90 ft. The internal diameters of the outer and inner wall circles respectively are 134 ft. and 106 ft. From the outer circle to the back of the platform the distance is 107 ft. The platform opening is 52 ft. wide and is covered by an elliptical ceiling. The hall is to be lighted by electric light and the organ will be worked by electricity. The galleries are reached by two circular staircases in the outer circumference, each double, containing a separate stair for each gallery. From the inner circle are five doors giving access to the hall. The balustrades of the galleries, the pews in the galleries, and the panelling of the inner wall up to the level of the first gallery are in dark stained oak. The area floor is of oak, and on it the seats will be movable, with the exception of four tiers of fixed fauteuils ranged round the back of the semicircle. The principle staircase occupies the south angle of the building, and the north angle is formed by the base of the proposed campanile tower which forms part of the original design, but still remains unexecuted. Another donor is wanted to complete this part of the scheme. The tower in the plan is 270 ft. in height. For purposes of ventilation there will be a fan placed in the basement of the building. The masses of masonry on the external elevations have been disposed with telling effect. The wall is divided vertically by buttresses corresponding to the internal divisions of the hall, and standing well out from the face of the wall. Between two of the buttresses on the north-east side there is carved the following inscription.—

Hanc Aulam Academicam
Gulielmus McEwan
Universitati Edinburgensi
Libero Animo Donavit
MDCCCXCIV.

The external elevations show horizontally three divisions. In the lower, which is panelled, are the windows for lighting the corridor; the upper section is arcaded in red stone and the wall is finished by a cornice and open balustrade. The clerestory and the dome rise above these, the dome being covered with lead and surmounted by an ornamental lantern 30 feet high. The height from street level to the top of the lantern is 130 feet. In the outer circle are seven doorways for entrance and exit, the principal one being in the east elevation. There is a staircase giving access to the hall from the quadrangle of the University which is very pleasing in effect. The constructive part of the work in connexion with the erection of this hall has been finished for some time, but the opening has been retarded by the execution of an elaborate scheme of decoration. The scaffolding has now, however, been cleared away and the principal decorations are completed.

The decorative part of the work was placed by the trustees in the hands of Mr. W. M. Palin, who has now been engaged for over two years in this part of the undertaking. Mr. Palin has followed the relief as opposed to the flat method of painting in the mural decoration. His figures are executed in strong relief and his backgrounds have been given perspective depth. The dome, which is most elaborately treated, shows running round its inner edge a broad blue band, on which is inscribed in golden letters the words, taken from Scripture: "Wisdom is the principal thing; therefore get wisdom: and with all thy getting get understanding. Exalt her and she shall bring thee to honour." In the decoration of the dome the artist has endeavoured to produce on a large scale the effect of an enamelled jewel, which he has done by painting on a background of gold and using in the drapery of his figures the colours of precious stones. The dome is divided by the ribs into fifteen compartments, these being subdivided into smaller panels, the upper of which are filled with ornament in white and gold, while the lowest and largest panel in each compartment shows a seated female figure in double life size. There are thus fifteen figures in the half circle of the dome, of which thirteen are named. Reading from the left they are: "Astronomy," "Mathematics," "Poetry," "History," "Divinity," "Philosophy," "Medicine," "Oratory," "Jurisprudence," "Fine Arts," "Music," "Biology," "Physics." Over the top of the platform opening on the west wall is a large panel measuring 100 ft. across and narrowing as it ascends to the apex. On it is painted a representation of the "Temple of Fame." The composition contains eighty or ninety figures, on a scale of 9 ft., representing groups of philosophers and students conversing together or ascending steps to a raised piazza, where there is a temple in the background. At the apex of the panel three goddesses are painted representing "Science," "Art," and "Literature." The figures are in strong relief with draperies of blue, red and violet, and red and green respectively. In front of the figures are Cupids with tablets. On each side of the platform opening on the west wall is a large panel, 24 ft. by 13 ft., with a lunette above it. On the right "Minerva" is represented, draped in green and red, as the tutelary

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deity of the University, seated on a marble throne in the grove of Academia receiving the gift of the building. Into one of the figures, arrayed in classic robes, standing at the sides of the steps of the throne the artist has introduced a portrait of Mr. McEwan, which is an excellent likness of the generous donor. The panel balancing this on the other side gives a representation of "Fame" as a female figure in pale green and gold seated on a throne with a trumpet in one hand and a laurel wreath in the other. An aspirant in red robes kneels in front of her while groups of men are ranged on either side. The angle panels of the arch are decorated like those alongside of them. On the right are two figures representing "Perseverance" and "Intelligence," while on the left are "Imagination" and "Experience." On the walls of the clerestory, which are painted sky blue and gold, are inscribed the names of eminent men who have been connected with the University. The carved stone frieze is very effectively picked out in gold. The ceiling of the first gallery is panelled in blue and gold, while the roof of the second is treated in a warm sepia tint. The paintings and dome decorations were finished in oil on canvas in the artist's studio and afterwards affixed to the walls and dome. The colouring has been necessarily strongly executed to allow for the mellowing influence of age.

There can be no doubt that on the completion of the McEwan Hall the University of Edinburgh will possess an academic building unequalled in any other university in the United Kingdom.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6544 births and 3814 deaths were registered during the week ending April 4th. The annual rate of mortality in these towns, which had declined in the four preceding weeks from 20·7 to 18·8 per 1000, further fell last week to 18·3. In London the rate was 17·9 per 1000, while it averaged 18·6 in the thirty-two provincial towns. The lowest rates in these towns were 11·7 in Portsmouth, 12·2 in West Ham, 13·0 in Huddersfield, and 13·1 in Cardiff; the highest rates were 21·5 in Preston, 22·0 in Liverpool, 22·1 in Manchester, 24·3 in Salford, and 26·7 in Birkenhead. The 3814 deaths included 615 which were referred to the principal zymotic diseases, against 578 and 631 in the two preceding weeks; of these, 247 resulted from measles, 183 from whooping-cough, 68 from diphtheria, 48 from scarlet fever, 39 from diarrhœa, 30 from "fever" (principally enteric), and not one from small-pox. No fatal case of any of these diseases occurred last week in Halifax; in the other towns they caused the lowest death-rates in Portsmouth, Swansea, Preston, and Hull, and the highest rates in London, Manchester, Plymouth, Sunderland, and Birkenhead. The greatest mortality from measles occurred in Plymouth, Birkenhead, Manchester, Burnley, and Sunderland; from scarlet fever in Bolton; from whooping-cough in Birmingham, Leeds, Sheffield, London, and Plymouth, and from "fever" in Norwich and in Blackburn. The 68 deaths from diphtheria included 45 in London, 5 in Birmingham, 4 in West Ham, and 3 in Liverpool. No fatal case of small-pox was registered either in London or in any other of the thirty-three large towns. There were 23 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 4th inst., against 42, 43, and 33 at the end of the three preceding weeks; 2 new cases were admitted during the week, against 4, 9, and 2 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2676, against 2764, 2773, and 2744 on the three preceding Saturdays; 186 new cases were admitted during the week, against 217, 277, and 224 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had declined from 433 to 285, in the four preceding weeks, further fell to 270 last week, and were 131 below the corrected average. The causes of 56, or 1·5 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Salford, Oldham, Sunderland, Newcastle-upon-Tyne, and in ten other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, and Liverpool.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·6 and 18·9 per 1000 in the two preceding weeks, further declined to 18·7 during the week ending April 4th, but slightly exceeded the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 10·5 in Leith and 13·4 in Edinburgh to 21·6 in Dundee and 22·2 in Aberdeen. The 545 deaths in these towns included 21 which were referred to whooping-cough, 17 to diarrhœa, 8 to measles, 6 to "fever," 5 to scarlet fever, and 4 to diphtheria. In all, 61 deaths resulted from these principal zymotic diseases, against 70 and 52 in the two preceding weeks. These 61 deaths were equal to an annual rate of 2·1 per 1000, which was 0·8 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had declined from 35 to 21 in the three preceding weeks, were again 21 last week, of which 13 occurred in Glasgow and Aberdeen. The deaths from measles, which been 13 and 6 in the two preceding weeks, rose again to 8 last week, and included 4 in Glasgow and 3 in Greenock. The deaths referred to different forms of "fever," which had been 6 and 4 in the two preceding weeks, increased to 6 last week, of which 5 occurred in Glasgow. The 5 fatal cases of scarlet fever showed a slight further decline from the numbers recorded in recent weeks, and included 2 in Glasgow and 2 in Edinburgh. Of the 4 fatal cases of diphtheria 2 were returned in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 115 and 107 in the two preceding weeks, further declined to 87 last week, and were less than half the number in the corresponding period of last year. The causes of 37, or nearly 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the three preceding weeks from 28·3 to 24·8 per 1000, rose again to 25·5 during the week ending April 4th. During the thirteen weeks of last quarter the death-rate in the city averaged 25·3 per 1000, the rate during the same period being 19·5 in London and 17·7 in Edinburgh. The 171 deaths registered in Dublin during the week under notice showed an increase of 5 upon the number in the preceding week, and included 8 which were referred to the principal zymotic diseases, against 7 in each of the two preceding weeks; of these, 2 resulted from measles, 2 from diarrhœa, 1 from small-pox, 1 from diphtheria, 1 from whooping-cough, 1 from "fever," but not one from measles. These 8 deaths were equal to an annual rate of 1·2 per 1000, the zymotic death-rate during the same period being 3·7 in London and 1·3 in Edinburgh. The fatal cases of scarlet fever, which had been 4, 1, and 2 in the three preceding weeks, were again 2 last week. The 2 deaths referred to diarrhœa were within one of the number in the preceding week, while the mortality from diphtheria and whooping-cough corresponded with that recorded in the previous week. The fatal case of small-pox was the first registered within the city since January last. The 171 deaths in Dublin last week included 26 of infants under one year of age, and 48 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons exceeded those recorded in recent weeks. Two inquest cases and 3 deaths from violence were registered; and 64, or more than a third, of the deaths occurred in public institutions. The causes of 9, or more than 5 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING MARCH, 1896.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during March in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 8·4 per 1000 of the population, estimated at 4,435,955 persons in the middle of this year. In the three preceding months

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ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON—MARCH, 1896.

(Specially compiled for THE LANCET.)

SANITARY AREAS.	Estimated population in the middle of 1896.	NOTIFIED CASES OF INFECTIOUS DISEASE.									DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.										Deaths from all causes.	Death-rate per 1000 Living.	Deaths of Infants under one year to 1000 Births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fever.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons Living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fever.	Diarrhœa.	Total.	Annual rate per 1000 persons Living.		
LONDON	4,458,955	23	1294	983	1	147	3	29	383	—	2861	8·4	2	552	69	193	386	—	27	1	33	1262	3·7	6601	19·4	1490
West Districts.																										
Paddington	123,942	—	33	17	—	2	—	—	5	—	57	6·0	—	21	1	6	9	—	—	—	—	37	3·9	172	18·1	159
Kensington	167,963	1	59	26	—	2	—	—	18	—	106	8·2	—	25	2	10	10	—	—	—	—	43	3·3	246	19·0	160
Hammersmith	111,246	—	20	28	—	4	—	2	6	—	60	7·0	—	10	2	4	7	—	—	—	—	23	2·7	141	17·2	165
Fulham	124,029	—	17	47	—	5	1	—	3	—	73	7·7	—	19	3	6	8	—	1	—	—	40	4·2	188	19·8	140
Chelsea	100,815	1	29	15	—	8	—	1	3	—	66	8·5	—	10	1	4	11	—	2	—	1	28	3·4	158	20·4	176
St. George Hanover-square	73,064	—	9	12	—	1	—	—	3	—	26	4·6	—	6	—	2	1	—	—	—	1	10	1·8	88	15·3	149
Westminster	53,595	—	15	14	—	3	1	—	4	—	37	9·0	—	2	1	1	1	—	1	—	2	8	1·9	70	17·0	126
St. James Westminster ...	22,735	—	5	2	—	—	—	1	—	—	8	4·6	—	5	—	—	1	—	—	—	—	6	3·4	28	16·1	140
North Districts.																										
Marylebone	136,239	—	36	19	—	2	—	—	9	—	66	6·3	—	53	7	3	6	—	1	—	2	68	6·5	271	25·9	158
Hampstead	79,831	—	29	25	—	4	—	—	4	—	62	10·1	—	8	3	1	3	—	—	—	1	13	2·2	62	10·1	98
St. Pancras	233,347	—	63	62	—	8	—	—	21	—	134	7·5	—	18	6	16	3	—	3	—	2	45	2·6	324	18·1	119
Islington	340,007	—	80	57	—	11	1	3	27	—	188	7·6	—	68	6	17	36	—	—	1	1	126	4·8	551	21·1	102
Stoke Newington	36,329	—	10	7	—	—	—	—	4	—	21	7·6	—	—	—	2	—	—	—	—	—	2	0·7	32	11·5	18
Hackney	219,834	—	79	34	—	8	—	—	21	—	145	8·6	—	7	2	5	25	—	—	—	5	44	2·6	284	16·8	146
Central Districts.																										
St. Giles	37,170	—	6	3	—	1	—	—	3	—	13	4·6	—	7	—	1	3	—	1	—	—	12	2·9	62	21·8	177
St. Martin-in-the-Fields ...	13,294	—	3	—	—	—	—	—	—	—	4	3·9	—	1	—	—	—	—	—	—	—	3	2·9	16	15·7	214
Strand	22,008	—	9	2	—	—	—	—	—	—	11	6·5	—	6	1	—	2	—	—	—	—	6	3·6	40	23·7	80
Holborn	31,940	—	10	5	—	1	—	1	3	—	21	8·6	—	8	1	1	2	—	—	—	—	12	4·9	59	24·1	149
Clerkenwell	64,762	—	28	18	1	4	—	1	9	—	60	12·1	—	11	—	4	1	—	—	—	1	17	3·4	113	22·8	167
St. Luke	40,362	—	6	5	—	4	—	1	8	—	24	7·8	—	4	1	2	4	—	—	—	1	12	3·9	86	27·8	111
City of London	32,845	—	6	3	—	—	—	—	3	—	11	4·4	—	1	1	1	1	—	1	—	—	5	2·0	85	21·8	116
East Districts.																										
Shoreditch	122,678	—	34	33	—	5	—	1	28	—	99	10·5	—	26	4	8	22	—	1	—	—	61	6·5	223	23·7	140
Bethnal Green	130,282	—	46	16	—	4	—	—	9	—	75	7·5	—	20	4	4	33	—	2	—	1	69	6·9	268	28·8	176
Whitechapel	76,143	1	25	26	—	2	—	1	1	—	55	9·4	—	3	1	4	7	—	—	—	—	14	2·4	121	20·7	161
St. George-in-the-East ...	45,036	—	18	12	—	—	—	—	2	—	32	9·3	—	1	1	4	3	—	—	—	—	9	2·4	85	24·6	88
Limehouse	56,770	—	17	30	—	2	—	—	8	—	57	13·1	—	3	4	7	9	—	—	—	—	20	4·6	103	23·7	139
Mile End Old Town	108,646	—	44	49	—	9	—	—	12	—	115	13·8	—	4	5	6	12	—	2	—	1	30	3·6	157	18·8	124
Poplar	172,319	1	66	49	—	11	—	—	17	—	135	10·2	—	9	3	4	41	—	3	—	2	62	4·7	276	20·8	151
South Districts.																										
St. Saviour Southwark	26,429	—	15	4	—	1	—	1	2	—	22	10·9	—	3	—	1	2	—	—	—	—	6	3·0	38	18·8	169
St. George Southwark	60,276	1	19	12	—	3	—	—	8	—	44	9·5	—	11	4	3	7	—	1	—	—	27	5·8	118	25·5	150
Newington	120,211	—	38	23	—	1	—	3	14	—	79	8·6	—	14	2	6	9	—	1	—	—	35	3·8	201	21·8	169
St. Olave Southwark	13,147	—	7	1	—	1	—	—	3	—	12	11·9	—	1	1	1	4	—	—	—	—	7	6·9	14	13·9	121
Bermondsey	83,669	—	16	6	—	3	—	1	7	—	33	6·1	—	10	1	1	12	—	—	—	—	25	3·9	153	23·8	141
Rotherhithe	41,064	—	10	7	—	2	—	1	4	—	24	7·6	—	8	2	2	2	—	—	—	—	13	4·1	62	19·7	128
Lambeth	287,211	3	80	46	—	1	—	1	26	—	157	7·1	1	37	4	4	12	—	1	—	—	69	2·7	399	18·1	112
Battersea	168,825	—	67	38	—	4	—	2	17	—	118	9·1	—	24	2	7	9	—	1	—	1	25	1·9	198	15·3	118
Wandsworth	191,922	—	63	24	—	6	—	—	19	—	112	7·6	—	24	3	3	26	—	—	—	—	58	3·9	226	15·4	120
Camberwell	256,672	1	62	117	—	9	—	2	27	—	218	11·1	—	38	3	24	22	—	1	—	—	90	4·6	381	15·4	124
Greenwich	177,286	—	70	65	—	10	—	4	19	—	168	12·4	1	27	1	9	16	—	3	—	2	57	4·2	271	19·9	167
Lewisham (excluding Penge) ...	84,996	—	28	14	—	2	—	—	1	—	45	6·9	—	5	—	3	2	—	—	—	—	10	1·5	76	11·7	81
Woolwich	43,232	—	10	6	—	—	—	—	2	—	18	6·4	—	3	2	1	—	—	—	—	—	6	1·8	47	14·2	68
Lee	39,564	—	7	2	—	1	—	2	1	—	13	4·3	—	2	—	1	—	—	—	—	—	3	1·0	39	12·9	134
Plumstead	64,203	—	21	12	—	1	—	—	3	—	38	7·7	—	9	2	2	1	—	—	—	—	15	3·0	77	15·6	120
Port of London	—	1	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 38 cases of membranous croup.

† Including deaths from membranous croup.

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the rates had been 11·5, 10·3, and 8·8 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in St. George Hanover-square, St. James Westminster, St. Giles, St. Martin-in-the-Fields, City of London, Bermondsey, and Lee; while they showed the largest excess in Clerkenwell, Mile End Old Town, Limehouse, St. Saviour Southwark, St. Olave Southwark, Camberwell, and Greenwich. The prevalence of small-pox in London during March corresponded with that in the preceding month, the 22 cases notified including 7 in Islington, 3 in Hackney, 3 in Lambeth, and 2 in Poplar sanitary areas. The Metropolitan Asylum Hospitals contained 33 small-pox patients at the end of March, against 75, 68, and 45 at the end of the three preceding months; the weekly admissions averaged 7, against 13 and 6 in the two preceding months. The prevalence of scarlet fever in London showed a further decline during March; this disease was proportionally most prevalent in Hampstead, Strand, Clerkenwell, St. George-in-the-East, Mile-end Old Town, St. Saviour Southwark, St. Olave Southwark, and Greenwich sanitary areas. The Metropolitan Asylum Hospitals contained 2688 scarlet fever patients at the end of March, against 2708, 2814, and 2867 at the end of the three preceding months; the weekly admissions averaged 234, against 250, 282, and 258 in the three preceding months. The prevalence of diphtheria in London during March showed a very slight increase upon that recorded in February; among the various sanitary areas this disease showed the highest proportional prevalence in Fulham, Hampstead, Whitechapel, Limehouse, Mile End Old Town, Camberwell, and Greenwich. There were 704 diphtheria patients under treatment in the Metropolitan Asylum Hospitals at the end of March, against 687, 682, and 715 at the end of the three preceding months; the weekly admissions averaged 99, against 99, 103, and 99 in the three preceding months. The prevalence of enteric fever in London showed a further marked decline from that recorded in recent months; this disease was proportionally most prevalent in Chelsea, St. Luke, and Mile End Old Town sanitary areas. Erysipelas was proportionally most prevalent in Clerkenwell, St. Luke, Shoreditch, and Limehouse sanitary areas. The 29 cases of puerperal fever notified during March included 4 in Greenwich, 3 in Islington, and 3 in Newington sanitary areas.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various sanitary areas, the deaths occurring in the institutions of London having been distributed among the different sanitary areas in which the patients had previously resided. During the four weeks ending Saturday, March 28th, the deaths of 6601 persons belonging to London were registered, equal to an annual rate of 19·4 per 1000, against 17·3, 18·4, and 20·0 in the three preceding months. The lowest death-rates during March in the various sanitary areas were 10·1 in Hampstead, 11·5 in Stoke Newington, 11·7 in Lewisham (excluding Penge), 12·9 in Lee, 13·9 in St. Olave Southwark, 14·2 in Woolwich, and 15·3 in St. George Hanover-square and in Battersea; the highest rates were 23·8 in Bermondsey, 24·1 in Holborn, 24·6 in St. George-in-the-East, 25·5 in St. George Southwark, 25·9 in Marylebone, 27·8 in St. Luke, and 28·8 in Bethnal Green. During the four weeks of March 1262 deaths were referred to the principal zymotic diseases in London; of these, 552 resulted from measles, 886 from whooping-cough, 193 from diphtheria, 69 from scarlet fever, 32 from diarrhœa, 27 from enteric fever, 1 from an ill-defined form of continued fever, and 2 from small-pox. These 1262 deaths were equal to an annual rate of 3·7 per 1000; among the various sanitary areas the lowest death-rates from these diseases were recorded in St. George Hanover-square, Westminster, Stoke Newington, Battersea, Lewisham, Woolwich, and Lee, and the highest rates in Marylebone, Islington, Holborn, Shoreditch, Bethnal Green, Poplar, St. George Southwark, and St. Olave Southwark. The 2 fatal cases of small-pox were within one of the corrected average number in the corresponding periods of the ten preceding years; 1 belonged to Lambeth and 1 to Greenwich sanitary areas. The 552 deaths referred to measles were considerably more than double the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Marylebone, Islington, Strand, Shoreditch, St. George Southwark, Rotherhithe, and Greenwich. The 69 fatal cases of scarlet fever were 8 above the corrected average number; this disease showed the highest proportional fatality in St. George-in-the-East, Mile End Old Town, and St. George Southwark sanitary areas. The 193 deaths from diphtheria were 77 above the corrected average number; among the various sanitary areas this disease was proportionally most fatal in Fulham, Marylebone, St. Pancras, Clerkenwell, Shoreditch, St. George-in-the-East, Limehouse, and Camberwell. The 386 fatal cases of whooping-cough were 77 above the corrected average number; this disease showed the highest proportional fatality in Shoreditch, Bethnal Green, Limehouse, Poplar, Bermondsey, and Wandsworth sanitary areas. The 27 deaths referred to enteric fever were 8 below the corrected average number; the mortality from this disease showed no marked excess last month in any of the sanitary areas. The 32 fatal cases of diarrhœa were 23 below the corrected average number. In conclusion, it may be stated that the mortality in London during March from these principal zymotic diseases was more than 64 per cent. above the average.

Infant mortality in London during March, measured by the proportion of deaths under one year of age to births registered, was equal to 140 per 1000, and was below the average. Among the various sanitary areas the lowest rates of infant mortality were recorded in Hampstead, Stoke Newington, Strand, St. George-in-the-East, Lewisham, and Woolwich; and the highest rates in St. James Westminster, St. Martin-in-the-Fields, Clerkenwell, Bethnal Green, St. Saviour Southwark, and Newington.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-LIEUTENANT-COLONEL BLENNERHASSETT has joined the depôt of the Medical Staff Corps at Aldershot prior to his transfer to Netley as the successor of Brigade-Surgeon-Lieutenant-Colonel Evatt, who has embarked to take up the appointment of Principal Medical Officer at Hong-Kong. The following arrivals from abroad are notified:—Surgeon-Majors Archer, Donaldson, and Creagh from Bermuda; Surgeon-Captains Eckersley and Josling from Ashanti; Surgeon-Major Tidbury from Malta; and Surgeon-Captain Carter from Ceylon. Surgeon-Major E. Wilson has arrived at the Gold Coast on a tour of duty, and Surgeon-Major Hickman has been posted to the North British District. Surgeon-Colonel Preston will succeed Surgeon-Major-General Colahan as Principal Medical Officer in Ireland.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Captain Thacker, on arrival from England, is posted to the Bombay District, and Surgeon-Lieutenant Collins to the Mhow District. Surgeon-Major R. Cobb, Civil Surgeon of Patna, is appointed to officiate as Surgeon-Superintendent of the Presidency General Hospital, Calcutta, during the absence on furlough of Surgeon-Lieutenant-Colonel A. Crombie. Surgeon-Lieutenant-Colonel R. D. Murray, Civil Surgeon, Howrah, is appointed to officiate as Professor of Surgery, Medical College, Calcutta, and *ex-officio* First Surgeon to the College Hospital, during the absence on furlough on private affairs of Surgeon-Lieutenant-Colonel J. O'Brien. Surgeon-Major A. W. D. Leahy, F.R.C.S., Civil Surgeon, 24th Parganas, is appointed to officiate as Professor of Midwifery, Medical College, and Obstetric Physician, Eden Hospital, Calcutta, during the absence on furlough on private affairs of Surgeon-Lieutenant-Colonel C. H. Joubert. Surgeon-Major R. N. Campbell, M.B., is appointed to officiate as Senior Medical Officer, Port Blair, vice Surgeon-Lieutenant-Colonel D. P. MacDonald, M.D., who has been granted eight months' furlough on private affairs. Brigade-Surgeon-Lieutenant-Colonel G. Hutcheson, M.D., Bengal Medical Establishment, is granted the temporary rank of Surgeon-Colonel while officiating as Inspector-General of Civil Hospitals, Bengal, vice Surgeon-Colonel G. Ross, granted privilege leave. Surgeon-Lieutenant-Colonel P. J. Freyer, Bengal Medical Establishment, Civil Surgeon, Allahabad, retires from the service.

NAVAL MEDICAL SERVICE.

The following appointments are notified:—Deputy Inspector-Generals: G. Maclean to Hong-Kong Hospital and T. S. Burnett to Haslar Hospital. Fleet Surgeon John A. M'Adam to the *Victory*, additional, for the *Duke of*

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Wellington. Staff Surgeons: George W. Bell to the *St. Vincent*; Charles W. Buchanan Hamilton to the *Penelope*, additional, for Ascension Hospital; and William G. K. Barnes to the *Australia*. Surgeons: Edward Cooper to Malta Hospital, Richard H. Way to the *Skipjack*, Frederick F. Mahon to the *Magpie*, and Ernest C. Lomas to the Portsmouth Division of Royal Marines. Surgeon and Agent: J. Cæsar to be Surgeon and Agent at Sheerness and Queenborough, in addition to Scrapsgate, East-end-lane, Leysdown, and Shellness already under his charge.

MILITIA MEDICAL STAFF CORPS.

William Kenneth Steele, gent., to be Surgeon-Lieutenant.

YEOMANRY CAVALRY.

Herts: Surgeon-Lieutenant L. Drage, M.D., to be Surgeon-Captain.

VOLUNTEER CORPS.

Artillery: 1st Norfolk (Eastern Division, Royal Artillery): Surgeon-Lieutenant R. B. Wrightson, M.D., resigns his commission. 1st Hampshire (Southern Division, Royal Artillery): Victor John Blake, M.B., to be Surgeon-Lieutenant. 1st Lincolnshire (Western Division, Royal Artillery): Lewis Walter Pockett, gent., to be Surgeon-Lieutenant. *Engineer: Fortress and Railway Forces, Royal Engineers:* 2nd Gloucestershire (the Bristol): Sidney Reginald Dyer, M.D., late Captain, to be Surgeon-Lieutenant. *Rifle:* 6th Volunteer Battalion the Royal Scots (Lothian Regiment): George Melville, M.B., to be Surgeon-Lieutenant. 1st (Cumberland) Volunteer Battalion the Border Regiment: Surgeon-Lieutenant J. Macdonald, M.D., resigns his commission. 1st Volunteer Battalion the Hampshire Regiment: Surgeon-Lieutenant J. W. Ekens resigns his commission. 2nd Volunteer Battalion the Sherwood Foresters (Derbyshire Regiment): Surgeon-Captain A. Chawner to be Surgeon-Major. 2nd Volunteer Battalion the Loyal North Lancashire Regiment: Surgeon-Captain E. M. Garstang to be Surgeon-Major. 9th Lancashire: Thomas Wilson Banks, M.B., to be Surgeon-Lieutenant.

THE ITALIANS IN AFRICA.

It is announced from Rome, through Reuter's Agency, that in spite of the force occupying Kassala having recently defeated the Dervishes, Kassala is to be evacuated by its Italian garrison, and that, in accordance with General Baldissera's orders to that effect, Colonel Stevani is falling back upon Agordat, which is about half way between Kassala and Massowah. General Baldissera's action has been based upon the view he takes of the general situation. We learn also, from the same source, some interesting intelligence regarding the Red Cross Society. It appears that in consequence of the superabundance of aid at the disposal of the Italian Red Cross Society the German and Russian societies have been requested to suspend the despatch of nurses and material to Naples for service in Abyssinia. It is evident that some difficulty or hitch has arisen regarding the operation of these societies in connexion with the belligerent forces, for it is alleged that the Italian Government has addressed an inquiry to St. Petersburg regarding the names and position of the members of the Russian Red Cross Society who are to go to Abyssinia. The *Italie*, referring to the subject, says the Italian Government, in signifying its consent to the despatch of the Red Cross Mission, gave striking proof of its respect for the duties devolving upon all civilised Governments. "We hope," the journal adds, "that the Russian Government will, in its turn, recognise its duty to confine itself to a philanthropic and humane action, which can in no way give rise to an equivocal construction. Those whom Russia is sending to the Government of the Negus must obviously be only medical men and nurses; and it is for these that authority to pass through Massowah can be and should be granted. The Russian Government could not object to any decision which the Italian Government might feel compelled to take, if only out of regard for the very natural sentiments of the nation, which would never tolerate anything else being done under the guise of philanthropy."

ARMY MEDICAL SCHOOL, NETLEY.

The seventy-second or summer session of the Army Medical School, Netley, commenced on April 2nd. The following are lists of the surgeons on probation now attending the course of instruction:—

ARMY MEDICAL STAFF.

Names in order of merit.	London marks 4600.	Names in order of merit.	London marks 4600.
E. T. F. Birrell	2740	A. J. MacDougall	2207
A. H. Morris	2308	G. B. Riddick	2135
S. A. Archer	2297	H. Hewetson	2107
E. W. W. Cochrane	2223	R. W. Clements	2000
M. Swabey	2210		

INDIAN MEDICAL SERVICE.

Names in order of merit.	London marks 4600.	Names in order of merit.	London marks 4600.
H. Walton	3186	H. R. Brown	2331
H. Ainsworth	3010	A. N. Fleming	2316
J. W. Cornwall	2683	S. P. James	2305
F. A. Smith	2635	A. E. H. Pinch	2285
J. S. Stevenson	2610	P. Dee	2283
H. A. D. Dickson	2604	F. O. N. Mell	2233
W. G. Richards	2518	F. D. Brown	2259
M. Dick	2513	F. A. L. Hammond	2223
A. Miller	2476		

MORTALITY FROM FEVER AND "KALA-AZAR" IN ASSAM.

The mortality from fever has much increased of late in Assam, and a large portion of it appears under the head of "Kala-azar"—a parasitic disease attributable to the presence of the dochmius duodenalis. We learn that a medical officer is to be appointed to inquire into the subject and the causes of "Kala-azar." There seems to be some difference of opinion as to the exact nature of the disease which has given rise to the fever mortality in Assam—whether it is due to an aggravated form of malarial fever or to the parasite in question. It is quite probable that the two diseases may coexist; in other words, that the subject of a severe form of malarial fever may be also affected with the parasite. An investigation of the matter is likely to be of interest from a scientific point of view. Are the febrile phenomena and fatality traceable to the parasitic affection only or to the influence of malaria?

THE MEDICAL SERVICE IN INDIA.

Apropos of the proposed amalgamation of the Medical Services of Bengal, Madras, and Bombay into one Service, under the direct administration and control of the Government of India, to which we have previously alluded, the *Times of India* of the 14th ult. contains a paragraph to the following effect: "The Surgeon-General with the Government of India will be the head of the amalgamated Service, and his designation will be Director-General of the Indian Medical Service. No change will be made in the condition of the officers appointed before the second examination in 1896; but from that date the appointments will be made on one general list, and officers will be liable to an appointment in any part of India. The present surgeon-generals in Madras and Bombay will retain their privileges, but continuance of these privileges to their successors will be reserved for future consideration."

THE DEFENCE AND RELIEF OF CHITRAL.

We are extremely glad to learn that an Army Order has been promulgated at the War Office with reference to the grant of a medal and clasps for the defence and relief of Chitral. The order is preceded by another in which it is stated that the Queen has been graciously pleased to approve of a new medal—to be designated "the India Medal, 1895"—being struck to commemorate military operations on the frontier of India. This medal will have two clasps, for the defence and relief of Chitral respectively, which will be issued to the troops employed in the operations connected therewith between certain specified dates. Anyone may feel proud of having taken part in either the defence or relief of Chitral, and we are glad to think that some of the members of the two medical services did not play the least distinguished part in those operations where all strove to do their duty.

THE EASTER VOLUNTEER MANŒUVRES.

Some facetious individual has said that we do not have "weather" in England, but only samples, and the truth of his remark, if tested by the period during which the Easter Manœuvres have taken place, must be admitted. On the whole, however, the weather which prevailed has been as enjoyable as that which prevails at most Eastertides, and the Volunteers who took part in the operations may be said to have spent a profitable and useful holiday. Some 26,000 men must have left London for Folkestone, Canterbury, Eastbourne, Winchester, Brighton, Shorncliffe, Sandgate, and other towns where the manœuvres took place. The Medical Staff Corps were stationed at Walmer and were quartered at the barracks in that town. Among the officers were Surgeon-

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Lieutenant-Colonel Norton, commanding, Surgeon-Captain Squires, and Surgeon-Captain Harper.

THE GOVERNMENT DAIRY AT ALDERSHOT.

Some discussion took place at the last meeting of the Aldershot district council as to the proposal of the War Office to establish a dairy on the Government sewage farm at Aldershot, whence the military will be supplied with dairy produce. The general opinion was that an individual would have to be appointed as the actual vendor of milk, &c., on behalf of the Government, and the dairy and such vendor would be liable to the restrictions and regulations applicable to private dairies. No action was therefore taken in the matter.

THE MATABELE RISING.

Amid the numerous wars and military operations that are taking place at the present time the news from South Africa occupies a fairly prominent position. There has been some sharp fighting in Matabeleland between the Hon. M. Gifford's party and the natives, in which this officer and some troopers have been wounded and a few killed. There is no doubt that the wounded will be well looked after.

THE PREVENTION OF CHOLERA AMONG THE COOLIES IN ASSAM.

The *Pioneer Mail* states that the plan suggested by the India Tea Association for guarding against cholera among the labourers intended for the Assam gardens is being tried in Calcutta, where coolies enlisted for the gardens are being inoculated by Professor Haffkine's method.

VOLUNTEER MEDICAL STAFF CORPS.

Her Majesty has been pleased to approve of the disbandment of the Norwich Company, with effect from March 31st, 1896, and Surgeon-Major T. W. Richardson is allowed to resign his commission from that date, with permission to retain his rank and to continue to wear the uniform of the Corps on his retirement.

DEATH IN THE SERVICES.

Surgeon-Major Arthur Francis Sargent, M.R.C.S., L.S.A., 3rd Bombay Infantry, at Nice, on March 27th, aged forty-three. He entered the Army as Surgeon on Oct. 1st, 1877, and was promoted to the rank of Surgeon-Major in 1889. During the year 1884 he served with the Zhob Valley Expedition.

Three hundred and eleven patients were admitted to the Royal Victoria Hospital, Netley, on April 2nd, *ex* steamship *Dilwarra* from Bombay.

Correspondence.

"Audi alteram partem."

THE TREATMENT OF HEART DISEASE BY BATHS AND GYMNASTICS.

To the Editors of THE LANCET.

SIRS,—In several of the articles recently published in the English medical journals on the so-called Nauheim treatment of heart disease I find that the meritorious work of the late Professor Beneke in this branch of therapeutics has not been sufficiently acknowledged, whilst that of another well-known physician of Nauheim—namely, Dr. Groedel—has not been even mentioned; and nothing has been said about the gymnastic treatment of heart diseases having been first employed in Sweden. I will therefore be greatly obliged if you will allow me to make the following remarks.

Beneke as early as 1859 and 1861 described the effect of the Nauheim baths on heart diseases. Special papers on this subject appeared in the years 1870, 1872, and 1875, in which we find that Beneke treated not only valvular lesions combined with rheumatism but all kinds of heart diseases, and I beg to call particular attention to the fact that he found that not only was a soothing effect produced by the baths upon the heart's action but that there was also a striking improvement of the compensation in cases where no other treatment had been of any effect. The next paper on this subject was written by Dr. Groedel in the year 1878 and appeared in the *Berliner Klinische Wochenschrift*, and this was the *first* announcement "that the baths increase the energy of the heart's action," an effect which was thus expressed in the first work of Dr. A. Schott two years later: "Baths are a first-class tonic for the diseased heart." A number of papers followed, written both by A. Schott and Groedel and subsequently by Th. Schott. Among those by Groedel I will only mention: The Effect of Baths on Respiration and Circulation,[1] the Treatment of Heart Diseases,[2] Nervous Heart Diseases,[3] Bad Nauheim and the Treatment of Chronic Heart Diseases,[4] a paper on the same subject in THE LANCET,[5] and Baths in Cases of Arterio-sclerosis.[6] As regards gymnastics for heart diseases Schott's first paper appeared in 1885. But publications by Swedish physicians about the application and advantages of gymnastics in disordered circulation are of much older date. Dr. Saetherberg of Stockholm, who made use of gymnastics for cardiac lesions as early as the year 1847, described his experiences in *Hygiea* in 1862, and he was followed in the same paper by Wrettind of Gottenburg in 1867 and by Dr. Zander in the *Nord. Med. Archiv*, 1872.[7] It is undoubtedly to the late Dr. A. Schott that we owe the first employment of gymnastics in cardiac disease in Nauheim, but the modifications made by him in the Swedish system were so insignificant that it cannot be called a method invented by himself. Groedel, who a year later published good results attained with gymnastics, prefers gymnastics with Zander's machines in certain cases to manual exercises.[8] I myself have also seen the best results produced by Zander's mechanical gymnastics.

Summing up all this, we find that Beneke having devised the bath treatment for heart disease, and Swedish physicians the gymnastics, there is no real reason for giving the name of Schott's method to the two treatments combined. Dr. Schott has endeavoured to explain the effects of baths and gymnastics, and in so doing he has assisted in making both methods of treatment better known, but others, especially Groedel, have also contributed to this end. In Germany, where the course of events could be followed from the very beginning, nobody ever thinks of speaking or writing about a "Schott method," we seldom hear even of a "Nauheim method," but simply of Nauheim as a health resort for patients with heart disease.

I am, Sirs, yours faithfully,

DR. HERMANN NEBEL,
Physician and Specialist for Gymnastics at Frankfort.

Frankfort-on-the-Maine, April 2nd, 1896.

*** We are much obliged to our correspondent for recalling the work of Professor Beneke and Dr. Groedel to our recollection. In THE LANCET of Dec. 22nd, 1894, page 1515, there is a letter from an Eastbourne correspondent of a tenour somewhat similar to the above, in that it asks for justice to the claims of Sweden as the original home of the essential part of the treatment.—ED. L.

THE EFFECT OF MUSCULAR WORK UPON THE ALKALINITY OF THE BLOOD.

To the Editors of THE LANCET.

SIRS,—Although my knowledge of the subject is scarcely such as to entitle me to speak, you will, perhaps, allow me to compare the statements made in two articles which appeared in THE LANCET of March 7th with regard to the effect of muscular work upon the alkalinity of the blood. In the course of his most interesting contribution upon the effect of exercise on the secretion of urea Dr. Haig, referring to the chapter on Mental Depression and Fatigue in the second edition of his book, "Uric Acid," observes: "I then go on to point out that the effect of exercise is to lower the acidity of the urine owing to the increased excretion of acids by the skin in perspiration; that the fall of acidity, or, more accurately, the increased alkalinity of the blood, allows the passage of an excess of uric acid through it, and that this is accompanied by a fall of urea and the presence of more or less marked feelings of fatigue." Upon this assumption that the effect of exercise

[1] Berliner Klinische Wochenschrift, 1880.
[2] Ibid., 1883. [3] Ibid., 1890.
[4] Petersburger Medicinische Wochenschrift, 1893.
[5] THE LANCET, March 30th, 1895, p. 802.
[6] Deutsche Medicinische Zeitung, 1895.
[7] Cf. Beiträge zur Mechanischen Behandlung, von Dr. H. Nebel. Bergmann, Wiesbaden, 1888.
[8] Vide Groedel's Medical Guide to Nauheim, Bindernagel, Friedberg, sixth edition, 1893; English edition, 1895.

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is to increase the alkalinity of the blood is based Dr. Haig's entire theory of the cause of fatigue—a theory that seems to be completely borne out by the experiments he adduces. But in the article which follows, "The Clinical Estimation of the Alkalinity of the Blood," Dr. Hutchison makes the following explicit assertion: "The effect of severe muscular work is to cause a fall in the alkalinity of the blood, this being probably due to the production of considerable quantities of lactic acid by muscular metabolism." How can these two statements be reconciled? Dr. Haig, it will be seen, attributes the rise in the alkalinity to the increased excretion of acids by the skin, while Dr. Hutchison thinks that the reverse result is probably due to the production of lactic acid by muscular metabolism. Which is the correct view? As I have said before, I can lay claim to absolutely no qualification that would entitle me to express any opinion upon the subject, but the question as to what really is the effect of muscular work upon the alkalinity of the blood is one of such great interest and importance that I may possibly be excused for calling attention to it in this instance. I am, Sirs, yours faithfully,

March 16th 1896. W. B. FOTHERINGHAM.

"THE NEW INFANTRY SWORD EXERCISE."

To the Editors of THE LANCET.

SIRS,—In a letter published in THE LANCET of March 28th Dr. Ritchie takes exception to my criticisms,[1] founded on anatomical and physiological grounds, of the new infantry sword exercise. With your permission I will reply briefly to the points he raises. I endeavoured to show that in the Masiello system—a more accurate term, I understand, than "Italian" for the newly-adopted exercise—a greater expenditure of force is necessary to effect the required movements than in the French system; that fatigue, in consequence, will ensue earlier; that the chief muscles concerned have to act at an undue mechanical disadvantage; and that rapidity, variety, and delicacy of movement are to a great extent sacrificed in order to ensure a more powerful thrust. It does not appear to me that Dr. Ritchie effectively traverses these propositions. With regard to the "on guard" position, Dr. Ritchie argues that the wider separation of the feet in the Masiello attitude allows greater rapidity in the "advance" and "retire," because a greater pressure can be exerted in the left foot in the "advance" and from the right in the "retire." I cannot agree with him. The more the feet are separated the greater is the exertion necessary in the initial stage of either movement and the less perfect is the balance. Additional exertion is therefore required to preserve the balance. If we accept Dr. Ritchie's view it should follow that with the feet still more widely separated than is prescribed in the Masiello "on guard" position the movements of "advance" and "retire" are still further facilitated. We are then brought face to face with a very obvious *reductio ad absurdum*. Dr. Ritchie admits frankly the greater exertion needed when he writes that the advantage of "greater rapidity of movement backwards from the Italian than from the French attitude" (retiring) is "well worth the extra effort entailed by the further separation of the feet." But to my mind the removal of the resistance of the left foot in retiring leads not to greater rapidity of movement so much as to loss of balance. The further the supporting leg (in this case the right) is from the line of gravity passing through the trunk, the less perfect is the balance and the greater is the effort required to maintain it. Comparisons of diagrams of the Masiello and French attitudes will make this point obvious at once. The greater the exertion the more quickly will fatigue ensue.

Next, as to recovery from the lunge, Dr. Ritchie considers that the raising of the body to the vertical position is effected by the hamstring muscles rather than by the gluteals, as I stated. I think this criticism is sound. I noticed the error before my letter appeared in print, but when it was too late to correct it. The correction makes my case stronger. It is unnecessary for me to call attention again to the mechanical disadvantage under which the hamstring muscles act and the disproportion between the two arms of the lever, for Dr. Ritchie himself points this out very clearly. As the muscles act at such a mechanical disadvantage the expenditure of force necessary to effect the recovery is very great, far greater than in the recovery from the French lunge. And for the same reason the initial velocity of the backward swing is comparatively low. By "backward swing," it must be noted, is meant the raising of the body from the inclined position forwards to the vertical attitude; beyond this the body is not allowed to swing. The chief function of the erector spinæ in this action is to preserve the rigidity of the longer arm of the lever. To the opinion that the backward swing does not increase the rapidity of recovery I must still adhere. The experiment mentioned by Dr. Ritchie only illustrates the greater force needed in recovery from the Masiello lunge. The extra exertion and the consequent fatigue again are practically conceded. Dr. Ritchie makes no allusion to the fatigue entailed on the sword arm by the extended position of the limb in the "on guard" position, and I may take it, therefore, that he concedes this point also, which, indeed, it seems impossible to question. He does not deal with the remarks I made on the movements of pronation and supination on the ground that in the Masiello system these movements are not concerned, supination being only required in one of the parries; that is to say, that all the advantages to be obtained in the French system from the various movements of the fingers and the actions of pronation and supination are thrown away in the Masiello method. The greater variety of movements, and the fact that they can be made with less expenditure of force and so entail less fatigue, seem to me, on anatomical and physiological grounds, to make the French system incomparably the more scientific of the two. I am, Sirs, yours faithfully,

Brook-street, W., April 6th, 1896. C. T. DENT.

[1] THE LANCET, Nov. 30th, 1895.

THE SANITARY INSTITUTE AND THE ISOLATION OF CASES OF INFECTIOUS DISEASE IN THE METROPOLIS.

To the Editors of THE LANCET.

SIRS,—The interesting paper on the above subject read at the sessional meeting on March 11th by Mr. Augustus Charles Scovell could not have failed to impress the audience with the importance of this subject as regards the protection of the public against zymotic diseases and consequently the reduction of the death-rate. But while I deeply appreciated the interesting discussion and the important contribution thereto by the eloquence of Dr. Thorne Thorne I was disappointed that little or nothing was said as to the working of the Notification Act. My presence as a guest made me feel some diffidence as to the etiquette of personally calling attention to the subject, the importance of which alone justifies my now drawing attention to it. Mr. Scovell, in speaking of scarlet fever in connexion with the future demands for hospital accommodation, said that "the accumulating statistics of notification ought to prove useful." And it is to this disease alone that I shall confine my comments. Mr. Scovell is right, but I feel sure as long as the Act remains as it is, and as long as even its present provisions are not strictly carried out, the Metropolitan Asylums Board will not benefit by the collected statistics as much as they desire, nor will the disease become less prevalent; nay, even the contrary effect will be produced. I am confident that the Act is not thoroughly carried out and that it wants amending so that the full benefit it was intended to convey to the public may be secured. I would ask, first, why is the Act not strictly carried out? and, secondly, what defect, if any, conduces to render it incompetent to deal with this disease as we all desire?

Now, Sirs, in answer to the first question I would say that the Act places a penalty on the head of the family which might become so severe that he deliberately, and perhaps not unnaturally, tries to avoid coming under its provisions; and owing to the notification having in many instances to go to an opposing general practitioner it is felt to be a grievance in provincial towns—where there is much prejudice against employing a medical man who is known to be in attendance on a patient suffering from an infectious disease—that one practitioner should be placed in possession of information that sooner or later leaks out (not by the medical officer of health divulging information he has officially received) and which will bring temporary loss on the notifying practitioner. That part of the question relating to the head of the family is by far the more serious. No medical man would abstain

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from notifying a case of the diagnosis of which he was confident; and parents know this, so that in times of epidemics, large or small, the medical man is not sent for until some serious complication has arisen. The latter may then feel morally certain that the patient's symptoms are the sequelæ of scarlet fever, but when he is met by a negative reply to all his definite questions he may well be excused, with legal actions so prevalent, if he lets the matter drop, contenting himself with treating the present symptoms. I do not imply that honourable members of the profession, when once satisfied as to the nature of the case, would even let this fear stand in the way of duty; but I do assert that the case of a large tradesman whose keenest opponent in the trade is on the sanitary board and whom publicity of the fact of there being fever on his establishment will affect seriously (added to the fact that he is a constant and good all-round patient of the medical man) presents a combination of circumstances that may enable the medical man not to be reasonably satisfied that he has a case of scarlet fever to deal with. And in the case of the lower classes a more painful and a sadder state of things confronts the medical man. He sees a case and informs the parent it must be notified, which means that no children must go to school, causing a prolongation of the time before A and B can pass the necessary standard and take their part as partial bread-earners of the family. A and B, too, who get 2*s*. a week each and their breakfast by cleaning boots and knives before going to school, must relinquish this work for several weeks. The mother must not go out charing, &c. Is it surprising, then, that among this class the medical man rarely sees the rash or any other early symptoms? Hundreds of cases are so mild that the little patients have no medical attendance, and when they do it is for scarlatinal nephritis, dropsy, or some other sequel which has frightened the parents. The tale is always the same: they have seen no rash, noted nothing, know of no adjacent cases, and even when the desquamating parts of the body are pointed out the utmost surprise is expressed and the medical man is asked if he is certain of his diagnosis.

The answer to the second question is brief. Let the Act be so altered or amended that no general practitioner shall be eligible for the post of medical officer of health. Let an indemnifying clause be added to protect all practitioners from the annoyance of any legal action consequent on the notification of cases of infectious disease, and give protection to the public in case of their disputing the diagnosis by empowering them to demand a consultation with the medical officer of health free of charge. Make it a good action at law for libel for any member of a sanitary board to divulge information obtained under the Act; and, most important of all, insert a compensation clause so that parents shall not suffer pecuniary loss by having to isolate the sick child as well as other members of the family. I am confident with this clause every member of the community would help the profession to stamp out the disease, instead of as now spreading it far and near. Let the poor man lose nothing by the isolation of the little patient and his whole family and he will help in the matter. Increased hospital accommodation would not be necessary, and I feel sure that highly satisfactory results would shortly be obtained.

I am, Sirs, yours faithfully,

ELLIOT DAUNT, L.R.C.P.Lond., M.R.C.S.Eng., D.P.H.

March 23rd, 1896.

"DEATH UNDER CHLOROFORM AT A DENTIST'S ROOMS."

To the Editors of THE LANCET.

SIRS,—The reasons for avoiding the sitting posture for the patient in the administration of chloroform have not, I think, been recently given.

It is clear from the exhaustive experiments of Dr. Leonard Hill[1] and of the Hyderabad Chloroform Commission[2] that the force of gravity has a marked effect upon the circulation, especially under the influence of certain anæsthetics, producing a fall of blood pressure in the carotid arteries in the vertical and sitting postures, which can be restored by placing the body in a horizontal position; also, that when the compensatory vaso-motor mechanism of the splanchnics is paralysed the sitting posture is dangerous, because it allows dilatation of the abdominal veins, emptying of the right heart, and failure of the cerebral circulation.[3] Now chloroform lowers the blood pressure and rapidly paralyses the splanchnic vaso-motor mechanism. It cannot, therefore, be safe (with our knowledge of the limits of chloroform anæsthesia) to add the lower blood pressure of the sitting posture to the lowered blood pressure and paralysed vaso-motor mechanism of chloroform narcosis.

Beside these considerations the mortality from chloroform in any position is five times that of ether.[4] Nitrous oxide and ether cause a rise of blood pressure and do not readily paralyse the splanchnics even in large doses; they can be administered together or ether can be given alone by means of Clover's inhaler, and will yield complete, quiet anæsthesia of any required duration without danger in the sitting posture. This is a matter of every-day experience, supported by all the above experiments and authorities. For these reasons—and I write in the hope that they may be more widely recognised among dental operators—I would urge very earnestly that it is not justifiable to administer chloroform for dental operations when ether can be obtained, unless the patient is prepared beforehand, laid flat upon a couch, and the risks are clearly recognised as in all sugical procedures. In my opinion cases obliging the use of chloroform in dental work are extremely rare, and if they do arise the risk to life will be reduced by such precautions.

I am, Sirs, yours faithfully,

H. BELLAMY GARDNER,

Assistant Anæsthetist to Charing-cross Hospital and to the Dental Department.

Welbeck-street, Cavendish square, W.

"THE DUTIES OF DIVISIONAL SURGEONS IN CASES OF INFECTIOUS DISEASES."

To the Editors of THE LANCET.

SIRS,—Mr. Harnett's letter is no answer to my inquiry, although he admits the two flagrant breaches of professional etiquette I specified. I regret to see no word of apology. Whatever he may write to the contrary, I emphatically deny having ever given him any cause for his behaviour. I am not aware that a *tu quoque* argument exonerates a man from following the well-established rules which govern the behaviour of one professional man to another. I propose to adduce several other instances of similar misconduct occurring in my practice that your readers may judge of this gentleman's procedure. Some months ago a mild scarlet fever epidemic existed here and attacked several families of the police force. In one instance the father was told to have the patients' heads shaved or cut close. This was objected to and the divisional surgeon reported the man to the inspector to enforce his prescription. It appeared to be *ultra vires*, however, and was dropped. In another instance the divisional surgeon ordered the family out into the garden at the end of a fortnight—at least, so the mother told me. I was also told that the inunction of a medicament which I had ordered had not the sanction of his approval. In a case of diphtheria the divisional surgeon got the child out of bed and made it walk to the window that he might examine the throat—surely an unnecessary punishment for being the patient of another practitioner. When this uncalled-for and irritating interference is indulged in on every possible occasion it indicates to my mind an animus which must be destructive to a man's judgment on other matters. Other divisional surgeons whom I have consulted disclaim any mission to offend professional propriety and have no such difficulties. The limits of my letter will not permit me to discuss the irrelevant matter and inaccuracies introduced into Mr. Harnett's letter. As there is no promise of amendment I shall consider it my duty for the protection of my patients and myself to call the attention of the Chief Surgeon of Police to this correspondence in the hope that Mr. Mackellar may be able to render the divisional surgeon's self-imposed duties less onerous. It is not my intention to prolong this correspondence further.

I am, Sirs, yours faithfully,

Barnet, Herts, April 6th, 1896. W. THYNE, M.B., C.M. Edin.

[1] Proceedings of the Royal Society, vol lvii., No. 342.

[2] Lauder Brunton: Transactions of the Medical Society, vol. xlii., p. 271.

[3] Hewitt: Royal Medical and Chirurgical Society, Oct. 22nd, 1895.

[4] Hewitt: Anæsthetics and their Administration, p. 62. Neyraud: Lyons Thesis, Statistics from over a Million Cases from Seven different Authorities — Étude Comparative sur l'Éther et le Chloroforme. J. Campbell, Paris Thesis, 1894: De l'Emploi de l'Éther.

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ACUTE CONGESTION OF THE LUNGS (?).

To the Editors of THE LANCET

SIRS,—Dr. Squire, in his interesting and instructive paper on "Some Clinical Remarks on Pneumonia," published in THE LANCET of April 4th, says, "It is an interesting point whether there are cases which justify a diagnosis of acute congestion of the lung." A case which has quite recently come under my notice seems explicable only on the assumption that such a pathological condition as active pulmonary congestion does exist. A girl aged eighteen years, who had been suffering from obscure pains in the limbs for some days previously, was suddenly attacked with dyspnœa, shivering, and cough. When seen there was loss of resonance over the lower third of the right lung, and over this same area crepitations, fine consonating râles, and tubular breathing were well marked. Vocal fremitus was not increased, nor could bronchophony be heard. The temperature was 101·9° F. Respirations were increased in frequency and the cough was very troublesome. Next day the patient expressed herself as feeling much better. The area of dulness was diminished, and by the end of forty-eight hours the right lung was quite resonant and the breath sounds had assumed the normal vesicular tone. The cough still continued and the expectoration was profuse. The morning and evening temperatures were normal, and the patient has made an uninterrupted recovery.

I am, Sirs, yours faithfully,
J. H. MARSH,
April 7th, 1896. Senior House Surgeon, The Infirmary, Macclesfield.

"THE QUESTION OF MEDICAL DEFENCE."

To the Editors of THE LANCET.

SIRS,—Now that there seems to be a general desire that we may make the Medical Defence Union a strong corporation to defend the individual rights of its members, I think many medical men would join if an undertaking was given that they would not interfere in disputes affecting personal matters between medical men. I know of a case where one medical man, a member of the Union, slandered a medical man who was not a member simply because he started a practice for himself without purchasing it, and on the writ being served it was immediately taken up by the Union. Is this fair play?

I am, Sirs, yours truly,
March 24th, 1896. PERPLEXED.

DEATH CERTIFICATES FOR TONTINES.

To the Editors of THE LANCET.

SIRS,—A man whose child dies comes to Dr. A—— for a certificate of death, which is given on the usual form for the registrar. The father being in a tontine society is entitled to £1 on the death of his child, and he therefore asks for other certificates so as to obtain this money. Dr. A—— writes out (on note-paper) a certificate as required. The registrar on being informed of this states that the payment of the money on such a certificate is illegal. Would you kindly inform me whether this is correct?

I am, Sirs, yours truly,
April 7th, 1896. A. M.

*** Section 14, Sub-section 2, Friendly Societies Act, 1875, says: "No registered society shall pay any money on the death of a person of any age without the production of a certificate of the death issued by the *registrar or other person who has the care of the register book* in which the death is registered." It will therefore be seen that the registrar is legally right, but we do not admire the by-law that places the medical man in this position.—ED. L.

THE LANCASHIRE ASYLUMS BOARD'S PENSION SCHEME.

To the Editors of THE LANCET.

SIRS,—Few will be found to congratulate the Lancashire Asylums Board on their recently formulated pension scheme. It is to be hoped that the scheme is but a tentative one, as in its present form it is in most respects extremely imperfect. Possibilities there are, truly, but certainties none. The earnest, faithful asylum official has been led to expect, after a period of from twenty to thirty years of difficult, often dangerous, and comparatively ill-paid service, a definite pension according to his service and record. It is well known that the promise of this pension was taken into account when the various salaries and values of the emoluments were fixed. Now, forsooth, he may obtain, irrespectively of his record of good and long service, between fifty-five and sixty years of age, a pension of at least one-third of his actual salary or at most of two-thirds of his salary and emoluments, but the actual amount of which depends upon the caprice or temper of the awarding body which may then be in office. Several instances have lately occurred where the amount of an attendant's pension proposed by the committee of visitors of the asylum to which he belonged has been cut down to one-half by the Asylums Board at the general meeting by a majority of members who, knowing nothing of the merits of the case, yet so voted either out of jealousy, a feeling of economy, or a rooted aversion to any pension scheme whatsoever. Even apart from these wide limits the scheme is too elastic, every provision being so arranged as to be possibly set aside or to be modified indefinitely. The minimum age at which a pension may be ordinarily granted is fixed by the Lunacy Act of 1890 at fifty years, yet this is over-ridden and other five years added in this scheme, making the minimum age fifty-five years. The age for compulsory retirement proposed in this scheme is sixty years. Few attendants on the insane are fit for active duty after fifty-five years, as long service in an asylum has without doubt a markedly deteriorating effect both mentally and physically.

One could name several counties, some of far less extent and importance than Lancashire, where definite and equitable pension schemes have been adopted and which have given general satisfaction. I am, Sirs, yours faithfully,
April 4th, 1896. LANCASTRIAN.

A MEDICAL OFFICER OF HEALTH AND THE LONDON COUNTY COUNCIL.

To the Editors of THE LANCET.

SIRS,—I should be obliged if you would give me an opinion on the following case. The solicitors of the London County Council have entered into correspondence with me and have got me to call and see them in their office at Spring-gardens. The letters and interview relate to a scheme of the Council relative to an insanitary area (Falcon-court, Borough, Southwark) under Part II. of the Housing of the Working Classes Act, 1890, a portion of the expenses in the carrying out of which the vestry of St. George's, Southwark, have agreed to pay. I am asked by the Council to (*a*) draw up death-rates, births, &c., for the past four years and make up a full report of evidence; and (*b*) to give evidence before a public inquiry, which is shortly to be made by the Local Government Board to support Dr. Hamer's evidence. The area in question is in St. George's, Southwark, for which I am "*wholetime* (?)" medical officer of health, and I have received the consent of my authority to give the evidence. I wish to know whether I would be justified in charging the London County Council a fee for the evidence and for the report of evidence, &c., drawn up in the evenings after office hours, or must I give my services gratuitously? Nothing so far has been said about any payment by solicitors or self. Some time ago I was similarly interviewed by the London County Council solicitors and asked to give evidence on (*a*) Water Bills of the London County Council, and (*b*) the amount of water necessary to flush w.c.'s. The first thing I did on calling upon the London County Council solicitors was to ask them on what terms I was to give evidence. They said *gratuitously*, and I accordingly refused the honour.

I am, Sirs, yours faithfully,
March 28th, 1896. M.O.H.

*** Our correspondent does not tell us whether in connexion with (*a*) the Water Bills of the London County Council and (*b*) the amount of water necessary to flush w.c.'s, he was asked by the Council or his own vestry to give evidence, but if the former this is the first instance of which we have heard in which the Council has refused to pay its medical witnesses. In reference to his question as to whether he would be justified in charging a fee for evidence, &c., in connexion with the

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Falcon-court Scheme we think the only objection which could be raised to such action would be that his fee would be part of the expenses of the scheme, a portion of which would be paid by his own authority. We think he would do well to obtain leave from his authority to make a claim before doing so.—ED. L.

"ASSISTANTS."

To the Editors of THE LANCET.

SIRS,—Surely it cannot be maintained that the singularly unfortunate experiences of "A Sorely-tried Principal" are by any means those of the majority of medical men requiring assistance. The many difficulties with which an assistant has to contend have already been so ably dealt with by your two correspondents on this subject in THE LANCET of March 28th that it is quite unnecessary to again refer to them. I would wish, however, to emphasise the question of salary as being of still more importance. It cannot be expected that men of experience, possessing good diplomas and excellent references, will undertake to perform the often laborious and in many cases most irksome duties of assistant at the miserable salary of £6 or £7 (in-door) per month. Luckily, we junior members of the profession are not entirely dependent on these positions, and such salaries will be accepted only, I imagine, either by those but just qualified or who, by reason of intemperance &c., are unable to obtain more lucrative employment. I have always been taught that to obtain a first-class article one must go to a first-class firm and pay a first-class price. I would venture to say that if those requiring help were to adopt this principle there would seldom be grounds for such complaints as are the subject of "A Sorely-tried Principal's" letter.

I am, Sirs, yours truly,

April 6th, 1896. COUNTRY ASSISTANT.

P.S.—Would it not be interesting to know how many men and of what class will be attracted by an advertisement which offers the remunerative (!) salary of £20 (in-door) per annum?

THE BATTLE OF THE CLUBS.—XXVII.[1]

(FROM OUR SPECIAL COMMISSIONER.)

(Continued from p. 955.)

LEICESTER AND WOLVERHAMPTON.—THE POLICY OF THE MEDICAL UNIONS RECENTLY CONSTITUTED IN THESE TOWNS.

THE Medical Union movement is spreading in all directions. During the last few weeks it has been more particularly pronounced in the Midland counties. We have seen how a union has been successfully formed at Nottingham, and now we have to congratulate the profession on the constitution of similar organisations at Leicester, Wolverhampton, and Walsall. At Leicester the medical practitioners have been acting with marked circumspection. A meeting, to which all the members of the profession were invited, was held some time ago and was well attended. A union was then constituted, but it was decided to study the situation thoroughly before taking action. From the first it was evident that the position and the interests of the medical men concerned differed very widely. To discuss in common the various phases of contract or club work would occasion a great loss of time. The contract work at Leicester may be divided into three or four categories. First of all there are the twenty-seven practitioners who are attached to the Leicester Provident Dispensary. Then there are the medical officers of the friendly societies and the medical officers in the service of insurance companies. To these three categories may be added the medical men who have private medical aid dispensaries of their own. Instead of holding large meetings in which all these different questions would be treated at once a number of small meetings have taken place. Thus the Provident Dispensary medical officers have met separately and several times. The same may be said of the other two categories: the insurance company medical men and the friendly societies' medical men. When in each of these branches the practitioners concerned shall have thoroughly investigated their own position and agreed as to the possible remedies, then the whole of the profession will be brought together again. It will then be decided whether a general effort can be made along the whole line or whether the grievances shall be fought out in detail, one at a time. If so, the point of least resistance will naturally be selected for the first attack. But in so large a town as Leicester, where the problem is so complex and differs according to the various institutions, a great deal of investigation and study is absolutely necessary before a policy of action can be safely pursued. Till this policy has been definitively adopted, and till the information and the means of action have been collected and organised, the Leicester Medical Union is wisely observing a prudent silence. There is no desire to rush into print till everything is ready, but in due time there is no doubt that a good case will be put before the profession and the public and that this statement will be followed up by energetic and, let us hope, effectual action.

At Wolverhampton there used to be a medical society which collapsed from inanition some ten years ago. It was, however, reconstituted in 1894 and called the Wolverhampton and District Medical Society. It was a scientific and social society—perhaps more social than scientific. In any case it served the primary purpose of bringing medical men together. Out of the fifty borough and thirty district practitioners thirty-two were enrolled as members of this society. On Feb. 12th last, when the members of this society met, a circular received from the Incorporated Medical Practitioners' Association occasioned some discussion on the grievances arising from club practice. Dr. Armitage spoke of hospital abuse and of the competition of medical aid societies. Dr. Malet admitted the prevalence of hospital abuse, but they could not be too severe as it was so difficult to collect funds for the maintenance of in-door patients. The general consensus of opinion gravitated towards the suggestion that a provident institution managed by the medical profession should be established at Wolverhampton on somewhat similar lines to what has been done at Eastbourne. A resolution was carried to the effect that information should be obtained as to the constitution and rules of those provident institutions which had been organised in other towns by the medical profession. This information having been secured, another meeting was held on March 11th, at which Dr. Deanesley moved and Dr. Malet seconded:—

"That in the opinion of this society it is advisable to establish in Wolverhampton a provident medical association (similar to that founded at Eastbourne) for the purpose of enabling those persons who cannot afford medical attendance at the usual charges to obtain the same under conditions satisfactory both to themselves and to the medical profession."

This was carried unanimously, but the attendance was small and limited to the members of the society. It was therefore resolved that a general meeting should be convoked and all the members of the profession invited to attend. Together with this invitation a copy of the Eastbourne rules was forwarded to every practitioner. On the invitation the text of the above resolution was given, with the intimation that it would be submitted anew to the general meeting by Dr. Armitage and seconded by Dr. Bankier in order to ascertain whether the general body of local practitioners were willing to coöperate with the medical society in carrying out the proposed scheme. This general meeting took place on March 25th, and twenty-eight out of the fifty borough practitioners attended. Six other practitioners wrote letters of approval. It may be said that two-thirds of the local practitioners are in favour of the

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Aug. 24th, 1895, Brussels; (2) Aug. 31st, 1895, Brussels; (3) Sept. 21st, 1895, Portsmouth; (4) Sept. 28th, 1895, Portsmouth; (5) Oct. 5th, 1895, Eastbourne; (6) Oct. 12th, 1895, Lincoln; (7) Oct. 26th, 1895, Lincoln; (8) Nov. 2nd, 1895, Grimsby; (9) Nov. 9th, 1895, Bexhill-on-Sea; (10) Nov. 16th, 1895, Hull; (11) Nov. 23rd, 1895, Hull; (12) Dec. 7th, 1895, York; (13) Dec. 14th, 1895, Northampton; (14) Dec. 21st, 1895, Fermanagh Medico-Ethical Association; (15) Dec. 28th, 1895, Northampton; (16) Jan. 4th, 1896, Birmingham; (17) Jan. 18th, 1896, Birmingham; (18) Jan. 25th, 1896, Club Practices in Rural and Mining Districts; (19) Feb. 1st, 1896, The Formation of a Provident Medical Association at Folkestone; (20) Feb. 8th, 1896. The Manchester Medical Guild and Medical Aid Associations; (21) Feb. 15th, 1896. The Leicester and Leicestershire Provident Dispensary; (22) Feb. 22nd, 1896, The Organisation of the Profession at Leicester; (23) March 7th, 1896, Loughborough: Local Efforts Defeated by Consultants from Neighbouring Towns; (24) March 14th, 1896, Medical Aid Societies in Small Heath; Medical Clubs at Stockport; (25) March 21st, 1896, General Meeting of the Profession and the Formation of a Union at Nottingham; (26) April 4th, 1896, Nottingham; the London and Manchester Industrial Assurance Company, Limited; the Public-house Medical Aid Clubs; United Action at Lincoln.

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scheme. Among the remaining third there is little or no active hostility, but mere lukewarmness. Most of the speakers were in favour of following the Eastbourne example, which had been rendered familiar to the members present by the full description published in the columns of THE LANCET. The speakers denounced the sweating of the medical profession, the lay control of medical work, the absence of a wage limit, and generally agreed as to the prevalence of the various grievances that have so frequently been exposed in this series of articles. One medical practitioner who was recently in the service of the friendly societies said he was at first opposed to the scheme because he thought that persons who could afford to pay small bills would be tempted to join an institution which the medical men themselves had organised, though they now objected to belong to the clubs or medical aid associations managed by laymen. This objection, however, would be met if a wage limit was enforced, particularly if that limit was not too high. Another speaker also feared that the creation of a provident association by the profession would tend to increase instead of reducing the prevalence of club practice. Such a provident association being supported by the whole of the profession would acquire so high a reputation that private patients would be tempted to join. Then, again, there are at Wolverhampton several practitioners who compete successfully against the clubs by adapting themselves to the needs of the working classes. Thus, when there is serious illness they undertake the charge of the case for a fixed sum, perhaps 7*s.* per week. Others maintain the 2*s.* 6*d.* fee, but they forget to charge for every other visit. Their attendance by these means does not cost more than workmen can afford. Nor, apparently, is the average cost to the workman greater than if he paid 1*d.* per week whether well or ill. In any case many workmen prefer this system to joining a medical aid club. The medical men who do this sort of practice fear, however, the probable competition of a provident society organised by the profession. Nevertheless, here again the difficulty resolves itself in the establishment of a wage limit, which, however, it is urged should be lower for Wolverhampton than for Eastbourne. When the resolution as above was put four hands only were held up in opposition. Two of these voters were the medical officers who are engaged at a fixed salary by the amalgamation of the friendly societies. One of them rose and delivered a denunciatory speech. He complained that the movement was simply an attempt to form a capitalist "ring." This association of the privileged and more fortunate members of the profession would have for policy the boycotting of medical men, who were none the less brothers in the same profession, because they were so poor that they could not sit still and wait for a practice, but were compelled by the necessity of existence to accept posts at fixed salaries in the service of friendly societies. The suggestion that a medical society which is composed in part of medical men who are in a necessitous position and have to work very hard for a modest income could be qualified as a "ring" of capitalists excited a good deal of laughter. Nevertheless, the medical profession will have to deal with the unemployed question, for it is the principal obstacle to successful organisation. A very active local practitioner with whom I discussed the Eastbourne scheme said that at Wolverhampton the profession might be divided into three categories. First, there was the young medical man who had very little work; secondly, there was the consultant; and, thirdly, the busy general practitioner. If the profession established a provident association of their own the consultant would not lose anything. The young practitioner by inscribing his name as one of the active medical officers of the association would gain a great deal. Also, was there not a risk that medical men of somewhat inferior reputation would profit by the opportunity to put their names down side by side with those who enjoyed the highest reputation and profit undeservedly by such a juxtaposition? In conclusion, he thought that the general practitioner who had many patients was likely to lose by the arrangement. Also he thought that in Wolverhampton many medical men were so lax in the observance of medical etiquette that he failed to see what guarantee there could be that the rules of the proposed provident association would be strictly observed by its active medical officers. Of course, the wage limit and the uniformity of charge form the sovereign remedy for all these doubts. As this charge would be paid to the society and not to the individual medical officers it is difficult to see how the latter could undersell each other. But the very fact that so many criticisms were made led me to the conclusion that the Wolverhampton Medical Society had, perhaps, been attempting to run before it had learnt how to walk. It also struck me that there was a tendency to put all the eggs in one basket. The formation of a provident association such as exists at Eastbourne is, after all, only one phase of the struggle, and the position of affairs is much more simple in a small fashionable watering-town than in a working-class and manufacturing community like that of Wolverhampton. Above all, there is always a tendency, all the more dangerous as it is most natural, to hasten to grapple with the evil. The desire is to at once engage in a heroic battle and win a glorious victory. The patient, slow, laborious work of organising such armies as alone can win battles is not so attractive, especially to such busy men as medical practitioners. Yet without very careful organisation disasters are likely to ensue, followed by discouragement and disbandment. It seemed to me very evident that at Wolverhampton schemes of action had not been maturely studied. The Union, such as it is, is not yet sufficiently strong, and it has only discussed the question of forming a provident association on the Eastbourne model. Will the working men readily give up the management of the medical aid organisations which they have built up step by step and to which poor men have devoted hours of gratuitous labour? An elaborate and carefully prepared argument must be drawn up by the Medical Union and submitted to these workmen, so that they may be convinced that the medical profession is not acting against but in favour of their true interests. All this takes time and much study. Institutions which have grown up in the course of years are not overthrown in a day. The formation of a medical union is all the more creditable to those who succeed in bringing it into existence as it can only be firmly established by much laborious and persistent work. It redounds to the honour of the medical profession at Wolverhampton that they should have courageously attempted this arduous task. They have, perhaps, sought to advance a little too quickly at first; but if this is a mistake it is also a proof of zeal, and if the willingness to act is there, experience will soon show which is the right road to follow.

That action is necessary the deplorable state of affairs at Wolverhampton amply proves. These evils have been denounced over and over again. Dr. Leslie Phillips called attention to this town some four years ago. He then related, and the facts were printed at the time, that Mr. Wallington had been for five and a half years senior medical officer of the Wolverhampton Friendly Societies' Medical Association. For a salary of £250 a year Mr. Wallington went through the terrible excess of work occasioned by the first two influenza epidemics. He asked for some compensation, especially as he had incurred a considerable excess of cab hire. The income of the association at that time was £1835, out of which the medical officers and locum-tenents obtained only £498. Nevertheless, the association refused to pay the cost of the cab hire, and out of his modest income of £250 Mr. Wallington was out of pocket £57 for this item alone. While the association refused to bear this extra expense caused by the epidemic the profit they made was sufficient, after paying all working expenses, to purchase and pay for land to the value of £550. It was also calculated that the actual cash paid to Mr. Wallington only amounted to 10*d.* per year per member of the friendly societies. In 1894 this association had 8759 members. Its receipts had fallen to £1369, and out of this sum it paid its medical officers £425. On questioning some of the medical men who attend the members of friendly societies they admitted that some of the lady patients wore silk dresses and sealskin jackets. There is no doubt that the usual abuses prevail at Wolverhampton as in so many other towns. The disunited condition of the profession has up to quite recently been the chief obstacle to reform. As one practitioner observed in my presence, the medical men injure each other quite as much as the clubs injure them. It is not only advisable to establish a provident medical association which, under the management of the medical profession, shall replace the existing clubs and medical aid associations, but it is necessary also to fix a minimum limit which every medical man in competing with other medical men shall be bound to respect.

A HASTINGS DISPENSARY WOUND UP.

At a meeting held at the Hastings Town Hall on Monday, Dr. B. H. Allen presiding, it was resolved on the motion of

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the Chairman, seconded by Mr. Coleman, that the Provident Dispensary be wound up.

THE PROPOSED CHEAP MIDWIFERY FEES AT LINCOLN.

To the Editors of THE LANCET.

SIRS,—There surely must be some explanation of the absurdly low midwifery fees which the union of medical men at Lincoln has gone in for. Read as the "Battle of the Clubs" doubtless is at this particular epoch by the officials of the various clubs, dispensaries, &c., it will be "nuts to crack" for them to find at what low fees the Lincoln medical practitioners assess themselves. It is, moreover, manifestly worse to demand such disproportionate midwifery fees than (under pressure) to accept them. If the worry and trouble of forming a medical union only eventuate in "half-guinea midwifery" all one can say is that "the game is not worth the candle," and that it is but another instance of *parturiunt montes, nascetur ridiculus mus*. Here (a Midland town which must perforce be nameless) no contract midwifery work is taken even now under 15*s.*, and in the case of the Oddfellows £1 1*s.* is the fee for attendance on primiparæ. Beyond and above all this, at various meetings of the profession in this town it has been all but unanimously agreed to that no midwifery case in any club or dispensary should be attended for a less fee than £1 1*s.*, and there is absolute unanimity that that should be the minimum fee for primiparæ.

Now the low midwifery fee which the Lincoln practitioners have announced—viz., "confinements 10*s.* 6*d.*, operative midwifery 15*s.*"—will have a tendency to lower the contract midwifery fee to be demanded by the various medical unions throughout the country, for how can medical men "in union welded" demand (I beg pardon, "suggest") in one county a general midwifery fee of £1 1*s.* when in another only half that amount is asked? Certainly, whilst acknowledging that each town must be treated to some extent on its own merits, nevertheless this action of the Lincoln practitioners prejudges the question and tends to show that in this "Battle of the Clubs" there should be some central union or authority to fix what the minimum midwifery fee ought to be. It is, of course, pleasing to think that there is "unanimity" at Lincoln, but surely even that may be bought at too high a price or rather, as in this case, at too low a figure. It would be interesting to know what the midwifery fees in contract practice are in that town at the present time. Apparently they must be 7*s.* 6*d.*, with 2*s.* 6*d.* extra for "putting on the forceps." It is, however, too serious a question to joke about, and I hope due attention will be called to the matter and the Lincoln practitioners urged to rearrange this obnoxious rule No. 5 about midwifery and demand a minimum uniform fee of one guinea, or certainly not less than a 15*s.* fee, and for all primiparæ one guinea.

Charging an extra fee (4*s.* 6*d.*) for "operative midwifery," by which term I conclude that "putting on the forceps" is generally implied—certainly the general public do not consider anything an "operation" unless "instruments" are used—I look upon as an inadequate and vexatious addendum. It is certainly likely in many instances to lead to unpleasantness with one's patients, as we shall be sure to get the credit, albeit, I hope, undeservedly, of "using instruments" to obtain the extra nine sixpences. For obvious reasons I do not sign my name, but

Remain, Sirs, yours faithfully,

April 4th, 1896. A MIDLAND MEDICAL MAN.

*** Our correspondent's letter reveals a difficulty which all have known to be present in this matter. It is difficult enough to obtain unanimity of opinion in one district, but for the present at least it must be impossible to obtain unanimity among a number of districts. Any attempt at over-centralisation as a definite tariff of fees to be maintained universally throughout the United Kingdom would probably end in failure. Special reasons will dictate special fees in different districts, and we do not think much practical harm will arise from the fact, which, after all, is a necessity and has to be faced. If the medical men in a given district are unanimous in demanding a fair rate of emolument they will obtain it. The fact that in a neighbouring district united medical opinion has decided in favour of lower emolument may certainly furnish a handle to some of the clubs for grumbling, but it cannot materially affect the position of the medical men of the place.—ED. L.

A HARD CASE.

To the Editors of THE LANCET.

SIRS,—Unless something is done by the medical authorities to abate the evils menacing the profession through the invasion of our rights by the medical sweating commercial companies, great distress and trouble will be the lot of those practitioners who continue to refuse to degrade their calling by accepting the undignified position of medical attendant to the company's assurance members. About ten years ago a practitioner in the south of London—we may call him A.—enjoying a fair amount of practice received a visit from a representative of the company and was requested to allow his name to be added to a list of those who were willing to become the paid servants of the company. Upon A. declining he was informed that he had better reconsider his determination, as there would be no difficulty in securing a medical man in the neighbourhood to accept the post, and inasmuch as the company intended to canvass the district thoroughly it was a certainty that many persons would be induced to join the medical club, and the man who would be appointed would secure a large proportion of the patients of those practitioners who refused to coöperate with the company's agents. Time proved that the company's representative was a truthful prophet. A practitioner (call him B.) residing a few yards from A. accepted the position, and a transfer of several patients from A. to B. was the result of the energetic canvass of the agents. As years have gone on the company have induced so many medical men practising close to A. to accept appointments that now poor A. is to all intents and purposes at the present moment a ruined man. His earnings have so cruelly decreased that pinching poverty has been his lot for a considerable time. His position is now most deplorable. His wife and family have scarcely a change of clothing, and to supply them with proper food and education is becoming more and more a difficulty. He is in daily dread of being sold up by his landlord, who worries him for his rent directly quarter-day arrives. Can you be surprised that he is now beginning to reflect that he has been to blame in permitting his family to suffer in consequence of his refusing to do that which he considered detrimental to the honour of his profession? Why, Sirs, should the medical authorities any longer allow men to do under cover of the protecting wing of a company that they would not dare to do in their individual capacity as private medical practitioners—viz., tout, tout, tout, to get hold of their neighbours' patients and their neighbours' living?

I am, Sirs, yours faithfully,

GENERAL PRACTITIONER.

*** The case is not a unique one. But it is our belief that a time of emancipation is approaching.—ED. L.

THE PEOPLE'S DISPENSARY, LEICESTER.

To the Editors of THE LANCET.

SIRS,—I am prepared to fight in the "Battle of the Clubs" as long as there is a bottle left to rally round, but I think that the People's Dispensary (Leicester) which is criticised by your Commissioner somewhat contemptuously has some claim to survive the general wreck—if wreckage be the order of the day—and for the following two reasons amongst others. Firstly, it is the wish and intention of the board of management to make the pay of the medical staff adequate, but it is handicapped by the competition of the wealthier "provident dispensary." Secondly, cases of abuse of the institution by persons able to pay for medical attendance at ordinary rates have only to be pointed out to the board to be remedied: this is my personal experience, for I have repeatedly refused to attend ineligible members as dispensary patients, and my action has always been upheld by the board. I am altogether opposed to the club and dispensary system, but I think common honesty demands that the fairness of the board of the People's Dispensary should be thus acknowledged.

I am, Sirs, yours faithfully,

Leicester. ALFRED CLARK, L.R.C.P. Edin.

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THE ASHANTI EXPEDITION.

(BY OUR SPECIAL WAR CORRESPONDENT.)

II.[1]

Climate and Soil of the Country traversed by the Expeditionary Force.

THE belt of country stretching from Cape Coast Castle to Kumasi, the line of march which our troops covered, lies between the parallels of 5° 8′ and 6° 45′ north latitude and 1° 15′ to 1° 35′ west longitude, therefore well within the equatorial region of Western Africa. Its climate is essentially tropical and notoriously unhealthy; whilst its unsuitability as a residence for Europeans, or even West Indians, must surely be admitted in view of the fact that a death-roll of 16 and a rate of sickness equal to 50 per cent. have been the results of only some six weeks' stay there by our white and coloured troops employed during the recent campaign. From very careful observations taken every four hours, by night as well as by day, and registered by instruments that could thoroughly be relied on, the solar heat, even during the dry season (whilst the harmattan was blowing), cannot in any way be considered excessive, especially in comparison with what is felt in India or even the Soudan. Only on two occasions during the march up or down was 90° F. reached, and even this degree of heat was only maintained for a few hours in the middle of the day, the thermometer having sunk considerably by nightfall. The extreme registers were taken at the rest camp of Kwissa at 2 P.M. on Jan. 9th and also at Prahsu on Dec. 25th, 1895. Kwissa lies to the north of the Monsi Hill and is considered one of the healthiest spots *en route*. The lowest temperature ever recorded during the expedition was 68° F.; this was registered at 4 A.M. on Jan. 6th at the camp of Akusirem. The mean of all the maximum observations recorded from Dec. 15th, 1895, to Jan. 1st, 1896, gives an average highest temperature of 85° F., and that of the lowest an average of 75° F., and taking the mean betwixt these two an all-round temperature of only some 80° F. is shown—surely an amount of heat that could be endured with impunity by well-seasoned and healthy troops. It is therefore not to the amount or persistence of heat but to some other cause or causes that we must look for an explanation of the development of that calamitous form of sickness which has stricken men down, not only in this, but in every other preceding expedition to the Gold Coast. The difference between the dry and wet bulbs averaged about 3·5°. During the winter and rainy season the mean average temperature is about 80° F., and the difference then between wet and dry bulb is about 2° or 2 50°.

On the Gold Coast there are two distinct seasons: one, the dry, commences generally about the middle or end of October, and terminates at the latter part of February or beginning of March. It embraces a period of sometimes over five months, during which season the rainfall is very limited or in some years conspicuous by its entire absence. Fortunately, however, heavy thunderstorms may, and do, occur during the dry season and are very beneficial when they come. First, the heavy rains which accompany these tempests reduce the temperature 3° or 4° and relieve the oppressiveness of the air considerably. Secondly, the increased momentum given to the air by the incursion of these storms disturbs and scatters malarial germs; and, thirdly, the short, heavy downpour of rain which accompanies these "busters" washes down the land, removes any accumulation of filth, carrying it away by surface-made channels, and thence, by contributory streams, deposits it into the main river. But it does more than this, it cleanses by removing the rotting and decaying material left by the receding water on the banks of the river itself.

During the dry season the harmattan, or north-east wind, is prevalent over the Guinea Coast. Blowing as it does over the Soudan desert, it is dry and very parching in character, and has a distinct reputation for arresting vegetation, but it is supposed to be beneficial in checking malaria and fever; if this be so it is probably by drying the air (usually so humid), and thereby rendering it more respirable than it otherwise would be. Sometimes it comes on in November, and in some years it has not made its appearance till February. During this last Ashanti campaign, however, its influence was only felt (and that too sparingly) for two or three days at the end of December, and to its absence may possibly be attributed much of the sickness that has overtaken so many of our men. During the march from Cape Coast Castle to Kumasi there was an entire absence of any wind.

The wet season commences about March and ends in October. It is frequently ushered in by a heavy downpour of rain—sometimes by a tornado; but it is during May and June that these storms are most severely felt. This is supposed to be the unhealthy season; but the supposition is certainly open to doubt. Many observers consider the wet season as the healthier of the two. Experience has abundantly taught us that accumulation of stagnant water, or even the neighbourhood of rivers, is at all periods more or less unhealthy, and if it be admitted that the malarial morbific agent, whatever it may be, results from the decomposition of animal and vegetable matters, or from exhalations from soils recently under water—then, assuredly, that period of the year when the river is most full or the area of the water at its greatest extent should (theoretically) be the least prejudicial to health. Unquestionably, when a river is low its banks are covered with an accumulation of animal and vegetable detritus. The Prah was so at the time of our stay, and was evidently in a fair condition to evolve miasmatic gases into the surrounding atmosphere, while the low-lying lands surrounding Prahsu, always under water during the wet season, were by reason of the dry one converted into black, stinking bogs, and became at once elements for the production of pestilential effluvia. As temperature increases so the water recedes. From day to day a greater surface of muddy soil becomes exposed, and more organic matter is acted upon by the sun and more poisonous gases are abundantly evolved. Many practical men with whom I have conversed upon the subject say that a trading experience of many years has taught them that more sickness occurs in the dry than in the wet season, especially if the harmattan blows intermittently and without its full strength; but all admit the relief and benefit produced by the occurrence of tornadoes. Without their occasional visits life would be unendurable on the western coast of Africa. They usually commence in April and are most violent during the months of May and June. Some are more destructive than others and do a considerable amount of damage by demolishing native buildings, uprooting large trees, and destroying the young growing plantain and banana plants. However, they give ample warning of their approach. Sky signs are never wanting, and if proper precautions are taken by the natives to stay their huts with cane lanyards much destruction of property can be prevented. Some time before the storm bursts a black ring appears above the horizon, and the whole arch of heaven, previously so blue and clear, becomes gradually enveloped in darkness; then a few drops of rain will fall and a light cooling breeze will but ruffle the foliage of the trees, causing their dry leaves to fall and fly about in every direction; then the rumble of distant thunder is heard, sounding louder and louder, and the lightning is seen, becoming brighter and brighter as the tornado approaches. Forked flashes are now incessant, with deafening thunder pealing overhead; the wind has by this time increased to hurricane violence, and the rain comes down in torrents. What makes most impression on a beholder during such a fearful war of the elements is certainly the frequent transition from pitchy darkness to broad glaring light. At one moment nothing is visible, and in another the whole expanse of nature seems suddenly illumined by the vivid lightning so as to make small objects distinctly perceptible even at a distance. A tornado is truly a grand but at the same time terrible sight. Just a month or so before the wet season ends the rains begin to ease off and the weather becomes hazy. During the middle of the day the sun shines brightly, but in the mornings and evenings the whole country is enveloped in heavy dense fogs. Throughout September these lessen appreciably day after day, and at the beginning of October the dry season once more sets in.

Although it is called the dry season it is very questionable if it is so in reality. True, the rains are over; but heavy fogs have taken their place, excessive moisture being ever present in the air, and one might wait in vain for the

[1] No. 1 was published in THE LANCET of April 4th, 1896.

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FIG. 1.

A running stream of fairly good water at Biafra Edru. Over this one of the Haussas had been placed as guard to prevent the natives polluting it. The illustration shows how thoroughly the sentry recognised the importance of the duty entrusted to him!

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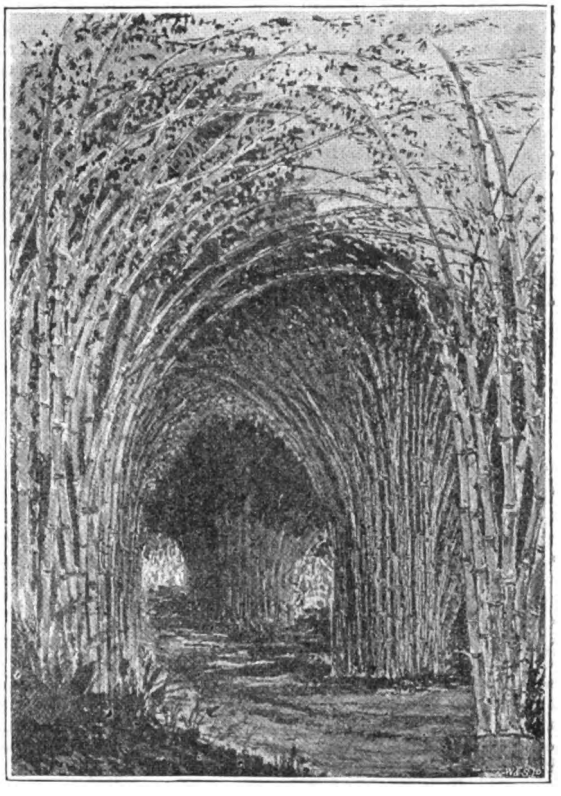
advent of one of those bright sunny dry days we are apt to experience in more temperate climes. So loaded is the atmosphere with moisture even during December, January, and February that it is impossible to keep anything free from an investment of green mould unless it be protected by tin, or some other weatherproof substance. Tea done up in the ordinary tinfoil packets becomes caked and unfit for use after a few days' exposure to the air. Salt as soon as opened becomes liquefied, while meat lozenges in paper boxes had a sorry time of it, much to the chagrin of some officers who, relying on the possession of these luxuries and hoping to enjoy a good meal, found on opening the receptacles nothing to reward their confidence but a lump of sodden rotting animal matter at the bottom of the cases. If men took off their clothes at night and hung them quite dry over a camp chair or biscuit box, in the morning they would be found quite wet—not merely damp as our matrons would understand the term, but actually as saturated with water as if they had been rained upon. At Akusirem, that pestilential locality where I and others no doubt received the germs of malarial fever, this excessive humidity was especially noticeable.

In noticing the soil of the Guinea Coast one can well understand the difficulty experienced by an amateur geologist, attached to an expedition moving hurriedly over the country, in obtaining reliable information regarding the geological formation of the various districts through which he has so quickly passed. His field of observation is narrowed to a degree. A long, nearly straight road, bounded on both sides by a dense impenetrable bush, must necessarily offer but poor prospects to the observer, however earnest he may be in searching after truth. Commencing at Cape Coast, the rock upon which the Castle is built is granite, the outcrop rising some eight or nine feet from the sand surrounding it. The native town at its back by a gradual rise seemed built on sand and gneiss, in which some beautiful specimens of opalescent felspar could be observed. Gold (alluvial) in small grains has occasionally been washed out from the mud of the rivulets in the streets after a severe storm of rain; but no remunerative finds have as yet been unearthed at Cape Coast Castle or in its vicinity. About five miles out in a north-north-east direction there is a hill of gneiss through which veins of granite cut. At Akroful, the first rest camp, there was much sand with mica, with lime stone outcrop, and at this place, and this place only, was the water found to contain lime in anything like appreciable quantity. During our trip up to Ashantiland I repeatedly tried to obtain an indication of its presence in the water, but failed on every examination to do so.

Proceeding onwards towards Dunkwa we passed over patches of sand covered here and there with a thin layer of vegetable soil, but as the township above mentioned was approached the sand gave place to a rich chocolate-coloured loam some five or six feet deep, and banks of this rich alluvial deposit flanked the road on either side. One could readily imagine how easily crops of cocoa and spices might be grown on such a soil if anything like care and industry were exhibited in their cultivation. Indeed, cocoa, coffee, bananas, and oranges seemed to be growing wild amidst the tangled undergrowth at this spot. After quitting Dunkwa the soil appeared much the same till the bamboo swamps near Mansu were reached, when we once more came upon the sand with occasional patches of black soil—leafy mould, in fact, the result of decayed vegetation. Mansu is situated upon a slight rise, and here gneiss was once more much in evidence: micaceous slabs three or four inches across could be picked up all over the place. In the river bed there were large quartz boulders and sandstone, but although carefully searched for no gold could be found. Of mica there was an abundance, and a few nodules of water-worn magnetic ironstone were also observed. After quitting Mansu and passing through some grand bamboo swamps (vide Fig. 2) where an alluvial dark-coloured muddy deposit of some four feet in thickness rested on a gneiss bottom, we came by a gradual ascent to Baracou. Here one observed once more the rich chocolate-coloured soil, where in the native gardens, better and more carefully cultivated than heretofore, cocoa, coffee, bananas, and plantain plants were to be seen growing to great perfection. In a hollow some half mile from the native village there was a small stream the bed of which was sand and gneiss; also small blocks of quartz could be seen, but no trace of gold was visible anywhere. By a gradual descent we arrived at Prahsu, the midway resting camp betwixt Cape Coast Castle and Kumasi. The soil here was gneiss, the river coursing from east to west over a sandy bottom with large boulders of sandstone. Beyond the Prah the ground gradually rose to the next resting camp, Tobiassi, where granitic outcrops appeared with highly ferruginous sandstone and hypersthene, which has often been mistaken for granite. Shortly after leaving Tobiassi a long belt of gneiss was fallen in with till nearing Biafra Edru, another military station. Here was a fine flowing stream coursing from west to east over micaceous detritus, with large sandstone rocks nearly horizontally stratified, together with a considerable quantity of ferruginous sand. As customary, we had placed a Haussa guard to look after the non-pollution of the water by the natives. The day was warm. He placed his cap on a tree and went to sleep in the manner represented in the sketch attached (vide Fig. 1). Within a mile

FIG. 2.



This illustration represents one of the very many gigantic bamboo swamps in the neighbourhood of Mansu, through which our troops passed on their way to Kumasi: dark, boggy, mephitic spots of earth which the sun's rays have ceased to illumine for centuries past.

of this place the base of Monsi Hill was reached, where there was found a rich vegetable mould with huge blocks of granite scattered about. Near its summit there were outcrops of quartz with large quantities of disintegrated iron ore, the quartz being extensively traversed by bands of this substance, whilst nodules of magnetic iron ore, from the size of an orange to that of a pea, with smooth, worn surfaces, were observed lying about in every direction. On the northern side of the hill a similar sort of soil occurred, with the exception that quartz was more abundant and the ironstone was less in evidence as the foot of the hill was reached. Midway down the hill I camped, and a few yards off the roadway came upon a waterfall with bright, pure, drinkable water. When we reached Kwissa, situated as it is on an elevated, healthy spot, the soil formation was essentially gneiss, with extensive patches of a dark brown (not red) vegetable mould around. Here large quantities of paw-paw, banana, plantain, and chilli plants are grown, while

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several cocoa plants and not a few coffee shrubs seemed to have been ruthlessly torn up by the irregular troops who had preceded us in the march. The magnificent baobab (monkey bread—Adansonia digitata) grows to perfection close by the river near this place. There were also to be seen the castor-oil and wild cotton plants. The shea butter tree abounds in the district, but no use seemed to be made of it by the natives. The tall gramineæ and cyperaceæ as well as convolvuli and leguminosæ were everywhere luxuriantly growing on the banks of the stream. There was ageneral haze over the land every morning which disappeared as the sun rose; but the humidity of the air was not nearly so great as we experienced on the other side of the Monsi Hill, and the site evidently had been well chosen for the formation of a rest camp.

On leaving Kwissa, and proceeding northward towards Kumasi, the soil was a ferruginous sand formed by the decomposition of rock with a vegetable mould. The magnificent bombax, with its enormous trunk and widespreading branches, towered aloft in the midst of cassiæ, convolvuli, and other shrubs and trees with their endless variety of tint and shade, and the forest on our flanks seemed denser and more impenetrable than ever. The increased cultivation of yams, bananas, and plantains indicated more extensive habitation than we had yet seen since leaving the Prah district. These gardens of course existed only where the thick bush had in places been cleared away. As we journeyed onward the number of streamlets increased, while the running water was found to be much purer and more usable the nearer we approached our destination in Ashantiland. Considering the climate it has been a grand piece of engineering to cut through and lay our telegraph wire along this forest from Cape Coast Castle to Kumasi, a distance of more than 150 miles, and no small amount of credit must be given to Major Sinclair, R.E., his officers and men, for performing such a masterly piece of work in so expeditious and successful a manner.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Dissection in Board Schools.

THE dissection of rabbits by girls in one of the Board schools seems destined to bring notoriety upon the school in question and upon the system in particular. Whether physiology should be taught in such schools and if a proper knowledge of it can be acquired without practical demonstrations are propositions which give rise to keen discussion. From a science standpoint it is not easy to see what harm can be done to pupils by such an innocent mode of teaching. To skin and prepare a rabbit for cooking is not considered among women to be offensive to good taste; the handling is certainly practical in this instance. Probably if this branch of domestic economy were taught in the schools the permanent benefit to the community would be greater and not call for criticism. Such is the opinion of many outsiders at the present crisis.

Hospital Saturday Fund.

The annual meeting of those interested in this movement was lately held under the presidency of the mayor. The Executive Committee report that the twenty-second collection made in 1895 amounted to £13,057 14*s.* 11*d.*, and the balance brought forward from the previous year was £439 9*s.* 6*d.* The amount of all expenses connected with the collection was 3·89 per cent. per annum. For the seventeenth year there had been an increase in the collections, a gratifying fact to record. The average length of stay of the patients in the home at Tyn-y-Coed was 16 85 days. The cost of maintenance per individual per day was 1*s.* 5·25*d.*; the total cost, including all expenses of administration and wages, was 16*s.* 7·78*d.* per visitor per week. Mr. Smedley, honorary secretary, made some stringent remarks as to the classes from which the contributions come. He said that in 1867 the working classes of Birmingham contributed £567 in all to the medical charities. In 1895 they contributed £25,000; at the same time the subscriptions of the wealthy classes were less in 1895 than in 1867, notwithstanding the increase in the wealth of the town. He pointed out that the hospital did not exist solely for the benefit of the working classes and instanced the value in training for the physicians and surgeons of the future, together with some interesting observations upon the duty of the rich in such matters.

Schools and Swimming.

A discussion upon this subject brings into prominence the value of this branch of physical training, the small percentage of those who learn, and the difficulties attending the facilities for teaching this art. The Athletic Institute has endeavoured to foster the practice by the promotion of contests and prizes. Swimming clubs, and more particularly the City Baths Committee, have been urged to afford opportunities, and now that attention is called to the subject there is a probability of its becoming more general in the elementary schools. Most people will admit the utility and importance of acquiring this knowledge, which has hitherto been sadly neglected. Out of 30,000 school boys in the town, about six in 1000 only are taught at the present time, a fact which speaks for itself.

April 6th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Mersey and Irwell Committee.

AT the meeting of this committee, held in Manchester on the 28th ult., Sir Henry Roscoe was reappointed chemical adviser for twelve months. At the same meeting a report, prepared by the chief inspector, Mr. R. A. Tatton, on the work which has been done for the prevention of river pollution in the Mersey and Irwell watershed since the joint committee was constituted in October, 1891, was received and adopted. The district overseen by the committee has a ratable value of £9,731,007 and contains a population of 2,191,319, so that the work of purifying the rivers is no light one. The inhabitants have grown up with the idea that water-courses and flowing streams were intended by nature to be used as sewers and as the receptacles of all filth and rubbish. The factories disposed of their cinders "either by tipping them direct into the rivers or by depositing them on the banks to be washed away by the first flood." This has been practically stopped, to the great improvement of the beds of the rivers and of the Ship Canal, into which they gradually found their way; for while the dredgings of the canal were formerly composed chiefly of cinders they now contain scarcely any. But few prosecutions have been required to bring about this result, remonstrances being usually sufficient. But it is added significantly, "Constant inspection of the rivers is, however, required." In May, 1892, twenty-seven works were dealing with pollutions under urban authorities, while in March, 1896, forty-seven were in operation, besides five under rural authorities. The works under construction were eight in May, 1892, against thirty in March, 1896. There is the remarkable statement that "the progress made by manufacturers had been greater, as far as results were concerned, than by local authorities," the rivers principally polluted by sewage showing less improvement than those in which manufacturing pollution formed a larger proportion. This illustrates apparently the difficulty usually found in rousing the corporate conscience, the Mersey, with a watershed population of 633,493 and only 60 manufactories, showing little improvement, whereas the Irwell, with a population of 998,625 and 272 manufactories, was decidedly purer, and many of its tributaries which used to be very foul were now in fair order. Partly for this reason and partly because some of their tributaries are polluted from manufactories in Yorkshire and Derbyshire — which means divided authority — the Cheshire rivers show less improvement than those of Lancashire. It is satisfactory to learn that the manufacturers on the whole "had met the committee in a fair spirit, although to many of them the cost of constructing works had been very considerable," and that in comparatively few cases had proceedings been necessary. And this purification is fortunately by no means all loss, for the report adds that "manufacturers who used river water had in many cases, especially on the Medlock and Irwell, already derived considerable benefit." Sir H. Roscoe reported on the sewage affluents analysed during the past month. Of these, six were good, one fair, five unsatisfactory, and two samples, one from Hyde and one from Salford, were bad. As mentioned in a previous letter, Salford has been granted to April 20th to submit an efficient

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scheme of sewage filtration to the Local Government Board. The effluent sent out from the Manchester sewage works was not spoken of in a manner quite pleasing to Alderman Joseph Thompson, an important member of the Manchester city council and also of the joint committee. It is no doubt difficult, in a case of divided affections, to maintain an evenly-balanced attitude, and therefore not unnatural, perhaps, that at the last meeting of the council he should say that Sir H. Roscoe's report to the joint committee giving the result of his analyses of the effluent from the Manchester sewage works was "misleading." He explained "that as the result of experiments it would be possible to effect a large saving in the estimated cost of the sewage works and get sent out an effluent that would be entirely satisfactory." Manchester is making great efforts to put her house in order so far as drainage is concerned, but a good deal has to be done before perfection will be reached, even if Alderman Thompson's anticipations are realised. It is satisfactory to learn from Sir H. Roscoe that the condition of the water in the Ship Canal is much better than in previous years.

Steaming in Weaving Sheds.

It is a coincidence very interesting to Manchester that the three gentlemen appointed by the Home Secretary to be a committee to inquire into the working of the Cotton Cloth Factories Act, 1889—Sir Henry Roscoe, Sir Wm. Roberts, and Dr. Ransome—should have been so long and closely connected with Manchester and the district. But having been so, they are all the more fully qualified to understand the question of steaming and the introduction of artificial moisture in cotton weaving sheds, and, if found desirable, to suggest amendments in the law.

Report of the Chief Constable.

The report on the work of the Manchester police during the past year is full of interesting if not very agreeable information, and it gives a picture of some phases of life in the city not roseate in hue; but the chairman of the Watch Committee at the last meeting of the City Council considered the report, on the whole, satisfactory. To some extent it is so, as there has been a decrease in several classes of offences. For instance, 217 fewer indictable offences were reported to the police, while 4607 fewer persons were proceeded against for non-indictable offences. The total number arrested during the year was 13,534, and of these 4550 males and 2487 females were drunk when taken into custody. For being drunk and "disorderly" in the streets 5608 persons were arrested and 256 summoned, being a decrease on the previous year of 1124. There is a great difference in the numbers arrested on the different days of the week, Saturday still standing out pre-eminently as the day specially and most conveniently devoted by a large section of the "British working man" class to the business and pleasure of drinking, for among the 5608 arrested 1766 are placed to its credit, while Sunday drops far behind with 804. The numbers then fall to Wednesday, rising a little to Friday, which has, however, only about a third of Saturday's number. There has been a decrease of 1033 on the number arrested for the same cause last year, which is encouraging so far as it goes—which is not very far. Of the chronic drunkards 5 had been in custody respectively 174, 131, 105, 101, and 97 times, so that their recurrent appearances before the court must be an almost continuous grim sort of comedy. For the accommodation of these people and sundry Manchester can boast of 517 public-houses and 2500 "beer and wine houses"—a number more than called for by the reasonable requirements of the people. Happily, they are not likely to be multiplied without careful consideration, and at the Brewster Sessions last August fifteen licences were refused. During the year 608 "juvenile offenders" were arrested—509 boys and 99 girls. Of this number 52 boys and 27 girls were little ones under ten years of age, most of them no doubt following their parents in the pathway of drink and crime. There are 286 registered common lodging houses in Manchester, which are constantly visited by officers appointed for the purpose to see that the regulations of the Common Lodging Houses Act are fully carried out. In addition to their functions in relation to crime the police have others which are almost as valuable to the community. They are of the greatest possible help to the sanitary department of the corporation and act as very efficient sanitary inspectors. In addition to securing some thousands of lost or ownerless dogs, most of which were consigned to a painless death, the police restored 3657 lost children to their homes last year, and they distributed 8047 bottles of medicine to poor people. This last may be thought a questionable proceeding, but presumably it was a simple diarrhœa mixture warranted not to kill.

Opening of the Failsworth Sewage Works.

An important addition to the means for the purification of the sewage of the district has just been made at Failsworth, an outlying suburb of Manchester, where new sewage works were opened on Thursday last. The chairman of the sewage committee of the district council spoke in glowing language and said: "Practical experiments had conclusively proved that the system which they were adopting was the very embodiment of sanitary science and experience brought down to modern times, producing as an effluent water which certainly appeared fit to drink." This looks as if he were too cautious to test it so far. A dinner in the evening at the Belle Vue Gardens followed the inspection of the precipitation tanks and filter beds, which were seen in operation. The cost of the scheme, including land, sewering, and everything complete, was £34,800. The cost of the outfall works was about £8700.

The Chorlton Workhouse Dietary.

Some time ago the Chorlton board of guardians, of which Dr. Rhodes is the chairman, decided to make some improvements in the diet and clothing of the inmates of the workhouse. It was foretold that this would lead to an increased cost of 7*d.* per week per head, but there has been instead a slight decrease. Between Michaelmas 1894 and 1895 "the average weekly cost per head of the in-door poor for provisions, medicine, necessaries, and clothing was 4*s.* 1½*d.*, whereas for 1895 it was only 3*s.* 11½*d.*, or an actual reduction of 1½*d.* per head per week as compared with 1894, when the improved dietary was not in force." There seems to be some doubt of the Local Government Board allowing this improved dietary to be continued, as it interferes with uniformity. In commenting on these matters the chairman said that as to the improved dietary and clothing the return showed that "humanity was sometimes the best policy as well as honesty," and that the reduction of 1½*d.* a head in the weekly cost of maintenance meant a saving of £800 a year. He hoped the ratepayers would remember that, if the Local Government Board persisted in the refusal to sanction the dietary.

Lady Poor-law Guardians.

In the Chorlton Union there are now six ladies on the board, one having been returned the other day for the Chorlton township. She has long taken an intelligent interest in sanitary matters and will be a very useful member of the board. In the Broughton township of the Salford Union, where there were eight candidates, a lady headed the poll with a considerable majority. In one matter the presence of ladies will prove to be economical, for in general they have exercised a moderating influence over the tendencies of male guardians to become members of costly deputations.

April 8th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

University of Glasgow.

THE list of those who are to receive the honorary degree of LL.D. at the graduation ceremony on the 14th inst. includes the names of Dr. Thomas Reid, Lecturer on Ophthalmology in the University; Mr. W. Thistleton Dyer, F.R.S., director of the Royal Botanic Gardens, Kew; and Mr. Jno. Ure, a former Lord Provost of Glasgow and the first chairman of the Public Health Committee, in which capacity he did important work in organising the sanitary system of the city. At the meeting of the general council on the 1st inst. the ordinances recently issued by the Universities Commission were discussed, and it was resolved to petition Parliament against the ordinance dealing with the power of the University Court to readjust the conditions upon which any chair was held at the occurrence of a vacancy; the council was of the opinion that the powers of the Court in this direction ought to be increased. Attention was also drawn to the fact that under the present circumstances the women students in Queen Margaret College were placed at a disadvantage as compared with the male students of the University, in consequence of the lecturers in Queen Margaret College not taking part in the degree examinations. The

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matter was referred to a committee to report to the next meeting of the council.

Presentations to Medical Men.

Dr. Cluckie, Greenock, upon his retiring from the town council, has been presented by the members of the council with a handsome silver tea-service in recognition of his public services. Dr. Cluckie has been a town councillor and bailie for several years. He is surgeon to the Greenock Eye Infirmary.—The ambulance class of the Govan police have presented Dr. Barras with a microscope as an acknowledgment of the assistance he has rendered to the class as their instructor.

Barony Parish Council, Glasgow.

The report of Dr. Fraser, the Commissioner in Lunacy, who visited the asylum on Feb. 2nd and 3rd, shows that the admission-rate continues to be high, being an average of 32 patients per month. The ratio of recoveries is very satisfactory, having been since the last report 40·3 per cent. and 47·9 per cent. of the men and women respectively admitted. The medical and general care of the patients and the management and order of the institution are noticed as worthy of commendation. A somewhat heated discussion took place at the last meeting of the council upon a proposal to give a donation to the St. Elizabeth Nursing Home, which is under Roman Catholic management. It has been the custom of the council to give a grant to the Glasgow Sick Poor Nursing Association, and it was stated at the meeting that this association refused to employ Roman Catholic nurses, and that therefore the St. Elizabeth Home should also be assisted. It is a matter for regret that a sectarian dispute should arise in connexion with the humane work of giving nursing assistance to the sick poor, but the responsibility may fairly be placed on those who adopt a purely charitable designation but in practice exclude nurses who belong to a particular religious communion.

Galashiels Cottage Hospital.

At the annual meeting on the 31st ult. it was reported that seventy-one patients had been under treatment during the year. The financial statement showed a deficit of £60.

Natural History Society of Glasgow.

At the meeting of this society on the 2nd inst. Dr. Robert Brown, Pollokshields, showed a large number of interesting plants which he had collected in Switzerland. On the same occasion, too, a number of mosses from Simla, collected by Surgeon-Major Shearer, were exhibited.

Glasgow Police Force Medical Officer.

The sub-committee appointed to consider the applications for this appointment having made a short leet sent the following names—viz., Dr. Jno. A. Boyd, Dr. Cumming Grant, and Dr. C. W. Stewart—to the committee. After a vote had been taken—the majority being in favour of Dr. Boyd—it was decided to recommend his name to the council, and he has accordingly been elected. The appointment is worth £350 a year, with an allowance of £50 for travelling expenses.

Aberdeen University Court.

At the last meeting the court appointed Mr. James Hendrick, Lecturer in Agricultural Chemistry in the Glasgow and West of Scotland Technical College, to the new Lectureship on Agricultural Chemistry. Regulations for the Students' Union were approved, and the sale of alcoholic liquors within the University buildings will, under the new rules, be prohibited on all occasions, including dinners or suppers. A legacy of £1000 from the estate of the late Mr. James Jamieson, of Prospect-hill, merchant in Aberdeen, has now become payable, the bequest having been made for the purpose of establishing a lectureship, or towards the endowment of a chair, in the Faculty of Law in the University, as may be determined by the court. It may be mentioned that prominent members of the Students' Union are dissatisfied as to the regulation regarding liquors and as to another rule fixing the opening hour of the billiard-room at 1 P.M. and the closing hour at 10 P.M.

Graduation Ceremony, Aberdeen University.

The graduation ceremony in all the Faculties took place on Saturday for the first time in the Mitchell Hall, Marischal College, in presence of a crowded audience.

Bequests to Aberdeen Hospitals.

Through the death of a life-rentrix the following among other Aberdeen institutions benefit from the estate alluded to above: the Royal Infirmary, £500; the Hospital for Incurables, £250; the Deaf and Dumb Institution, £250; and the Hospital for Sick Children, £250.

Outbreak of Small-pox at Alford, Aberdeenshire.

Towards the end of last week it was found that four cases of small-pox had occurred at Alford, a village about thirty miles from the city of Aberdeen. The county medical officer, Dr. Watt, at once took every precaution to prevent the spread of the disease.

Aboyne Ambulance Class.

On the 2nd inst. in Aboyne (Aberdeenshire) Public Hall the Marchioness of Huntly presented the medals and certificates to the members of the ambulance class which had been conducted by Dr. D. D. Mackintosh. Lord Huntly and Sir W. C. Brooks of Glen Tana both spoke on the importance of ambulance work, and the lecturer was thereafter presented with a handsome dining-room clock.

Outbreak of Small-pox at Alford, Aberdeenshire.

The epidemic has spread from Alford into the Cluny district, where up to Sunday night five cases were reported. Under the directions of the county medical officer energetic action is being taken in the direction of revaccination. The origin of the outbreak has been traced to a child brought by the parents to Alford from South Shields on Feb. 12th.

Dr. W. Findlay of Aberdeen has been appointed by the town council of that city as medical attendant of the employés of the cleansing and lighting departments.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The "Moy-Mell" Entertainment for the Children's Hospital.

THE entertainment in aid of the Children's Hospital, Temple-street, Dublin, will take place on the 7th inst., being Easter Tuesday. The whole of the Rotunda has been engaged and no less a sum than £500 spent on the decorations for the occasion. The *fête* will doubtless be a very great success, for it is under very distinguished and popular patronage, while the city happens to be at present crowded with visitors brought by the excursion trains from all parts of Ireland.

The Athlone Union Hospital.

The guardians of this union were, it will be remembered, dismissed last year by a sealed order of the Local Government Board on account of their refusal to appoint a trained night nurse in the infirmary. The last meeting of the vice-guardians took place on Saturday, the 4th inst., when their turn as managers of the union came to an end. Many improvements have been made and the rates collected in such a satisfactory manner that there is at present a balance of £5251 in favour of the board.

Health of Belfast.

At the meeting of the city council, held on April 1st, the medical superintendent officer of health reported that the health of the city seems gradually improving and contrasts very favourably with that of the corresponding period of last year, more especially in the deaths from diseases of the respiratory organs, which, owing to influenza, were then numerous. Some cases of that disease have occurred latterly, but not sufficient in number or severity to materially affect the death-rate. The epidemic of scarlet fever which seemed to have passed away has returned, and the cases are again numerous though the mortality is light. Measles, which has been prevalent for some months past in the Ballymacarrett district, has now spread to the open parts of the city. The deaths from measles and typhoid fever are few as yet; the death-rate was 25·7 from all causes. At an inquest on April 4th the coroner, in referring to the death-rate of Belfast, said it was the highest in Great Britain with the exception of Galway. In regard to infants he said it was an extraordinary fact that of every 100 persons dying in Belfast every week or month, as the case might be, 25 of them were children under one year of age. One of the main reasons for this was the fact that the parents would not take the trouble of bringing in a medical man, although they could get the services of a medical man in all quarters free of charge.

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The Belfast Water-supply.

At the present time the total storage in all the reservoirs is some 2,440,492,109 gallons, the largest store of water ever before available, and is upwards of 265 days' supply for the city of Belfast. This very favourable state of affairs is largely due to the careful working of the waste-water meter system, which has been the means of detecting and controlling the underground and other wastes of water within the commissioners' area of supply. The water-supply has been much increased by the very wet weather of March, during which there were only five days on which rain did not fall, and in which the number of inches of rain was 4·99, while the average is only 2·86. There was literally no March dust during the past month.

The Ulster Medical Society: Antitoxin in Diphtheria.

At the usual monthly meeting, held on April 2nd, Dr. Wadsworth gave an interesting *résumé* of a series of cases of diphtheria treated by him successfully with antitoxin. A prolonged discussion followed in which a large number of the members took part, the entire evening being devoted to the consideration of some of the many questions connected with diphtheria.

Election of Direct Representative for Ireland on the General Medical Council.

As the contest for the position of direct representative on the General Medical Council may be fought out again next November between the provincials and the metropolitans, the following statistics, procured from the files of THE LANCET, may prove interesting:—

Year.	Total metropolitan vote.	Total provincial vote.
1886	1642	398
1891	872	516
1896	1321	757

The metropolitan vote has, in fact, fallen off considerably, whilst the provincial vote has been steadily increasing, being at the recent election double what it was in 1886. In 1896 the successful metropolitan candidate beat the provincial by 109 votes.

The Application of the Sixty-five Rule to Queen's College Professors.

Many have been the attempts of the Treasury to convert the Queen's Colleges into mere civil service departments. At first it was intimated that all professors possessed of an income of over £300 a year should retire on attaining the age of sixty-five, or at furthest at seventy. The professors, regarding this as an encroachment on their rights, pointed to the charter of the College and to the fact that the majority of them were appointed "at the will and pleasure of the Queen," which has been always interpreted as meaning for life. A commission was then appointed, with the result that the commissioners recommended that all the professors should be brought under the provisions of the sixty-five rule. If that recommendation were adopted a cruel injustice would be done to the medical profession engaged in private practice, as, no matter how efficient, they would be liable to be turned adrift on attaining the age limit without even the solatium of a pension. Again the College authorities remonstrated. They pointed out that the statutes could not be altered for the purpose except by Act of Parliament, and urged many reasons against the policy of adopting such a course. In the interests of higher education, and especially in the interests of the Cork School of Medicine generally, I am glad to be in a position to state that I have learned on what I consider thoroughly reliable authority that the Lord-Lieutenant, having considered the whole question carefully, has decided that it is not desirable to apply the sixty-five rule, at least in its entirety, to the Queen's College presidents and professors.

National Registration of Plumbers.

The Lord Mayor of Belfast at a public meeting recently held said it seemed to him that the Worshipful Company of Plumbers was serving the best interests of the trade and at the same time protecting the public from imposition by its excellent system of registration. He considered that the system was of the greatest possible benefit to both master and journeymen and was glad to see it become so popular in Belfast.

April 6th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Uræmic Aphasia.

IT has hitherto been maintained that cerebral manifestations of uræmic poisoning were of a general character, proofs of the limitation of the activity of the toxines to a particular area of the brain being wanting. Dr. Rendu, physician of the Hôpital Necker, had, however, a case recently in his wards that invalidates this contention.[1] A man aged fifty-six was seized suddenly with an apoplectiform attack. When seen on the morrow by Dr. Rendu the man had regained consciousness, but three symptoms remained—viz., aphasia, right brachial monoplegia, and a systolic bruit at the base. The diagnosis of embolus was made. A few days later, however, the patient was seized with intense dyspnœa, lapsing quickly into Cheyne-Stokes respiration; the urine was scanty and albuminous. Phlebotomy was immediately practised, the analysis of the blood revealing the presence of seventy-five centigrammes of urea per litre. It was evidently a case of uræmia. The blood-letting determined an improvement in the condition, the dyspnœa disappeared, and the somnolence gradually diminished, whilst the vocabulary became more extensive. A month later no trace of either aphasia or monoplegia remained. MM. Ménétrier and Guyot stated that similar instances of uræmic aphasia had come under their notice, but that Dr. Rendu's case was peculiar in that paralysis was superadded.

The Sero-therapic Treatment of Acute Alcoholism.

This is the age of experiment, especially in the matter of humoral therapeutics. Had M. Toulouse's communication relative to the above heading not been presented to the grave and scientific Société de Biologie (March 28th) I should hardly have ventured to report it in the columns of THE LANCET. Thinking that poisoning with large doses of alcohol has perhaps the effect of rousing the organism and thus creating a barrier of self-defence by inducing the secretion of products capable of nullifying the action of the alcohol, M. Toulouse administered to two dogs for one week a daily dose of 40 grammes of ethylic alcohol. The serum of those animals was then injected in the course of one day in three separate doses of 8 c.c. into the subcutaneous tissues of a patient suffering from acute alcoholic delirium. The next day the fever is said to have disappeared and lucidity to have returned. M. Toulouse states that he is engaged in further researches calculated to throw light on the specific or non-specific properties of the serum employed. Should the method prove really useful we must expect to see in the near future a British Dogs' Total Abstinence Society in full working order, for faddists will not fail to urge the wickedness of corrupting the morals of the canine race in order to save a mere man from the consequences of his own debased habits.

A Sign of the Times.

I informed your readers in a recent number of the regulations controlling the admission into France of cattle, all of which, excepting such as are intended to be slaughtered within a week, have to be submitted at the frontier to the tuberculin test. That the public is fully alive to the danger of absorbing milk derived from a tuberculous cow is proved by the exhibition in the window of a milk-vendor living in the Rue St. Honoré of a card bearing the following notice:—"*Toutes nos vaches ont subi l'épreuve du vaccin de la tuberculose.*" This is up-to-dateness with a vengeance.

Landry's Paralysis from Streptococcic Infection.

Two cases of Landry's paralysis following influenza having been recently reported in THE LANCET,[2] it may be of interest to record an instance of the same disease due to microbic infection. M. Remlingen[3] reports the case, the patient being a non-commissioned officer who, having contracted malaria in Madagascar, was suddenly seized with paraplegia with subsequent evolution of typical Landry's disease. Death ensued on the eleventh day with bulbar symptoms. The necropsy revealed only slight congestion of the anterior cornua. Cultures made from nerve tissue collected at various points in the cord yielded the streptococcus in a state of purity, the microbe being especially abundant in the cervical

[1] Association Médicale des Hôpitaux, March 27th, 1893.
[2] THE LANCET, Feb. 29th and April 4th, 1896.
[3] Société de Biologie, March 28th, 1896.

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region. Inoculation into the rabbit gave a negative result. Sections of the cord treated according to Nissl's method showed the presence of streptococci in the cervical region; they were only found between the large cells of the anterior horns. These cells presented in several places a rupture of their prolongations—a lesion already pointed out in Landry's disease by MM. Marinesco, Ballet, and Dutil. The vessels of the anterior fissure and their ramifications into the anterior horns were in a state of inflammation, and they contained an undue number of white corpuscles. No hæmatozoaires were seen. The streptococcic origin of this case of acute ascending paralysis would thus appear to be distinctly proved, malaria having only had the effect of lessening the resistance of the system to the inroads of the germ.

April 7th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Berlin Psychiatrical Society.

THE ordinary quarterly meeting of the Berlin Psychiatrical Society took place on March 22nd, Professor H. Laehr, President, being in the chair. Dr. Neisser (Leubus) read a paper on Secondary Mental Weakness in Paranoia, arguing that mental weakness is not necessarily a symptom of paranoia, a view which is in opposition to that held by Professor Hitzig and others. The paper was discussed by Dr. Jastrowitz, Professor Moeli, Dr. Koeppen, and Dr. Falkenberg, and Dr. Neisser briefly replied.

The Emperor and Empress Frederick Hospital for Sick Children.

At the fifth annual meeting of the trustees and supporters of this hospital, held on March 22nd, Professor Virchow, who was in the chair, said that there had been 11,480 patients during last year; 8831 new cases were treated in the out-patient department, and 2049 in-patients were admitted, showing increases of 1711 and 300 respectively as compared with the previous year. The death-rate was lower by 26 per cent. than the corresponding one of the previous twelve months, and there is no doubt as to this good result being chiefly brought about by the efficacious antitoxin treatment of diphtheria. On the other hand, the treatment of scarlet fever with Dr. Marmoreck's anti-streptococcic serum has been rather discouraging, 25 per cent. of the cases proving fatal. The wards of the infirmary have been so crowded of late as to necessitate the building of an additional pavilion. The income from all sources during the year was 158,492 marks, and the total expenditure was 158,149 marks.

Congress of the South German Laryngologists.

The Third Congress of the South German Laryngologists will be held on Whit-Monday, May 25th, at Heidelberg.

A Female Assistant Medical Officer to a Lunatic Asylum.

Miss Sieglinde Stier, M.D., has been appointed assistant medical officer at Dr. Leehr's private asylum at Zehlendorf, near Berlin. Miss Stier has hitherto held the office of assistant medical officer to the infirmary at Dessau.

Professor Virchow.

At the last meeting of the Berlin Medical Society Professor Virchow was unanimously elected representative of the society at the twenty-fifth annual Congress of the German Surgical Society.

April 6th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Wounded at Naples.

THE Neapolitan Ospedale della Trinità now accommodates 111 of the wounded brought from the field of Abba Carima and landed at Naples from the *Sumatra*. The gratitude of the poor fellows at finding themselves in comfortable beds and properly cared for may be understood when many of them declare that for three months from their departure for the seat of war till their return the other day fresh, pure water had not touched their skins. The medical staff have many difficulties to overcome, aggravated by the conditions under which the wounded were transported from Massowah and by the importunities of relatives, friends, and the outside world generally to see the patients and hear what they have to tell. Owing to the system of communication which has kept Italy in the dark as to the fate of her sons in Abyssinia, the Neapolitan and other hospitals are literally besieged by fathers, mothers, sisters, and brothers clamorous for news of their near and dear ones. Up to the point at which the admission of these outsiders would prejudice treatment and recovery the medical staff have thrown no unnecessary obstacles in the way of interviews between the wounded and their relatives, and the scenes of which they have been witnesses are described to me as touching in the extreme. One detail the soldiers under treatment are unanimous upon and it is this—the savage cruelty of their antagonists. An Italian officer "crivellato di palle" (riddled with bullets) was breathing his last on the ground when eight Shoans pounced on him and disembowelled him with their spears! Another point on which equal unanimity prevails is the heroism of the army medical staff. Out of twenty surgeons on the battlefield of Abba Carima seventeen were killed in action. Take, for example, Dr. Giuseppe Lombi, who, surprised before he could regain his ambulance, had to fight like a combatant and join in a charge against the advancing hordes. He was among the foremost of the company, who were making head against their assailants when he was wounded in the throat just at the moment he was shouting "Viva l'Italia!" He refused all succour from the soldiers who wanted to carry him out of action and died soon after with his country's name on his lips. Experiences and anecdotes similar to the above are related by the sick and wounded, 227 in number, just landed from the *Bormida*. The Shoan atrocities perpetrated on the fallen are confirmed. As in the case of those disembarked from the *Sumatra*, the wounded brought by the *Bormida* are unanimous in praise of General Arimondi, to whose brigade nearly all belonged. His coolness and courage, they say, would have given the battle a quite different result had he been in command. No authentic news of him is as yet forthcoming, but his soldiers absolutely exclude the report that he died by his own hand.

Death of Professor Mariano Semmola.

As I send off this letter I receive the announcement of the death of one of Italy's most illustrious physicians, a consultant, indeed, of European reputation, whose contributions to THE LANCET are fresh in the recollection of your readers. Dr. Mariano Semmola, Professor of Clinical Medicine in the Neapolitan School, died yesterday of cerebral apoplexy. Next week I shall give some account of his life and work.

April 6th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Hospital for Inebriates at Washington.

A BILL has passed Congress to establish and maintain a hospital for the treatment and cure of persons suffering from the habitual excessive use of alcoholic liquors, opium, and cocaine. The hospital will have the care of persons of the following classes to the extent of its capacity to receive and treat them:—Firstly, such persons as may be committed to the said hospital by the police court or criminal court of the district; and the judges of the said courts shall have power to commit to the said hospital for a period not to exceed ninety days any person who may be convicted of the habitual excessive use of alcoholic liquors who might otherwise be amenable to commitment to the workhouse, and any person so committed may be at any time discharged from such hospital upon proof that he has been cured, and the certificate of the medical superintendent of the said hospital may be accepted as evidence in such proceedings; secondly, such persons as may be recommended for treatment in the said hospital by the commissioners of the district of Columbia.

Bovine Tuberculosis.

The New York State Board represents that a somewhat careful calculation shows that to destroy all the cattle affected with this disease in the State to-day would involve an expenditure of nearly 1,000,000 dollars. Should the eradication of the disease from all herds be once accomplished such rules and regulations as the board is competent

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to make and enforce would prevent any importation of infected animals from other States and thus permanently protect the people from this great menace to the public health. The great importance of this work may be fully realised when it is stated that of the deaths occurring in this State during the year over 10 per cent. of the entire number from all causes were from pulmonary tuberculosis.

Against Indiscriminate Spitting.

The New York Board of Health has adopted resolutions framed by Dr. Prudden and Dr. Biggs, bacteriologists, regulating expectoration in public conveyances and in public buildings. The new law requires that notices be posted in all public places warning persons against expectorating on the floors. Municipal authorities and surface and elevated railway companies will be required to provide proper receptacles for expectoration and they must be kept thoroughly clean. The resolutions prohibit the common use of knives, forks, and spoons on free-lunch counters in saloons and also the use of roller towels in the lavatories of saloons and restaurants and other public places. Towels in common use at saloon bars are also prohibited.

Tenement House Reform.

The Tenement House Commission has presented to the Legislature a Bill giving the city of New York power to condemn all rear tenements and convert their sites, together with the unoccupied area in front and rear, into courts bounded on all sides by the rear walls only of the existing front buildings. The city is to be authorised to expend 5,000,000 dollars a year in land damages and expenses until the improvement is completed, and the title to the property is to be taken by the city.

Classification of Diseases.

The Surgeon-General believes the classification of diseases and injuries based on that of the Royal College of Physicians of London to be inconsistent in many respects with our present knowledge of the causation and processes of disease. He has therefore constructed a new system in which the causes of disability are aggregated into five principal classes: (1) infectious diseases, general and local; (2) diseases of nutrition, general; (3) structural and functional diseases of organs; (4) accidents and injuries; and (5) unclassified. Many of the diseases now classed as diseases of particular organs are placed among the infectious diseases, such as tonsillitis, pericarditis, and endocarditis. Of the diarrhœal diseases of the old list acute dysentery has been placed among the infectious.

Health of the Army.

The mean strength of the Army of the United States during the year 1895, according to its medical reports, was: Whites, 22,904; Negroes, 2086; Indians, 386; total, 25,376. The admission-rate of the negro troops was considerably less than that of the white soldiers—811·60 as compared with 1116·44 per 1000; and this lower rate was due to a relative freedom from disease, for their admission-rate for injury was as high as that of the white troops. Their number constantly sick was 25·93 per 1000, while the corresponding rate among the whites was 35·18; and the average numbers of days lost by each on account of sickness or injury were, respectively, 9·5 and 12·8. The rate for discharges also was lower among the negroes—9·40 as compared with 13·56 among the white troops. There was little difference in the death-rates of the two races.

Treatment of Drunkenness in the Army.

Surgeon Arthur has reduced the statistics of alcoholism at Vancouver Barracks by treating drunkenness as acute poisoning. He states that the number of cases of simple acute alcoholism that appeared at sick call and during the day when he first assumed charge of the hospital was unusually large and resulted in the laying down of certain rules as an effort to discourage drunkenness as far as it was in his power. No man is taken on the sick report or excused from any duty unless his condition would make it actually dangerous for him to keep at work. A man reported at the hospital in any stage of alcoholism is treated as a case of alcoholic poisoning, taken immediately to the operating room, and his stomach emptied by the use of the stomach pump and thoroughly washed out with a warm 2 per cent. soda solution. After this he is given a bowl of hot beef extract with cayenne pepper and allowed an hour's rest, when he is generally able, however unwilling, to do his duty. If the weather is severe, either hot or cold, it might not be safe in his depressed condition to force a man to work out-of-doors immediately after this procedure, but at that post the extremes are not great and it has in no case resulted prejudicially to the patient. The effect of this treatment has been uniformly excellent. The stomach, emptied of its irritating contents and cleansed of the thick tenacious mucus that is always present in such cases, is much less irritable and rarely rejects the beef extract which is given immediately. The nervous symptoms improve at once, and sedatives administered by the mouth have a far more lasting effect, and in almost all cases the craving for liquor is diminished. In the past ten months only one case has been admitted.

New York, March 28th.

Obituary.

ROBERT MAIN HORNE, M.D. EDIN.

THE death on the 31st ult. of Dr. R. M. Horne, Senior Demonstrator of Physiology in the Owens College, Manchester, has come as a severe blow to his friends. Unwell for nearly a month, a loyal devotion to duty prevented him from taking much-needed rest till a week before his death, when he was found to be suffering from pleurisy. He appeared to be progressing towards convalescence till the morning of the 31st ult., when grave symptoms suddenly supervened and a fatal termination rapidly ensued. Born twenty-seven years ago, after finishing his education at the Stirling High School he entered the University of Edinburgh in 1886, where he showed himself pre-eminent amongst the men of his own year. During his curriculum he gained the Grierson Bursary on three occasions, the Vans Dunlop Scholarship for students of the third year, and medals or prizes in nearly all his classes; whilst, on graduating with first-class honours in 1890, he was awarded the Freeland Barbour Fellowship in Anatomy, Physiology, and Pathology. After graduation he acted as resident surgeon in the Royal Infirmary, and the following year went to Strassburg, where he engaged in original research on the thyroid gland, his results, embodied as a thesis, being awarded by the authorities of his *alma mater* the Gunning Victoria Jubilee Prize in Medicine in 1893. Shortly afterwards he was appointed Junior Demonstrator of Physiology in the Owens College, and more recently became Senior Demonstrator. In 1895 he graduated M.D. with honours, the subject of his thesis being "Muscle Plasma and its Coagulation." His "leaf has perished in the green," when only time and health seemed requisite for the fulfilment of those brilliant possibilities which had been forecast by his academic career. Cheerful in disposition, modest and unassuming, thoughtful and self-sacrificing in the interests of others, as well as warm-hearted and constant in his friendships, his early death will be a lasting loss to those who had the privilege of intimate friendship with him; whilst the profession will be much the poorer for the premature removal of a member endowed with such unusual ability and zeal.

WILLIAM WILSON, M.D. GÖTT., F.R.C.P. LOND.

ENGLISH-SPEAKING practitioners in Italy have lost their Dean in this able and accomplished physician and surgeon, who closed an honourable and successful career at Florence on Wednesday, April 1st.

A student at Guy's and St. Thomas's, young Wilson impressed all his teachers by his devotion to work, and in the clinical departments especially by his skill in diagnosis and his judgment in therapeutics. He took the diploma of the Royal College of Surgeons in 1838 and the same year graduated as Doctor in Medicine in the University of Göttingen, where he attracted the favourable notice of the illustrious Langenbeck. In 1844 he became a Member of the Royal College of Physicians, and enhanced his professional, particularly his clinical, proficiency by frequent and prolonged visits to the chief French and Austrian schools. Early in his career he served on the *Dreadnought* under Mr. George Busk, whose high opinion of his abilities and character as a surgeon confirmed the estimate formed of him at Guy's by Mr. Edward Cock. In medicine proper he distinguished himself as one of the physicians attached to the Royal Free Hospital, on leaving which institution to enter on practice

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abroad he received the most gratifying attestation of the esteem in which he was held by colleagues like Dr. Thomas B. Peacock and Mr. John Gay.

Having some fifty years ago become physician of Legation at Florence he rapidly rose to be the leading consultant in the English-speaking community there, while he was frequently called in consultation by professional colleagues, Italians and British, in other centres of the peninsula, notably Venice and Rome. Some years ago he delegated the chief portion of his practice to his son, Dr. Charles Blair Wilson, and, indeed, had almost retired from active duty when death struck down that exemplary young physician in the touchingly dramatic circumstances recorded in THE LANCET of Dec. 29th, 1894. From this cruel blow Dr. Wilson never entirely recovered, but, true to the medical enthusiasm which made him to the end a constant attendant at the clinique of the S. Maria Nuova, he once more entered into harness as the best solace open to him. The effort, however, was of brief duration, and, though always welcomed by his old *clientèle* and his younger colleagues, the burden of eighty winters, aggravated by the heaviest loss that could have befallen him, soon made itself felt. About a fortnight ago he was attacked with what turned out to be severe appendicitis and perityphlitis, and after a prolonged struggle in which he was ably supported by colleagues—Italian and British—he succumbed on the evening of Wednesday, April 1st, and on the following Friday was interred in presence of many mourners in the Protestant cemetery.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board in the subjects indicated on Monday, March 30th:—

Anatomy and Physiology.—Thomas Walsh Tetley, Yorkshire College, Leeds; Thomas Higson, Owens College, Manchester; Hubert Harry Hollick, Alfred Ernest Frear Wilkes, Herbert John Orford, Joseph Frederick Harvey, Lionel Edward Orton, Horace Wilberforce Freer, and James Arthur Lilwall Peirce, Mason College, Birmingham; Joseph Reginald Frost and Hugh Mortimer Thomas, University College, Bristol; John Gatzkell Churton and Adam Pearson Hope-Simpson, University College, Liverpool; Peter Herbert Schollberg, Cambridge University; and Cecil Westland Pilcher, Oxford University.

Anatomy only.—Edwin Garrett Bunbury, University College, Bristol; William Stanley Boothman, Owens College, Manchester; Frank Ryalls Eddison, St. Bartholomew's Hospital; and Arthur Bradshaw Passmore, Durham University and Guy's Hospital.

Physiology only.—Ralph Holt, Royal College of Surgeons in Ireland and Mr. Cooke's School of Anatomy and Physiology; Frank Cooper, Mason College, Birmingham; Stanislaus Marcus Dowling, Catholic University, Dublin; John Harris, Sydney and Durham Universities; Percy Bertram Spurgin, St. Mary's Hospital; and Charles Thomas McClure, London Hospital.

Eighteen gentlemen were referred in both subjects, three in anatomy only, and two in physiology only.

Tuesday, March 31st:—

Anatomy and Physiology.—Bertram Wilmore Moss, Herbert Midgley Reeve, Walter Baynard Hope, Ernest Thomas Jensen, and Arthur George Grant Plumley, Guy's Hospital; Harold St. Clair Elliott, Cambridge University; Henry Chadwick Woodcock, St. Mary's Hospital; George Padgett Taxler, Lewis Augustus Walker, and John Moore Collyns, St. Bartholomew's Hospital; Christopher John Mayhew and Cuthbert Allen Sprawson, King's College, London; John Bernard Davey and Alexander John Knowlton, Middlesex Hospital; Hackworth Stuart, University College; Alexander George Henry Anthonisz, University College, London, and Mr. Cooke's School of Anatomy and Physiology; Julian Taplin, Mason College, Birmingham; Alexander Tateosian Abadjian, London Hospital; and John Francis Cunningham, St. Thomas's Hospital.

Anatomy only.—Victor Samuel Alexander Bell, Cambridge University and St. Bartholomew's Hospital; John Stansfield Gayner, St. Bartholomew's Hospital; and Edmund Clapperton Dean, University College, London.

Fourteen gentlemen were referred in both subjects and three in physiology only.

Wednesday, April 1st:—

Anatomy and Physiology.—Thomas Hall Gandy, Sydney Richard Scott, Hugh William Leonard, and Ralph Harry Vincent, St. Bartholomew's Hospital; Arthur Thompson, Cambridge University and St. Bartholomew's Hospital; William Day French, University College, London, and Mr. Cooke's School of Anatomy and Physiology; Sydney James Evans, Guy's Hospital; Walter James Waters, Percy Lake Hope, and Basil Fawcett, St. Thomas's Hospital; William Layard Griffiths, and William Herbert Davis, University College, London; Arthur George Eldred, London Hospital; Frederick Fenn Elwes, Middlesex Hospital; and William Henry Passmore, Charing-cross Hospital.

Physiology.—Bernard Newmarch Molineux, St. Thomas's Hospital.

Twenty gentlemen were referred in both subjects and one in Anatomy only.

Thursday, April 2nd:—

Anatomy and Physiology.—Alfred Dittlof Benedictus Von Rosen and George Darell Maynard, St. Mary's Hospital; John Newton Dyson, Donald John Munro, Thomas Malcolm Walker, Everard Inseal Davis, Alfred Gelsthorpe Osborn, Arthur Ronald McLachlan, Russell Henry Jocelyn Swan, Joseph Taaffe De Coteau, and Frederick Ernest Hutchinson, Guy's Hospital; Hanway Richard Beale, Yoshihiro Takaki, and Arthur Webb Jones, St. Thomas's Hospital; John Michael Abraham Olivey, Cambridge University and St. Thomas's Hospital; Ernest Lewis Lilley, Charing-cross Hospital; Francis Henry Foulds, St. Mungo's College, Glasgow, and Charing-cross Hospital; Cecil Scarlett Frost, St. Bartholomew's Hospital; Walter Robert Dunstan and Alfred Orme, London Hospital; Timothy Howell Davies, Middlesex Hospital and Cooke's School of Anatomy and Physiology; William Alfred Stedwell Lamborn, St. Mungo's College, Glasgow, and Middlesex Hospital; Alfred John Vernon Betts, Westminster Hospital; Arthur James Tayler and Percy Vosper, King's College, London; and Moung Pha Taw, Medical College, Calcutta, Rangoon General Hospital, and King's College, London.

Anatomy only.—Arthur James Bowman Adams, St. Thomas's Hospital and Cooke's School of Anatomy and Physiology.

Physiology only.—Major Byron Oliver, University College, London; Joseph Cater, King's College, London; John Herbert Yearsley, St. Thomas's Hospital; and Arthur Henry MacNeill Mitchell, St. Mary's Hospital.

Eight gentlemen were referred in both subjects, four in anatomy only, and one in physiology only.

Saturday, April 4th—:

Anatomy and Physiology.—Frank Douglas Turner, Robert Macpherson Barron, and Graham Scales Simpson, Guy's Hospital; Ernest Blair Dowsett, King's College, London, and Guy's Hospital; Alfred Ernest Softly, Hubert Calvert, Harold Samuel Libby, and Arthur Bevan, St. Thomas's Hospital; William Howard Unwin and Peter Lewis Daniel, Charing-cross Hospital; Quirino Bonifacio de Freitas, King's College, London; William Ernest George Maltby, and Robert Edmond Heighes Woodforde St. Bartholomew's Hospital; Ernest Alsager Parsons, Mason College, Birmingham, and Westminster Hospital; Lewis Cook, and Edward John Budd Budd, Westminster Hospital; Edward Merry, and Thomas Chetwood, London Hospital; Philip Maynard Heath, University College, London; and Henry St. Arnand Agate and Octavius Robert Ennion, St. Mary's Hospital.

Fourteen gentlemen were referred in both subjects.

Monday, April 6th:—

Anatomy and Physiology.—James Herbert Sanders, Herbert Dean Pollard, and Alfred Frank Tredgold, London Hospital; Hugh Thomas Dyke Acland, James Goff, Henry Hugh Rose Clarke, Thomas Perrin, and Ernest Clarkson Bourdas, St. Thomas's Hospital; William Edward Peck, David Pratt Rockwood, John Edgar Simpson, University College, London; Thomas Walker Stanley Browne, Alec Densham, Juan José Rodd, and Alfred Reid, Guy's Hospital; Charles Dudley Bishop, Charing-cross Hospital; William Halliburton McMullin, Alexander Brown, King's College, London; Walter Seymour Danks, Harold Sebert Thomas, and John Abernethy Willett St. Bartholomew's Hospital; Charles Thomas Baxter, Middlesex Hospital; and Arthur Solomon Morley, St. George's Hospital.

Thirteen gentlemen were referred in both subjects.

Tuesday, April 7th:—

Anatomy and Physiology.—William Thomas Hillier, Middlesex Hospital; James Sherren, London Hospital; and John Frederick Paul and Henry George Drake-Brockman, St. George's Hospital.

Anatomy only.—Charles Augustus Scott, Charing-cross Hospital; Stephen Joseph Welch, London Hospital and Cooke's School of Anatomy and Physiology; William Moore Bell Sparkes, King's College, London; and Thomas Howard Body and George Minter Brown, Guy's Hospital.

Physiology only.—Benjamin Isaac, Guy's Hospital.

One gentleman was referred in both subjects, two in anatomy only, and two in physiology only.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates passed in the undermentioned subjects at the Primary Examination held on March 31st and April 1st and 2nd:—

Anatomy and Physiology.—George Aldridge, London Hospital; Joseph Cater, King's College; John George Glasgow, St. Thomas's Hospital; Thomas Baker Haig, St. Bartholomew's Hospital; James Hughes Harrison, Sheffield; Henry Cadwaladr Jones, St. Mary's Hospital; William Robert Murison, Edinburgh; Frank Rowland, Birmingham; George Edward Henry Sargent, London Hospital; Reginald Storrs, Leonard Edgar Whitaker, Ernest Dixon Wortley, and Thomas Lancelot Wyndham, St. Bartholomew's Hospital.

Anatomy.—Edward Quaid Ambrose, London Hospital; Charles Harold Bennett, Edinburgh; Frederick Edward Bissell, Birmingham; Kristnalal Datta, Paris and Glasgow; Richard Frank Killery, St. Bartholomew's Hospital; Charles Henry Farquharson, St. Mary's Hospital; Alexander Farrington, St. Bartholomew's Hospital; Reginald John de Gale Ferguson, University College Hospital; Percy Tranter Goodman, St. Thomas's Hospital; Stephen Joseph Welch, London Hospital.

Physiology.—Alfred Lewis Bartram, Cambridge University and Westminster Hospital; George Frederick Beacher, Sheffield; Oliver Charles Youell Cartter, Charing-cross Hospital; George William Hennen Edgelow, London Hospital; Herbert Devas Everington, St. Bartholomew's Hospital; William Wood Forbes, Aberdeen; Samuel John Brookfield Fox, Sheffield; John George Gowland, St. George's Hospital; Thomas Edward Holman, Guy's Hospital;

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Robert Orford Jones, Guy's Hospital; Ernest Ward Lowry, St. Bartholomew's Hospital; Edward Alexander Le Maistre, London Hospital; Cyril Purdon, Belfast; James Herbert Rhodes, St. Bartholomew's Hospital; Charles Golothorp Sugden, Cambridge and Leeds; Harry War Bennett Walling, Guy's Hospital; Harry Whittaker, Cambridge.

ROYAL COLLEGE OF SURGEONS IN IRELAND: SCHOOLS OF SURGERY: Class Prizes (Winter Session 1895–96).—Descriptive Anatomy: Junior, W. J. Trembath, first; J. S. P. Stewart, second. Senior, D. A. Fitzgerald, first; W J. Anglim, second. Practical Anatomy (first year): Miss R. F. Lynn, first; F. G. Fitzgerald, second; (second year) G. W. Little, first; J. J. Huston, second; (third year) W. M. Falkner and D. Hadden (equal), first; P. H. Falkner, second. Physiology: W. Gavin, first; P. S. O., Reilly, second. Practice of Medicine: D. Hadden, first; F. J. Palmer, second. Surgery: F. A. Benson, first; W. H. May, second. Midwifery: S. G. Longworth, first; Miss L. F. S. Strangman, second. Theoretical Chemistry: C. B. Vance and S. L. Worthington (equal), first; J. S. P. Stewart, second. Pathology: F. J. Palmer, first; S. G. Longman, second. Physics: J. S. P. Stewart, first. The schools opened on Tuesday, April 7th, for the three months' courses of operative surgery, practical chemistry, practical pharmacy, public health, and forensic medicine, materia medica, practical histology, biology, and dissections.

FOREIGN UNIVERSITY INTELLIGENCE.—*Breslau:* Dr. J. Pfannenstiel has been promoted to an Extraordinary Professorship of Gynæcology.—*Lausanne:* Dr. L. Secretan has been appointed Extraordinary Professor of Otology and Laryngology.—*Leipzig:* Dr. Fredrich has been recognised as *privat docent* in Throat Diseases.—*Strassburg:* Dr. Forster, Professor of Hygiene in Amsterdam, has been offered a Professorship if he will migrate, but at present it is uncertain if he will do so.—*St. Petersburg (Military Medical Academy):* Dr. S. S. Bolkin has been appointed Professor of Infectious Diseases and Bacteriology; Dr. N. N. Zhukoff has been recognised as *privat-docent* in Mental and Nervous Diseases; also Dr. D. A. Kamenski as *privat-docent* in Pharmacology and the Science of Natural Mineral Waters.—*Vienna:* Dr. Hans von Hebra has been promoted to an Extraordinary Professorship of Dermatology.

FOOTBALL FATALITY.—On the 6th instant, during a match at Nuneaton between the Nuneaton Town Club and the Sutton team, from the Birmingham district, a player sustained injuries from which he died at the Nuneaton Hospital on Wednesday last.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST.—The annual meeting of the governors of the Royal Hospital for Diseases of the Chest, City-road, was held at the hospital on March 13th, the Lord Mayor presiding. The report showed that during 1895 there were 755 in-patients and 23 844 attendances of out-patients. The income for the year, exclusive of legacies, was £6020, and the total ordinary expenditure was about £7500. It had been found necessary to borrow £1000 from the bankers, and in addition there was the sum of about £1200 due to tradespeople.

ROYAL METEOROLOGICAL SOCIETY.—At the ordinary meeting of the society, to be held at 22, Great George-street, Westminster, on Wednesday, the 15th inst., at 7 30 P.M., Mr. William Ellis, F.R.S., will read a paper on the Mean Amount of Cloud on each Day of the Year at the Royal Observatory, Greenwich, on the Average of the Fifty Years, 1841 to 1890; Mr. E. D. Fridlander will discuss Atmospheric Dust Observations from Various Parts of the World; and Major H. E. Rawson, R.E., will give an Analysis of the Greenwich Rainfall Records from 1879 to 1890, with Special Reference to the Declination of the Sun and Moon.

A MEETING of the Incorporated Society of Medical Officers of Health was held at 197, High Holborn on March 19th, when the secretary submitted the report of the council. In this report the council state that having had their attention called to the action of the Farnborough urban district council in advertising for tenders for the post of medical officer of health, they recommended that the society should in the interests of public health record its strong disapproval of such methods of filling a professional appointment so closely associated with national interests. The report was adopted, and a resolution registering emphatic disapproval of the action of the Farnborough urban district council was carried.

DR. F. SIDNEY GRAMSHAW, whose name appeared in THE LANCET of April 4th as having obtained the degree of M.D. St. Andrew's, passed the necessary examination in 1895, but was compelled to wait until the recent graduation ceremony for his "capping."

A QUARTERLY general meeting of the Society for the Study of Inebriety was held in the rooms of the Medical Society of London, 11, Chandos-street, Cavendish-square, W., on April 9th. Mr. A. E. T. Longhurst read a paper on the Relation of Alcoholic Stimulants to True Physiological Health and their value in the Treatment of Disease.

MENTALLY DEFECTIVE CHILDREN.—At the last meeting of the London branch of the British Association for Child Study Dr. W. S. Colman gave a short but very interesting account of the various classes into which cases of marked mental defect are usually grouped. He insisted strongly upon the necessity of early detection by parents and teachers of any defects of the sense organs.

A CENTRAL HOSPITAL BOARD FOR LONDON.—A special meeting of the council of the Charity Organisation Society is to be held at the Royal United Service Institution, Whitehall, S.W., on Monday next, April 13th, 1896, at 4.30 P.M., to discuss the subject of a central hospital board for London. The Earl of Stamford (the chairman of the council) will preside. We have dealt with the position in a leading article this week.

PRESENTATION.—On Easter Day, April 5th, Mr. Wilson, the medical superintendent of the Croydon Infirmary, Thornton Heath, was presented with a handsome testimonial in the shape of a gold watch with suitable inscription from the united staff of past and present officers at the infirmary as a small token of their respect and esteem. The presentation was made by Nurse Bell, the oldest resident nurse, and accompanied by a kindly letter of greeting from the contributors.

LONDON TEMPERANCE HOSPITAL.—The annual meeting of the governors of the London Temperance Hospital, Hampstead-road, was held at the hospital on the afternoon of March 19th. The report showed that from the foundation of the hospital in 1873 there had been 11,652 in-patients, with 766 deaths, or only a fraction over 6 per cent. During 1895 there were 1066 in-patients, with 99 deaths, equal to a death-rate of 9 3 per cent., and in the same period there were 5842 new out-patients. The same evening there was another meeting, at which the secretary read a report by Sir B. W. Richardson, stating that his belief in the uselessness of alcohol as a medicine was unabated.

THE DIFFUSION OF SMALL-POX.—The information from Gloucester is not reassuring, the new cases last week being said to have occurred at the maintained rate of 30 per diem. Up to Wednesday of last week, from the previous Friday, there had been 176 fresh attacks, 24 deaths, and only 11 discharges from the hospital. Taking the weeks ended since the second week of February the cases have been 61, 50, 79, 130, 155, 154, and, last week, some 200, making a total in the seven weeks of about 830 persons attacked by small-pox in a population of 40,000 people. Here, then, we find within the space of two months as high a rate as 20 per 1000 of the whole city suffering from a preventable disease. The data to the 26th of March showed that of the 693 cases which had occurred 118 had proved fatal, and that of the 365 hospital-treated cases 90 had proved fatal, no fewer than 74 of these latter having occurred in unvaccinated individuals. Not only so, but there had been but one revaccinated patient received into hospital, and the sufferer had been revaccinated fourteen years ago and caught the infection whilst nursing a private patient. With regard to the hospital cases we learn from Dr. Bond that 158 were of once-vaccinated persons, chiefly adults, and of these 11, or 7 per cent., proved fatal; that 207 were of unvaccinated persons, mostly children, with 70 deaths, or 33·8 per cent. Not a single death in a vaccinated person had occurred in an individual under the age of twenty-four years. The great majority of the unvaccinated children recovering from their attack will be disfigured through life, and some will be blind. Of the vaccinated 2, and of the unvaccinated 179, cases were of children under ten years of age; 42 and 14 respectively under twenty years of age, and 114 and 14 respectively over that age.

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Some 15,000 to 20,000 vaccinations and revaccinations have been already performed in the city—that is, about one-half of the population have yielded to the evidence of facts without the guardians having taken any positive action. The guardians have appointed assistant vaccination officers to make a house-to-house visitation in the interests of all unprotected children, and their task should, under present circumstances, prove an easy one, for even the opponents of vaccination have in many cases willingly submitted themselves to the operation. It is true that as recently as April 1st (*absit omen*) the anti-vaccinators held a demonstration in the Royal Albert Theatre, Gloucester, but popular feeling is no longer with them, for the trade of the city is feeling terribly the strain of the excommunication of the town. An additional case of small-pox is reported from Camborne. Further cases at Cardiff have been removed to hospital. Two deaths are reported from Newport. A second case has been discovered at Birmingham on a canal boat, the victim, since dead, being an unvaccinated child coming from Gloucester. At Cheltenham the town council have placarded the town with posters showing the arrangements made with a large number of medical men for securing gratuitous vaccination and revaccination; and in the Stroud Union exceptional arrangements have also been made for enabling the populace to be vaccinated at numerous places and during a long range of hours. Another employé of the urban district council at Bridgend has contracted the disease. The occurrence of several cases at Brecknock in the last few days of March led the district council to rent an empty house in the town for the isolation of the patients, but the demonstrations of the mob were such as to lead the mayor to publicly state that a house should be secured for the purpose outside the town and away from dwellings. These repeated declarations of the people in different places against the use of tenements in populated parts for the care of small-pox patients denote the growing tendency of the masses to relegate the disease to rural sites for hospital purposes. Many cases have arisen lately in Aberdeenshire, especially in the neighbourhood of Cluny, the original case having apparently been traced to importation from South Shields. Much free vaccination is being performed in the county in consequence. In Dublin small-pox is not quite extinct, the past month having furnished 7 cases to the hospital.

Parliamentary Intelligence.

CURRENT NOTES.

Coal Mines Regulation.

THE Government have made it known that they will very shortly introduce a Coal Mines Regulation Bill, having as its main object the prevention of accidents and the consequent loss of life.

Petroleum Accidents.

The Select Committee of the House of Commons on the sale, storage, and conveyance of petroleum, and on accidents occurring with paraffin lamps, has appointed as its chairman Mr. Mundella, and has begun the examination of witnesses. It devoted a whole sitting to the examination of Mr. A. Spencer of the Public Control Department of the London County Council, who gave interesting evidence as to the risks run in London both in connexion with lamps and with the storage of petroleum, and who recommended the strengthening of the Petroleum Acts in the general interests of the public.

HOUSE OF COMMONS.

TUESDAY, MARCH 31ST.

Public Health Certificates.

Mr. Knowles, on behalf of Mr. Rentoul, asked whether the Local Government Board had recognised the certificate of the Sanitary Institute as a certificate for a sanitary inspector under the Public Health (London) Act, 1891, Section 108 (2) (*d*); whether any other public health bodies had applied for recognition of their certificates, and, if so, their names; whether such approval had been given, and, if not, the reasons for refusal; and whether the committee appointed by the Local Government Board three years since for drawing up a scheme for establishing one examining board in England for the examination of sanitary inspectors did draw up such a scheme, and, if so, when would effect be given to it.—Mr. T. W. Russell, in reply, said the Local Government Board have approved, until they otherwise direct, of the Sanitary Institute as a body to grant certificates for the purposes of the section referred to in the question. The British Institute of Public Health applied for a similar approval, and the Board had reason to believe that application of a like character would be made by other bodies. The application of the British Institute of Public Health was not complied with, as the Board thought it desirable that a joint board should be formed consisting of representatives of various examinations and grant certificates for the purposes of the section. A committee was appointed in 1894 to draw up a scheme for establishing a joint examination board, and they have framed a scheme accordingly. The scheme adopted contemplates that the examination board should be incorporated under the Companies Act, 1862, and application was accordingly made to the Board of Trade. The Board are communicating with the Board of Trade on the subject.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ANDREWS, H. A., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the Hull Infirmary.

BENNETT, C. J., M.R.C.S., has been appointed Medical Officer of Health by the Dixley and Hayfield Rural District Councils respectively.

BERRY, H. P., M.B. Lond., M.R.C.S., has been reappointed Medical Officer by the Grantham Town Council.

BERRY, WILLIAM, L.R.C.P., L.R.C.S. Edin., F.R.C.S. Irel., M.R.C.S., D.P.H. Glasg., has been appointed Medical Officer of Health by the Hanley Urban District Council.

BLACKMORE, B., L.R.C.P., L.M. Irel., has been reappointed Medical Officer by the Tyldesley District Council.

CHRISTIE, MARGARET M. T., M.B. Lond., has been appointed Junior Medical Officer for the Greenwich Workhouse.

COGHLAN, T., L.R.C.S., L.M. Irel., has been appointed Medical Officer for the Kilmacow Dispensary.

CRINION, L. A. J., M.B., B.Ch. Irel., has been appointed Medical Officer for the Rathmore Dispensary District, vice Coady.

DARROLL, W. B., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer for the Brampton Brian Sanitary District of the Knighton Union.

FISHER, V. H., M.B. Dub., L.R.C.S., L.M.R.C.P. Irel., has been reappointed Medical Officer by the Howden Rural District Council.

GALLOWAY, A. R., M.B., C.M. Aberd., has been appointed for the combined office of Assistant Anæsthetist and Assistant Medical Electrician to the Aberdeen Royal Infirmary.

GIBBS, CHARLES, F.R.C.S., has been appointed Assistant Surgeon to Charing-cross Hospital, vice the late Mr. Archie T. Collum.

GOODFELLOW, J. A., M.B., C.M. Glasg., has been reappointed Medical Officer of Health for Brampton.

HARPER, CHARLES, L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health for Bath.

HAWKINS, E., M.D., C.M. Edin., has been appointed Medical Officer of Health, Sunderland.

HOPTON, RALPH, M.B., B.S. Lond., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Hospital for Women and Children at Leeds.

KEMPE, C. M., M.R.C.S., has been appointed, *pro tem.*, Medical Officer of the Workhouse, Steyning Union, vice T. Fuller, resigned.

LE FANU, H. G. P., L.R.C.P., L.R.C.S. Irel., has been appointed Honorary Medical Officer to the Derbyshire Hospital for Sick Children, vice F. E. Taylor, resigned.

MACKAY, J., M.D. Aberd., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer to the Poorhouse, Logierait.

MEAD, G. B. O., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer by the Newmarket Urban District Council.

MIVART, F. ST. GEORGE, M.D. Louvain, L.R.C.P., F.R.C.S. Edin., M.R.C.S., has been appointed Medical Inspector by the Local Government Board.

MONTGOMERY, R. J., M.A., M.B., T.C.D., F.R.C.S.I., has been appointed Ophthalmic Surgeon to the Drumcondra Hospital (Whitworth), Dublin.

NETTLE, WILLIAM, M.R.C.S., has been reappointed Medical Officer of Health for the Liskeard Rural and Urban Sanitary Districts.

PARSONS, F. J. C., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer by the Bridgwater District Council.

ROBERTS, LLEWELLYN W., M.B. Melb., &c., has been appointed House Surgeon to the Victoria Hospital, Folkestone.

SANKEY, J. IVOR, M.R.C.S., L.R.C.P., L.S.A., has been appointed Medical Officer and Public Vaccinator for the Sixth (Brenchley) District of the Tonbridge Union, vice P. W. Streatfield, resigned.

SHEARER, R. P., M.B., C.M. Glasg., has been appointed Medical Officer of Health for the Gotham Sanitary District of the Basford Union.

SOUTHEY, A. J., M.R.C.S., has been reappointed Medical Officer of Health by the Eton Urban District Council.

WALKER, J. D., M.B., M.S. Aberd., has been appointed Junior Assistant Medical Officer to the Cornwall County Asylum.

WEBBER, W. W., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health by the Crewkerne Urban District Council.

WELLS, S. RUSSELL, M.D., B.Sc. Lond., M.R.C.P., has been appointed Medical Registrar to St. George's Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis-road, Shadwell, E.—Resident Medical Officer. Salary £80 per annum, with board and residence.

HALIFAX INFIRMARY AND DISPENSARY.—Assistant House Surgeon, unmarried. Salary £50 per annum, with residence, board, and washing.

HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL, Hastings.—Honorary Ophthalmic Surgeon.

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HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury.—Surgical Registrar, for one year, an honorarium of £40 being voted at the expiration of that term.

LEICESTER INFIRMARY.—Assistant House Surgeon for six months. Honorarium £21, and board, residence at the infirmary, and washing provided.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House Surgeon. Salary, £70 per annum, with residence and maintenance in the hospital.

OWENS COLLEGE, Manchester.—A Senior and a Junior Demonstrator in Physiology.

OWENS COLLEGE, Manchester.—Junior Demonstrator in Anatomy.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, London.—Examiners.

SHEFFIELD ROYAL HOSPITAL.—Junior Assistant House Surgeon, unmarried. Salary 60 guineas per annum, with board (exclusive of wine and beer) and lodging.

SUSSEX COUNTY HOSPITAL, Brighton.—Fourth Resident Medical Officer, unmarried. Salary £30 per annum, with board, washing, and residence in the Hospital.

VICTORIA HOSPITAL, Burnley.—House Surgeon, unmarried. Salary £80 per annum, with board, residence, and washing.

WREXHAM INFIRMARY AND DISPENSARY.—House Surgeon. Salary £80 per annum, with furnished rooms, gas, coal, and attendance.

Births, Marriages, and Deaths.

BIRTHS.

CRAMPTON.—On March 31st, at Bond-street, W.C., the wife of T. Hobbs Crampton, L.R.C.P. Irel., L.R.C.S. Irel., of a daughter.

CROPPER.—On April 1st, at Syston House, Boscombe, Bournemouth, the wife of John Cropper, M.A., M.B., B.C. Cantab., of a daughter.

ELLERTON.—On March 31st, at Priory-terrace, Leamington, the wife of J. F. Heise Ellerton, M.D. Brux., of a daughter.

FRASER.—On April 3rd, at Burton-road, Carlton, Nottingham, the wife of Alexander Fraser, M.B., C.M. Edin., of a daughter.

LANGDON-DOWN.—On April 6th, at Harley-street, W., the wife of Reginald L. Langdon-Down, M.B., M.R.C.P., of a daughter.

MACGREGOR.—On March 31st, at Hillside, Clayton West, near Huddersfield, the wife of Duncan Alastair MacGregor, M.B. Univ. Edin., of a son.

MARTIN.—On April 3rd, at Southwick-place, Hyde-park, W., the wife of Henry C. Martin, M.D. Edin., of a son.

SANDFORD-SMITH.—On April 5th, at Eltham, Kent, the wife of H. Sandford-Smith, M.R.C.S., L.S.A., of a daughter.

SKYRME.—On March 27th, at Windsor-place, Cardiff, the wife of Hy. E. Skyrme, M.R.C.S., L.R.C.P. Lond., of a daughter.

MARRIAGES.

DUNCAN—WIGHTMAN.—On March 18th, at St. George's, Hanover-square, Duncan Duncan, M.R.C.S. Eng., of Eccleston-street, S.W., to Caroline Agnes, eldest daughter of the late George Wightman, of Clapham.

FINCHAM—GIBBON.—On April 8th, at St. Mary's, Hornsey-rise, N., Ernest C. Fincham, M.R.C.S. Eng., L.R.C.P. Lond., only son of James Fincham, M. Inst.C.E., of Hobart, Tasmania, to Blanche, youngest daughter of the late Richard Gibbon, of Shanghai.

LLOYD—WISKAR.—On April 7th, at the parish church, St. Pancras, Samuel Lloyd, M.D. St. And., of High-street, St. Giles's, to Emma, widow of the late Walter C. Wiskar, of Whitfield-street, Fitzroy-square.

MACKAY—MCHARDY.—On April 8th, at the Cathedral Church of St. Mary, Edinburgh, by the Right Reverend the Bishop of Edinburgh, assisted by the Reverend Irvine K. Anderson, Rector of Tavy St. Mary, Devon, uncle of the bride, George Mackay, M.D., F.R.C.S.E., eldest son of Deputy-Surgeon-General Geo. Mackay, M.D., to Elise Marjory, younger daughter of Lieutenant-Colonel Alex. Burness McHardy, R.E., one of H.M. Prison Commissioners for Scotland.

DEATHS.

ATTER.—On April 1st, at Lillie-road, West Brompton, London, Henry Herbert Atter, Surgeon, aged 33.

BRYCE.—On March 24th, at sea, on s.s. *Inchanga*, James Bryce, M.D. Aberd., late of Puckeridge, Herts, aged 33 years.

BURFORD.—On April 1st, at Greville-road, Kilburn, N.W., Henry Thomas Buttanshaw Burford, M.R.C.S., aged 90.

GREGG.—On March 31st, at Camberwell, the Right Reverend Thomas Huband Gregg, D.D. and M.D. Dubl., Bishop of Verulam, aged 56 years.

KANE.—On Easter Sunday, at Bishopsteignton, Joseph George Auriol Kane, M.D. Dubl., of Exmouth, aged 30.

SARGENT.—On March 27th, at Nice, Arthur Francis Sargent, Surgeon-Major 3rd Bombay Light Infantry, youngest son of the late Rev. John Paine Sargent, Vicar of Cauldon, Staffordshire, aged 43 years.

SMITH.—On April 1st, at Hammersmith, Wilberforce Smith, M.D. Heidelberg, of Stratford-place, aged 51.

THOMAS.—On March 31st, at Mile End House, Llandovery, David Thomas, M.R.C.S., J.P., in his 82nd year.

THORNE.—On April 7th, at Cannes, Annette Maud, only daughter of William Bezly and Annette Mary Thorne, of 53, Upper Brook-street, London.

WELSH.—On April 7th, at Oakdene, Oak Hill-road, Surbiton, Francis Fawcett Welsh, F.R.C.S., aged 79.

WILSON.—On April 1st, at Piazza Madonna, Florence, William Wilson, M.D. Gottingen, F.R.C.S., in his 82nd year.

WREFORD.—On April 4th, at Osborne-road, Newcastle, John William Ernest, only child of John Wreford, M.R.C.S., L.R.C.P.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 9th, 1896.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
April 3	30·15	N.E.	46	42	59	50	41	...	Overcast
,, 4	30 20	S.W.	42	41	66	54	39	...	Hazy
,, 5	30 07	N.E.	50	46	62	56	41	0·11	Raining
,, 6	30 20	N.	52	49	96	59	48	0·01	Cloudy
,, 7	30 24	N.W.	53	50	97	63	50	...	Cloudy
,, 8	30 26	N.	56	52	98	66	52	...	Cloudy
,, 9	30 24	N.W.	55	49	82	53	52	...	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (13th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.).

TUESDAY (14th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2 30 P.M.), Cancer (2 P.M.).

WEDNESDAY (15th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross, (3 P.M.), St Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY (16th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Great Northern Central (Gynecological, 2 30 P.M.).

FRIDAY (17th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1 30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.) Gt. Northern Central (2.30 P.M.).

SATURDAY (18th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (13th).—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-square, W.C.).—8 P.M. Papers:—Mr. A. Marmaduke Sheild: A Case of Aneurysm by Anastomosis of the Vessels of the Hard Palate, with Hæmorrhage into the Mouth, treated by Excision of a portion of the Jaw.—Mr. Storer Bennett: Report on a Case of Re-united Fractured Human Tooth, with some remarks on the Healing of Wounds of the Dental Pulp.—Mr. C. Tomes: (1) Description of a very remarkable Formation of Secondary Dentine after Fracture of a Tooth; (2) Further Notes on Amalgams.

SOCIETY OF ARTS.—8 P.M. Professor H. A. Miers: Precious Stones. (Cantor Lecture.)

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Cases:—Dr. E. Cautley: Congenital Distensile Tumour of the Neck.—Dr. de Havilland Hall: (1) Osteitis Deformans; (2) Great Enlargement of Leg; (3) Jaundice (? Hydatid of Liver).—Mr. W. H. Battle: (1) Lateral Spinal Meningocele; (2) The Result of Operation in a Case of Spontaneous Dislocation of the Patella.—Dr. Gilbart Smith: Carcinoma of Larynx.—Mr. Clinton Dent: (1) Hairy Mole of Face; (2) Tumour of Abdominal Wall.—Mr. G. R. Turner: Tumour of Neck.

TUESDAY (14th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—Surgeon-Captain M. L. Hughes: Note on the Endemic Fever of the Mediterranean.—Mr. R. Barwell: On Spontaneous Dislocation of the Hip, with some remarks on a Class of Cases often mistaken for Rheumatism.

WEDNESDAY (15th).—LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Adjourned Discussion on Foreign Bodies in the Upper Air and Food Passages, introduced by Mr. Charters Symonds at the February meeting.

ROYAL METEOROLOGICAL SOCIETY (22, Gt. George-st., Westminster).—7.30 P.M. Papers:—Mr. W. Ellis: Mean Amount of Cloud on each day of the year at the Royal Observatory, Greenwich, on the average of the fifty years 1841 to 1890.—Major H. E. Rawson: An Analysis of the Greenwich Rainfall Records from 1879 to 1890, with special reference to the Declination of the Sun and Moon. Mr. E. D. Fridlander will open a Discussion on Atmospheric Dust Observations from various parts of the world.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY (Limmer's Hotel, Conduit-street, W.).—8 P.M. Dr. F. Fox (Strathpeffer Spa): The Varieties and Treatment of Articular Gout. Discussion on Necessity of Increased Travelling Facilities to the British Health Resorts.

ROYAL MICROSCOPICAL SOCIETY (20, Hanover-sq., W.).—8 P.M. Meeting.

THURSDAY (16th).—HARVEIAN SOCIETY (Stafford Rooms, Pitshborne-street, Edgware-road, W.).—8 30 P.M. Papers:—Dr. W. Hill: Prognosis in Chronic Non-suppurative Catarrh of the Middle Ear.—Mr. R. Johnson: Some Unusual Cases of Swelling of the Parotid Gland. Mr. Dodgson: A Demonstration of the Process of Photography by means of Roentgen's Rays.

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FRIDAY (17th).—BRITISH LARYNGOLOGICAL, RHINOLOGICAL AND OTOLOGICAL ASSOCIATION (11, Chandos-st., Cavendish-sq., W.).—3 P.M. Cases by the President (Dr. Stoker), Dr. Whistler, Dr. Macnaughton Jones and Mr. Lake. Microscopic Sections by Dr. Pegler. Discussion on the Symptoms and Treatment of Disease of the Attic, introduced by Dr. A. Bronner (Bradford) and Dr. D. Grant. Dr. J. Macintyre (Glasgow): Demonstration of the Roentgen Ray Photography as applied to Laryngology.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (13th).—ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.

TUESDAY (14th).—ROYAL INSTITUTION.—3 P.M. Professor James Sully: Child Study and Education.

GRESHAM COLLEGE.—Dr. E. Symes Thompson: The Latency of Disease.

THURSDAY (16th).—ROYAL INSTITUTION.—3 P.M. Professor Dewar: Recent Chemical Progress.

FRIDAY (17th).—CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL.—4 P.M. Dr. Dundas Grant: The Diagnosis and Treatment of Deafness, occasioned by the residue of Suppurative Inflammation of the Middle Ear.

ROYAL INSTITUTION.—9 P.M. M. G. Lippmann: Colour Photography.

SATURDAY (18th).—ROYAL INSTITUTION.—3 P.M. Professor W. B. Richmond: The Vault of the Sixtine Chapel.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index for the second half-yearly volume for 1895 was given in the issue of Dec. 28th. The practice of supplying loose copies has been discontinued, the Index having been placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1895 are now ready. Bound in cloth, gilt lettered, price 18*s*.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s*.; by post, 2*s*. 3*d*.

To be obtained on application to the Manager, accompanied by remittance.

CARDIAC MURMURS AND FRICTIONS HEARD FROM A DISTANCE.

To the Editors of THE LANCET.

SIRS,—The interesting case reported in THE LANCET of April 4th, of a child with a mitral murmur heard from a distance, is by no means unique, as a reference to Section 780: 3 (1890 Edition) of the "Medical Digest" will prove. Dr. Osler in 1880 described a somewhat similar case, and incidentally alluded to several others that had been reported. In Section 753: 5 (Appendix) some remarkable cases of pericardial frictions heard from a distance will be found recorded.

I am, Sirs, yours truly,

South Hampstead, April 4th, 1896. RICHARD NEALE, M.D. Lond.

"THE POISON OF THE PRIMULA."

To the Editors of THE LANCET.

SIRS,—In connexion with the discussion on this subject it may be of interest to note that the Rhus toxicodendron or poison ivy produces when handled an acute dermatitis the inflammation of which is erysipelatous in character, rapidly spreading from the parts first affected all over the body and involving even the mucous membranes. The first case of this description which I saw was under the care of Professor T. R. Fraser in the Royal Infirmary at Edinburgh. A still more curious circumstance is that certain susceptible people are seized with acute eczema after touching the Japanese fancy boxes now so commonly sold in the shops, the explanation being that these boxes are varnished with a preparation made from a species of sumach.

I am, Sirs, yours truly,

Welbeck-street, W., April 6th, 1896. WILLIAM MURRELL.

To the Editors of THE LANCET.

SIRS,—In reply to your inquiry as to the poisonous qualities of the primula, as far as I know the primula obconica is the only one that is known to have poisonous qualities. It seems only to affect a limited number of the persons who have been in contact with it. It causes swelling of the parts and a glossy redness, with intense burning, itching, and tingling, especially severe after the patient retires to rest. These symptoms often remain for two or three days, and after this the fingers seem to shrivel and desquamate. The irritation is most tiresome and depressing, and if continued long tells seriously upon the general health. The parts affected are, as might be expected, the hands and those parts which come into contact with them, more especially the face. The treatment which I have found of the greatest use is the application of the following lotion—zinci oxidi, ʒ iii.; calaminæ, ʒ iv.; glycerini plumbi subacetatis, ʒ iss.; liquor carbonis picis, ʒi. to ʒ ii.; spiritus, ʒi.; aquæ sambuci ad ʒ viii.—or an ointment of cocaine. A solution of carbolic acid is also said to be very efficacious. As the primula obconica is now very extensively cultivated in greenhouses and seeing that it remains in flower all the year round, its effects ought to be better known to the profession than they have hitherto been, as the following case will show. A woman, fifty-two years of age, was brought under my notice suffering from repeated and severe inflammation and swelling of the fingers and palms of the hands, also occasionally of the eyelids and ears, rendering her nights sleepless from the pain and irritation. This state of affairs had continued for such a length of time that her general health began to suffer and she was becoming melancholy and desponding. She had consulted several medical men who had pronounced the case to be a recurrent urticaria. She had been put under a most rigid diet for more than twelve months, but without any benefit. Local sedatives had relieved the symptoms for an hour or two at a time, but without permanent good. Internal remedies of various kinds were adopted with no better results. But it had always been noticed that when she was away from home she at once improved and for a time entirely lost all the symptoms, but on her return home she began to suffer as badly as ever. Last summer she went away and, as usual, the symptoms disappeared. At the end of about a month her husband sent her a basket of flowers which had been grown in the conservatory at home, and within twenty-four hours the old trouble began. The writer of these notes calling and seeing the primula obconica on the table and knowing its poisonous effects at once solved the problem, and the patient has had no return of the trouble since that time.—I am, Sirs, yours faithfully,

Blackpool, March 31st, 1896. F. W. A. STOTT.

To the Editors of THE LANCET.

SIRS,—In reference to your note on the primula obconica it appears to be without doubt that the plant secretes a virulent poison, and that the primula sinensis also secretes a poison, presumably the same only less virulent, but considering the number of plants in cultivation the percentage of persons susceptible to the poison must be very small. A difficulty in bringing home the charge to the primula is that the effect does not immediately follow the cause, consequently many cases escape recognition. Last winter I had several plants of the obconica, and I suffered from numerous attacks of the eruption until I suspected the cause, and this subsequently I confirmed by handling when my skin was healthy. In about eight hours' time the first symptom appeared—viz., itching between the fingers and on the forehead—and soon an erythematous eruption appeared, which rapidly spread over the whole face, the palms, and up the flexor surfaces of the arms. The rash is slightly raised, but the edges are not well defined. The irritation is intense. Bullæ formed between the fingers and on the forehead. The duration of the attack was three days, the rash disappearing and the irritation gradually abating; desquamation in large flakes followed. I have seen only three cases of poisoning by the primula obconica, but have heard of several others. One of these was a market gardener who potted yearly several scores of this plant, but who never suffered any ill-effect until he handled them with a scratched hand; the rash then appeared on one arm only. A few weeks ago I handled some leaves of the primula sinensis, this was followed by a mild erythematous attack with itching, which, however, only lasted a few hours; and almost the same time I saw a patient with what I diagnosed as "primula erythema." He had been handling the primula sinensis the day before the eruption appeared.

I am, Sirs, yours faithfully,

Andover, April 6th, 1896. J. F. GILLETT, M.B.

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THE APPOINTMENT OF MEDICAL OFFICERS OF HEALTH: TWO QUESTIONS.

To the Editors of THE LANCET.

SIRS,—Will you kindly reply through the medium of THE LANCET to the following queries: (*a*) Are the duties of a medical officer of health set out in pamphlet form by the Local Government Board? If so, where can I apply for a cheap copy? (*b*) I am about to take up my residence in a "union district" where there is no resident medical man, and the medical officer for the poor lives in another district and is the holder of three or four such appointments outside his residential district. Now, I am told that on taking up my residence in this district I, being the only resident medical man therein, can "demand" (that is the word my informant used) the post of medical officer for the poor at the hands of the guardians for the district in which I reside, and that it will be given to me in one month after my application. Is this correct? Thanking you in anticipation, I am, Sirs, yours faithfully,

April 4th, 1896. M.O.H.

*** (*a*) Yes; we send our correspondent an "order" to rural sanitary authorities issued by the Local Government Board, and procurable from Messrs. Eyre and Spottiswoode. (*b*) He should apply to the guardians to be appointed when the year of office of the present holder terminates, and should inform this Board he has done so because he is resident in the district. He will probably find the appointment is annual only, on account of non-residence of the present holder. He cannot demand the appointment, but residence in the district is an extremely strong claim in the view of the Local Government Board to the office.—ED. L.

Young Student will find his first question answered as definitely as it can be by a leading article in our issue of Aug. 17th, 1895. He will be right to place M.D. after his name; he should certainly affix also the letters designating the university where he obtained the degree. With regard to his second question, we recommend him to address the secretaries, Dr. Albert Mills, 30, Rue du Pépin, Brussels, or Mr. Walter Reeve, 28, Victoria-street, Westminster.

THE QUESTION OF MEDICAL PRIVILEGE IN MICHIGAN.

A JUDGE has decided at Battle Creek, Michigan, against professional secrets. A physician must testify in regard to the ailments of his patients. Judges must either go further or not so far. They must define the circumstances in which secrets are to be disclosed, otherwise even judges may lose authority with the public.

CLUB MEMBERS AS PRIVATE PATIENTS.

To the Editors of THE LANCET.

SIRS,—Now that club practice is such a burning question I should like your opinion on the following case, which must be only one out of many in the country, though I have never seen the point raised.

A fairly well-to-do tradesman, who is a member of the Order of ———, came to me. He said he knew the payment by the club was too small, and that if I would do my best he would pay me for my attendance. I replied that he need not imagine that he would be better looked after by that arrangement as I tried to do my duty to club and private patients alike, but that I quite agreed that a man in his position ought not to take advantage of the club and that I would accept his offer on that ground. I made the note in my day-book, "Is in the ——— Club, but wishes to pay," and afterwards mentioned the matter to my assistant. At the usual time I sent in my account and was met by the threat to bring the matter before the club for having tried to charge a member for attendance. I consulted some of the officials and found that my patient had been to the lodge, who declined to interfere. They assured me that the club would not take part against me as they regarded the matter as a private affair between us. Now what are my rights? Am I justified in making such an arrangement with a member? If so, can he legally be made to abide by it? Is the note in my day-book of any value as evidence?

I am, Sirs, yours faithfully,

March 23rd, 1896. CLUB DOCTOR.

*** The point raised by our correspondent is very interesting but purely legal. The action of the club is to its credit, and so was the first action of the patient, who doubtless knew that he was not doing right in taking medical service from the club medical officer on club terms. He acted very unworthily of his better moments when he fell back on his club rights and tried to move the club to legal action against the medical officer. We are very doubtful of the legal power of our correspondent to enforce other payment than the club terms require. The patient has the principle of contract on his side. Had he paid cheerfully an honorarium the matter would have been different Nevertheless, the case is very valuable as showing the injustice of the club system.—ED. L.

Mr. Walter J. Bell.—We cannot break through our rule of never giving medical or surgical advice.

Mr. F. M. Beaumont is thanked for his interesting extracts from the *Weekly Entertainer*.

H. G. D.—The question is not simple of answer. We will give it our attention.

"ADVERTISING DENTISTS IN KENSINGTON."

To the Editors of THE LANCET.

SIRS,—I most emphatically deny having any knowledge whatever of the paragraph respecting myself you reproduce in THE LANCET of April 4th from *Society*, and I am in no way responsible for its appearance in that paper. I consider your heading "Advertising Dentists" most offensive and unjust to one who has never in his life advertised dentistry. I am now waiting for the advice of my solicitor as to his view of that question. With regard to your reference to the Irish College of Surgeons, that authority—which, after all, is the only one primarily concerned in this matter—is quite capable of guarding its own interests. I am, Sirs, yours faithfully,

Lancaster-gate, W., April 7th, 1896. W. CADWALADR JONES.

*** The fact remains that Mr. Cadwaladr Jones's dentistry has been advertised. We never said that he was responsible for this. What we did say was that it was difficult to acquit him of all responsibility inasmuch as the offending paragraph that we quoted was not the only one of its sort that had appeared. We are glad to print his disclaimer of all knowledge of the paragraph, and recommend him to ask the editor of *Society* to withhold similar attentions for the future.—ED. L.

LEGAL RECOVERY OF MEDICAL FEES.

A COURT of law in the United States of America has decided in favour of Dr. A. C. Bernays in his action to recover $5000 (£1000) for the trephining of a wealthy lady. The learned judge remarked that the plaintiff gained his case not merely because the defendant's circumstances enabled her to pay so large a fee without serious inconvenience, but also because the operation of itself was well worth the sum charged. Our contemporary, the *American Journal of Surgery and Gynæcology*, in recording the case adds: "Large retainers to lawyers go unquestioned; that is a matter of saving of dollars and cents. But when a surgeon demands a fairly reasonable sum—say, $3000 to $5000—for an operation which saved a life the lawyers and the general public hold up their hands in horror and cry 'Exorbitant!' The precedent created in this case will doubtless lead to the establishment of higher fees than those hitherto sustained in our courts—a consummation devoutly to be wished."

THE NEW PHOTOGRAPHY.

WE have received from the Electric Photo-Printing Co., Short Hill, Nottingham, a book of photographs illustrating a lecture on the new photography delivered at University College, Nottingham, by Professor Heaton, M.A. The photographs, which were taken by Mr. A. H. Simpson, show a living boy's hand (aged ten) after an exposure of two and a half minutes, the hand of a living woman containing a needle, and other illustrations of a like nature. In the photograph of a man's foot, taken with the boot on (exposure ten minutes), the bones and articulations are distinctly seen, and the skeletal framework of a mouse, a rat, and a frog can be traced in other pictures with more or less distinctness. The published price of the book is 1*s.* 6d.

ERRATUM.—By an obvious slip of the pen in our report of the trial of Kitson *v.* Playfair on page 961 of our last issue the name of Dr. Williams (line fifty-seven) was substituted for that of Dr. Playfair in the address of Sir Frank Lockwood to the jury. The first question submitted to the jury should read, "Were the words uttered as alleged?"

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Sheffield Independent, Norfolk Chronicle, Kingston News, Birmingham Post, Devon Gazette, Manchester Guardian, Northern Telegraph, Ayrshire Post, Times of India, Lancashire Express, Blackburn Times, Scarborough Evening News, Worcester Echo, Pioneer Mail, Architect, Eastern Morning News, Journal des Debats (Paris), Western Daily Press, Scotsman, Builder, Dundee Advertiser, Midland Counties Express, Durham Chronicle, Southport Visitor, Bradford Observer, Somerset County Herald, Hereford Times, Keene's Bath Journal, Yorkshire Post, Bristol Mercury, Leicester Post, Glasgow Herald, Irish Times, The Speaker, Newcastle Journal, Rochester Journal, Grays Standard, Cambridge Express, Bedfordshire Standard, Liverpool Daily Post, Leeds Mercury, Carnarvon Herald, City Press, Putney News, Newport Pagnell Gazette, Sporting Times, Sevenoaks Chronicle, Sanitary Record, Gloucestershire Chronicle, Reading Mercury, Hertfordshire Mercury, Weekly Free Press and Aberdeen Herald, Mining Journal, Surrey Advertiser, Local Government Chronicle, West Middlesex Standard, Local Government Journal, Le Moniteur (Paris), Le Temps (Paris), Levant Herald, Colchester Gazette, Bedfordshire Times, Ramsbottom Observer, Newbury Weekly News, Fife Herald, Lowestoft Standard, Carlisle Patriot, Sussex Daily News, &c., &c.*

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The Hunterian Lectures
ON
INFANTILE SYPHILIS.

Delivered at the Royal College of Surgeons of England on March 23rd, 25th, and 27th,

BY J. A. COUTTS, M.B. CANTAB., M.R.C.P. LOND.,
PROFESSOR AT THE COLLEGE, AND PHYSICIAN TO THE EAST LONDON HOSPITAL FOR CHILDREN.

LECTURE II.[1]

MR. PRESIDENT AND GENTLEMEN,—In my last lecture I dealt with the parental sources of inherited syphilis. I now proceed to treat of the symptoms of the complaint in the infant. These symptoms are so numerous and varied and affect so many parts of the body, either separately or simultaneously, that any elaborate treatment of any single one of them is incompatible with the time at my disposal. In fact, I feel now that instead of attempting to deal with such a controversial subject as infantile syphilis in its entirety it would have been better to have restricted myself to a more thorough consideration of a selected number of the chief manifestations of the complaint. Even as it is I must pass over many parts of the subject, not on account of their lacking either consequence or clinical interest, but because time will not allow me to deal with them in a manner at all commensurate with their importance. Some others of the less debatable points I also ignore, lest I incur the charge of "demonstrating the obvious and expatiating on the commonplace."

That the symptoms of inherited syphilis may be apparent in the dead-born fœtus or in the living child at birth must now, I think, be conceded by all. The word of obstetricians, who are the only persons with any great opportunities of experience on these points, is unanimous in this respect. It is true that such symptoms as maceration of the fœtus and the like—a necessary consequence of its retention *in utero* after death—were formerly too often and falsely ascribed to syphilis. The proof that such symptoms were not necessarily dependent upon syphilis, however, in nowise detracts from the testimony of the better informed, who have found uncontrovertible evidences of syphilis in the viscera, bones, and other organs of still-born infants. It is unnecessary, however, to dwell upon such cases; equally unnecessary, too, is it, I consider, to linger on the cases of infants presenting signs of unmistakable syphilis at birth. Such infants, in the vast majority of instances, are only foredoomed to die after the briefest span of life, even under the most skilful treatment and care. If recovery has taken place in infants presenting unequivocal signs of syphilis at birth, such recoveries are so exceedingly exceptional that any lengthy discussion on them would be unprofitable at the present place and time.

I have just said that infants born with unmistakable signs of syphilis speedily die. So short is their existence that few, if any, find their way to children's hospitals and kindred institutions. There is, however, one symptom of syphilis often present or commencing at birth that may appropriately be dealt with now. This is the marasmus or wasting that forms such a prominent feature in many cases of inherited syphilis. Now marasmus in a new-born child is far from being a certain proof that such a child is syphilitic. More than this, as a rule it does not manifest itself in syphilitic infants before other symptoms have cleared up the diagnosis, and in many syphilitic infants marasmus may never supervene. But still wasting may be the earliest symptom of inherited syphilis in the infant. I have known numerous infants brought to me at the East London Hospital for Children for wasting dating from birth develop other unmistakable evidences of syphilis whilst under observation. These infants have almost invariably died. Other marasmic infants whom I fancied were syphilitic have died before unequivocal signs of syphilis had possibly had time to develop. With these facts before my eyes I have on numerous occasions placed infants in whom wasting was the only objective sign on a course of mercury where the family history was suggestive of syphilis. This treatment has, I think, been attended in some cases with success, although the measure of success is not a great one. Some of these infants both gained flesh and developed syphilitic manifestations under the mercurial treatment. Others, whilst improving under mercury, developed no further syphilitic symptoms, owing possibly, I thought, to their abeyance under treatment. But early marasmus in syphilitic infants is of such grave import that treatment, let this be as early as it may, can claim but few successes.

The marasmus I have just mentioned is that present at birth or commencing soon after it. Such cases form but a small minority of those where marasmus plays a prominent part in inherited syphilis. Most syphilitic infants are plump and well nourished at birth and usually exhibit no trace of their complaint until a month or so later; then marasmus is apt to develop simultaneously with snuffles and rash. These last may disappear under mercury, but the marasmus is prone to persist and death may result from it at a period when all the more characteristic symptoms of syphilis have passed away. In other cases of undoubted syphilis a fatal marasmus may delay its appearance until months after that of the specific symptoms proper. It is in hand-fed infants, however, that marasmus has its most frequent and pronounced occurrence. Breast-fed infants, if specifically treated, usually escape it. It is only in such marasmic infants, I am inclined to agree with Henoch, that the peculiar *café-au-lait* tint of skin appears which Trousseau described as characteristic of cases of inherited syphilis in general. With Henoch and some other writers, too, I am at one in regarding marasmus as the most important factor in prognosis in the complaint. Other points that have been laid stress upon by some authorities, such as the early appearance, amount, and character of the eruption, the extent of the involvement of the viscera in the complaint, are, in my opinion, but seldom of the same prognostic significance as wasting. Henoch practically sums up the question of prognosis with the assertion that wasting infants die but well-nourished ones recover. Many wasting syphilitic infants, if they do not actually die from an obstinate and progressive asthenia, are very apt to do so from some intercurrent disease, such as collapse of the lung or diarrhœa, which they might have escaped or recovered from had they possessed greater vitality.

Thus far, except when it was present at birth, I have only treated of marasmus in connexion with syphilis in cases where the diagnosis of the latter was confirmed by the more unequivocal symptoms of the complaint. Cases where these last can be adduced in confirmation, however, in my opinion are far from being the only ones where an association between infantile syphilis and wasting can be traced. I have seen numerous infants in whom the only objective sign has been an obstinate wasting, and where the family history alone has been inferential of syphilis. Such cases occur in infants of any age, from that of three or four months upwards. The question arises as to how far it is justifiable to regard such cases of wasting as syphilitic where there are no direct evidences of that complaint beyond, possibly, the family history. The majority of authorities would, I believe, protest against such an assumption as unjustifiable from the absence of the more characteristic symptoms and as unduly and unnecessarily extending the domains of syphilis to unknown limits. Accordingly, whilst in most descriptions of inherited syphilis wasting is mentioned in connexion with other symptoms, it is in but few that it is treated as possibly the only manifestation of the complaint. For my part I can see nothing unreasonable in the diagnosis of syphilis in many wasting infants in whom there is an entire absence of specific symptoms, and in this contention I am happy in being supported by the majority of my colleagues. Snuffles and rash and other symptoms may be very evanescent, occasionally missed, and even when marked may disappear with doses of mercury totally inadequate for the cure of the complaint. Again, the first appearance of specific symptoms may not occur for many months later than the majority of text-books allow. Nowadays, moreover, we are even told that the manifestations of inherited syphilis may be retarded until puberty or many years later still. In numerous ways, then, it may well happen that one may be frequently called upon to treat a case of syphilis in an infant in whom the only noticeable symptom is obstinate wasting, and in

[1] Lecture I. was published in THE LANCET of April 11th, 1896.

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whom there is a totally negative history as to more unequivocal manifestations both in the present and the past. Dr. Donkin is, as far as I know, the only writer who has deemed such cases worthy of separate description, and he has done it so graphically that I need not go over the ground again. These cases of syphilitic atrophy are peculiar, he considers, in that they are not attended by any noticeable amount of diarrhœa or vomiting, and I agree with him in this and in his estimation of them as a large and important class that has not received sufficient attention at the hands of the profession.

The result of specific treatment cannot be applied as any fair test as to the syphilitic nature of such cases. Syphilitic infants with atrophy generally die, whether such atrophy date from birth or many months later, and whether treated with mercury or not. In some few cases I think I have succeeded in checking the wasting by means of that drug. In one or two younger infants, moreover, the use of mercury seemed to bring out other and more certain signs of syphilis beyond the wasting. The improvement in nutrition produced by the drug appeared to allow the production of these other syphilitic symptoms in infants previously too reduced in vitality for their manifestation, but their appearance with the administration of mercury may have been mere coincidence. The failure of mercury in infantile syphilis where atrophy is a prominent feature is readily accounted for by the post-mortem revelations in such cases. These show that the atrophy is by no means limited to the external parts under observation, but that it involves the internal organs at the same time. In many such cases the small intestine is found to be almost practically deprived of its mucous and muscular coats, being little more, in fact, than a semi-transparent tube of peritoneum. To a less degree the stomach and large intestine suffer from the same destructive change. With this atrophy of the secretive and absorptive surface of the intestinal tract it is evident that no satisfactory digestive processes could possibly take place. The liver, too, in many instances is found markedly fatty, and this probably assists in maintaining the failure of nutrition. The condition of intestine I have just alluded to is found in other cases of atrophy besides those arising from syphilis, but it is in these latter, I believe, that it finds its most frequent and pronounced appearance. Dr. Donkin alludes to it in his work on Children's Diseases, but I know of no satisfactory account of it in the leading pathological treatises. Here I may say that this is the only abnormal condition of intestine that I am personally acquainted with in inherited syphilis. At numerous necropsies I have seen nothing resembling the gummatous indurations of the mucous and muscular coats or of the condylomata and ulcerations occurring in Peyer's patches, described by Oser, Jürgens, and others. The atrophic condition I have mentioned is amply sufficient to account for the mortality in such cases. Mercury may be capable of combating the syphilitic diathesis accountable for the condition, but it cannot replace the wasted glandular intestinal structures on which nutrition depends.

In an apparently healthy infant, presenting as yet no signs of the parental disorder, I think it will be admitted that a mercurial course as a preventive or precautionary measure is inadvisable, if not unjustifiable. This being so, then the limit of time of possible onset of symptoms is no unimportant question, not only on account of relieving parental anxiety, but of releasing the infant from the stricter forms of medical supervision. A great diversity of opinion as to the limits of time in which initial symptoms are possible occurs amongst authorities. On two points, however, all observers are agreed, these being that in the majority of cases symptoms appear in the second month of life, and that their primary manifestation is exceptional after the third month has expired. All experience agrees on these points and statistics amply confirm them. Kassowitz, indeed, would seem to doubt whether the primary manifestation of symptoms is ever deferred beyond the third month. Dr. Radcliffe Crocker asserts that the initial symptoms are never delayed beyond the sixth month. Henoch writes: "After the second, or still more after the third month, it is rare for them to appear for the first time; and when they occur still later it is always doubtful whether it is not a case of recurrence or of direct transmission." With these last-named writers I cannot agree. I have not infrequently seen infants where snuffles and rash had primarily manifested themselves much later in the first year of life than the sixth month, and one or two where symptoms had been delayed until the second year. Of course, I may be told that such cases were those of a relapse, and that the first appearances of the complaint had been missed. Such an assertion is equally easy to make as hard to disprove. I would only say that in my experience relapses of the skin affection are somewhat rare in the later months of infancy, the common expressions of a relapse at such times being the presence of mucous tubercles or condylomata. If we may believe, moreover, in the reality of a "syphilis tarda," so commonly accepted now, then I can see no inherent improbability in the first manifestations of the complaint occurring at a much later infantile age than is usually taught. Dr. Donkin has already written to the same effect, and I gather that others are now inclined to extend the limit of time during which initial symptoms are possible to at least twelve months from birth.

The first obvious manifestation of inherited syphilis is usually the well-known snuffles. This generally precedes any affection of the skin, and in only a small minority of cases is the skin eruption simultaneous with, or anterior to, the snuffles. It is only in very exceptional instances, too, that the swelling of the nasal membrane causes distress and difficulty in sucking before the snuffling develops. Snuffles, which usually precedes all other symptoms, may also long outlast them. A few doses of mercury may cause the disappearance of all skin eruptions, but snuffles may persist for many months as the sole evidence of the complaint.

The prominence of snuffles in hereditary syphilis has often led, I fancy, to an erroneous diagnosis of that complaint from the presence of this one symptom alone. When it is marked and persistent in character I would admit a justification for the suspicion of syphilis in a large majority of cases in which it occurs. But the extreme sensitiveness of the nasal mucous membrane in infants leads to a minor degree of snuffling from many causes in cases where syphilis is out of the question. This sensitiveness of the nasal membrane persists for about the first year of life, and any undue exposure to cold may bring on a greater or slighter degree of snuffles in many infants. Its temporary character and the absence of other signs ought to be sufficient to dispel the suspicion of syphilis in the majority of such cases. There is, however, one complaint peculiar to infants where the presence of marked snuffling may mislead even the more wary. This is what Henoch has aptly named the "acute coryza of infants." In this an infant, generally after exposure to cold wind, is suddenly seized with high temperature and acute nasal obstruction, followed shortly, in most cases, by laryngitis or bronchitis. If seen for the first time towards the end of an attack, when all acute symptoms have subsided, the combination of hoarseness or voicelessness along with intense snuffling is very apt to lead to a confident, although erroneous, diagnosis of syphilis. The acute nature of the attack ought to prevent mistakes in anyone acquainted with Henoch's description of the complaint. In one case of this kind I knew dire offence given by an incautious catechising of the father which a short delay would have served to prevent.

The syphilitic affection of the nasal structures in infancy responsible for the snuffles generally leads to some broadening and depression of the root of the nose, more apparent, perhaps, than real. In most cases this is entirely recovered from, and the child grows up with a nose as well shapen as in those who are non-syphilitic. In a minority, however, a nasal deformity incurred in infancy persists throughout life. I have never in such cases noticed any undue fœtor in the nasal secretion suggestive of active bone destruction, nor have I ever learnt of the discharge of palpable portions of bone and cartilage which Diday and others write about. The explanation of the permanent nasal deformity incurred in infancy lies rather, I think, in changes occurring in the cartilage which interfere with its nutrition, and this defective nutrition is followed by arrested development. But beyond infancy there is no doubt that active destruction of the nasal bones can occur from inherited syphilis, and the usual time for this is generally from the age of four years to that of puberty. Not very infrequently, I believe, cases treated for strumous ozœna, with bone destruction, have their origin in inherited syphilis rather than struma, and I have known mercury and iodide successful in such cases where other measures have failed. In one interesting case I saw through the kindness of Dr. Julius Jacobson active nasal bone trouble occurred as late as the age of thirty-four years in a woman who was undoubtedly the subject of inherited syphilis.

The affection of the nasal membrane has little, if any,

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tendency to spread to neighbouring parts, and in the early stages of infancy the pharynx generally appears perfectly normal. Diday dissents from this, as he states that repeated examinations only resulted in his finding insuperable difficulties in the way of pronouncing with any certainty as to the freedom of the pharynx in very young infants. At any rate, his repeated examinations did not enable him to find any frequent affection of the pharynx in such cases. What has been said as to the pharynx applies equally to the mouth in very young infants. Any shallow ulcerations of the mouth found in them are generally due to aphthous conditions, which are common enough in babies with no suspicion of syphilis. Henoch agrees with this, and gives useful warning against mistaking ulcers along the middle line of the palate in young infants for specific manifestations. Although in early infancy the mouth and throat are free, yet in infants some months old, whether with a relapse or not, the tonsils, fauces, palate, and buccal membranes may be the sites of a few scattered ulcers unmistakably specific in character. These affections of the mouth only occur in a minority of cases, and the infants in whom they appear are seldom less than four months old, and generally some months older than this. Fissuring of the lips, too, is a later symptom than some of the text-books allege. The infrequency of sores about the mouth and their late appearance in the disorder have, I believe, important bearings on the spread of the disease from infants to others.

Along with the sores in the mouth I have usually found mucous tubercles at the angles of the lips and often on other parts of the body where there is a combination of moisture and warmth. These mucous tubercles have been often described as one of the earliest symptoms of inherited syphilis, but this I am certain is a decided fallacy. Their real place is amongst the later signs that may occur in infancy. They are the commonest symptoms of all in relapses, and may recur from time to time, as the sole evidence of the disease, until the child is five or six years old. Henoch has pointed out the much greater luxuriance of the growth of mucous tubercles and condylomata in the acquired syphilis of children than in the inherited form, and in this my experience fully tallies. I have seen cauliflower masses of condylomata in acquired syphilis in children such as I have never seen approached in inherited cases. These mucous tubercles afford the surest evidence of syphilis where other signs are doubtful. I quite agree with Mr. Hutchinson that one well-formed mucous tubercle or condyloma is pathognomonic and an incontrovertible proof of the complaint.

The skin eruptions have been so frequently and fully dealt with by others more competent than myself that I feel any lengthy description of most of them uncalled for. My former colleague, Dr. Radcliffe Crocker, whose experience was largely gained from the same sources as my own, has indeed rendered any attempt in this direction superfluous on my part. All I would propose to do then is to take the arrangement and classification laid down in Dr. Crocker's treatise on Diseases of the Skin, and to briefly deal with the different eruptions with such comments as personal observation may seem to warrant. The most frequent sites of the eruption are admittedly the buttocks and adjacent parts, the chin and upper lip, the eyebrows, and the skin behind the ears. In exceptional and generally fatal instances the eruption may be universal over the body. Of the parts mentioned the buttocks and their neighbourhood are those most frequently affected, and very commonly, indeed, the only ones. I cannot recall a case where there was any very decided eruption where the buttocks remained free. These parts are usually also the first to show the eruption, and are the ones most deeply affected even when it is fully developed on numerous other places. Next in frequency to the buttocks as sites for the eruption come the upper lip and chin. It has been assumed that the reason for these situations being the commonest ones for the syphilitic eruption is that they are the ones most subject to irritation from contact with wet napkins and saliva or mucus. To this view I have never altogether assented. Some of the other parts commonly affected by the syphilitic eruption are subject to no irritation that would explain their prominence in this respect over others of the body. In the acquired syphilis of infants, moreover, the eruption shows no preference for the parts most affected in the inherited form, although the sources of irritation are the same in each. Other eruptions, too, confessedly owing their origin to some source of irritation, show no special preference for the sites most commonly affected in inherited syphilis. I cannot help thinking, then, that there is some selective influence at work beyond mere irritation that determines the eruption to its favourite sites, the reason of the selection lying deeper than our present knowledge can explain.

Syphilitic roseola, far and away the most common form of eruption in adult acquired syphilis, is extremely rare in the inherited disease. I have never seen an example of it in the latter. Cases are, however, related by Bassereau, Cullerier, Dr. Crocker, and others. The record of single cases by these last-named is sufficient testimony to the rarity they place upon it. Although I have never seen this form of eruption in inherited syphilis I have several times seen it in the acquired variety in both infants and elder children. When seen in these last it differs in no respect either in situation or appearance from that occurring in adults.

Although syphilitic roseola is extremely rare, another of the erythematous eruptions is the commonest of all in the inherited disease. The following account by Dr. Crocker so graphically describes it that I prefer to give it in his own words: "It consists of erythematous patches of various sizes which usually commence on the buttocks and round the anus. They may be well or ill-defined at the edge, bright coppery or yellowish red, tending to coalesce into large sheets of eruption, but generally patchy on the borders. This erythema may extend uniformly on the back and inner side of the legs quite down to the feet, including the soles, which are bright red and peeling. On the front and outer side it is still generally patchy, upwards it often extends to the loins and abdomen, and in a few cases all over the body in patches which coalesce; the whole surface is then red and desquamating on the dry parts, while on the buttocks or where it is exposed to moisture the scales are soaked off and the surface is left raw or brightly glistening. These generalised cases are very likely to die." As to the fatal nature of these cases with extensive erythema, my experience fully tallies with that of Dr. Crocker, and Henoch writes to the same effect. A papulo-squamous eruption corresponding to that of acquired syphilis is the next most common one in the inherited complaint. The following description, like the preceding one, is taken from the same source, the work of Dr. Crocker. "It consists of round superficial patches, from one-eighth to half an inch in diameter, very slightly raised above the surface, delicately scaly, with a pink or reddish-brown colour at first, but after a few days of a pale fawn tint. It may be limited to one or more regions, such as the limbs, forehead, or round the mouth, or occupy the whole body surface, usually in discrete patches, and commencing upon the buttocks, where the superficial ulceration is apt to occur from the irritation of the urine and fæces. A variety of this is a crescentic squamous eruption with a raised border, which in one of my cases began on the buttocks a week after birth and then spread over the thighs and then all over the body, forming map-like outlines on the skin, most marked on the lower part of the body and legs."

Besides this last Dr. Crocker describes three small papular forms of eruption—the acuminate, convex, and flat. The first two may be crowned with a scaly cap, a small bead of pus, and less seldom with a clear vesicle. All these forms occupy the usual sites of the other eruptions, run the usual course, and are not significant of any particular import in prognosis or severity of the disease.

Vesicular eruptions are rare in inherited syphilis and are usually preceded by other forms of eruption. The skins of syphilitic infants, too, are more prone than those of others to respond to external irritation. In this way eczema and other inflammatory eruptions may break out in syphilitic infants independently of the constitutional complaint.

Pustular eruptions are much more common than the vesicular, but, like the last, are seldom the primary ones in the complaint. Any of the previously mentioned forms under continued irritation are liable to take on a pustular character. Besides these, however, others may be pustular from the onset. Thus ecthymatous sores are far from uncommon, covered with a greenish crust, concealing sharp-edged spreading ulcers or simple excoriations. They show no preference for any part of the body and are seldom numerous, but they generally denote a profound cachexia and are of bad prognosis.

One of the pustular forms is deserving of further notice. This was first described, I believe, by Dr. Barlow, and is known as the "syphilitic furuncle," although a more appropriate name could possibly be found for it. It is of importance as being often the sole manifestation of the later stages of

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inherited syphilis, and its significance in this respect is, to my personal knowledge, only too often overlooked. In its typical form it consists of an elevation of the epidermis of the size of half a hazel nut, the raised epidermis being generally of a deep purple colour. There is very slight hardening of the surrounding and underlying skin, and under the purple epidermis is a scanty secretion of ill-formed pus. If left to itself it may persist for long without the skin giving way, but under mercurial treatment it rapidly disappears without scarring. Without treatment it is apt to leave a small nodular thickening in the subcutaneous tissue, with a corresponding slight depression in the overlying epidermis. The same small nodular thickening in the subcutaneous tissue may occasionally be found preliminary to the formation of the cutaneous pustule. These "syphilitic furuncles" are most common, perhaps, in children two or three years old and are rare before the eighth or ninth month. They may appear anywhere on the body, but are most frequent, in my experience, on the upper and outer aspects of the thighs. As an indication of syphilis, when other signs are wanting, I consider them of prime importance. On two occasions my diagnosis of syphilis from their appearance alone was confirmed by the discovery of unsuspected mucous tubercles. At one time I looked upon them as pathognomonic of syphilis, but in one case I came across "furuncles," undistinguishable from those described, where syphilis could with certainty be excluded. They indicate syphilis, however, in the majority of instances, and the non-recognition of their significance by many observers is matter for regret.

Bullous eruptions are more common in inherited than in acquired syphilis. Pemphigus is one of the best recognised forms of eruption in the former. It is usually either present at birth or commences a few days later, seldom later than the first week. Dr. Crocker, however, mentions a case where it first appeared in an infant a fortnight old. It is usually confined to the hands and feet, and here more especially attacks the palms and soles. The nail beds, too, are generally affected with destruction of the nails. The situation of the eruption, mainly the palms and soles, is sufficient to distinguish it from another infantile form of pemphigus, arising from bad hygienic surroundings which shows no preference for these sites. The bullæ, too, in the syphilitic variety are flaccid and contain pus or blood; in the other variety they contain clear serum. The almost fatal prognosis attaching to pemphigus in inherited syphilis is disputed by none, and I have never known a case recover. Pemphigus in the later stages of infancy is not uncommon, but when occurring then has no connexion with syphilis in particular.

Although gummata are not, of course, confined to the skin, yet they may appropriately be dealt with now, as completing what I have to say on the cutaneous eruptions. All observers are agreed as to the rarity of gummata in the skin in inherited syphilis. My personal experience is limited to perhaps half-a-dozen cases. In only two of these did they break down forming the well-known characteristic ulcers, and even in these two there was a doubt in the history as to whether the syphilis was inherited or acquired. In the others they persisted for a long time, in spite of treatment by iodide, and this increased resistance to that drug would seem, in my limited experience of them, one of the peculiar features of gummata in the inherited form of the disease. The youngest of my patients was about two and a half years old, and the rest several years older than this. What has been said as to the rarity of gummata in the skin applies equally to gummata elsewhere in the inherited complaint. The cases I have seen of older children with destructive lesions of the palate and adjacent parts are not more numerous than the ones where gummata occurred in the skin. In more than one of these, again, the history was doubtful, and I was uncertain whether the disease was inherited or acquired. Gummatous infiltrations of the skin are of interest as being, in the opinion of Dr. Crocker and others, the only skin eruption found in the latest stages of inherited syphilis. Of this nature are probably the lupus-like conditions described by Mr. Hutchinson as occurring along with interstitial keratitis and allied disorders. These later skin eruptions are certainly rare, but I have seen one or two examples of this syphilitic "lupus" in children near the age of puberty.

One peculiarity about all the skin eruptions in early infancy is the rapidity with which they disappear under treatment and the little tendency they have to recur provided this last have been at all adequate. Mr. Hutchinson writes: "If an infantile eruption due to inherited syphilis have once disappeared under treatment, it but seldom, in my experience, shows any tendency to recur. The relapses so frequently seen in adults who have acquired the disease find no place in infants." With this opinion of Mr. Hutchinson I agree, provided, as I have said, that the treatment be efficient. During the first year I should not consider it very uncommon for the skin eruptions to disappear and relapse where the treatment had been little or none. After the first year, however, eruptions of any kind, except mucous tubercles or condylomata, are exceedingly exceptional under any circumstances whatever.

One of the most marked characteristics of inherited syphilis, as compared with the acquired form, is the early and frequent involvement of the viscera in the former, leading to their enlargement. The recognition of the affections of the abdominal viscera in inherited syphilis is not of modern origin, many of the older writers being as fully cognisant of them as those of the present time. The viscera most affected are admittedly the liver and spleen. It is, indeed, in only a minority of cases in my experience that the latter is of normal size. In 100 cases of inherited syphilis under my care I found the spleen enlarged in 62, and in 19 others its size was probably above the normal. Dr. Gee, however, only found the spleen enlarged in 45 per cent. of his cases. The splenic enlargement generally dates from birth and may certainly exist before any other symptom has manifested itself. In 92 examinations of macerated syphilitic fœtuses Mewis, cited by Mr. Hutchinson, found the spleen enlarged in 72—i.e., about 78 per cent. The fact of its occurrence *in utero* accounts for the early enlargement of the spleen to be found in living infants. In some few cases I have found the spleen enlarged in later months where I was unable to do so in the earlier ones, so that I am not inclined to regard the affection as necessarily a congenital one. The enlargement of the spleen in inherited syphilis is, I should say, very rarely carried to any great extent. In uncomplicated syphilis I have never known the hypertrophy of the spleen so great, at least in the first year of life, as to suggest any connexion between it and an associated condition of blood change, although such a connexion has been described by others. But anæmia is so common in inherited syphilis—and, indeed, in infants generally of the age in question—that it can seldom be necessary to assume any causation for it in the splenic affection. The profound anæmia and changes in the blood and bones which are sometimes found along with splenic enlargement in syphilitic infants in their second year are, in my opinion, more fairly ascribable to rickets, which almost invariably complicates the former complaint at that period. It is only in exceptional instances, moreover, that the hypertrophy from syphilis persists beyond the first year.

As far as present knowledge attains there is nothing specific in the changes in the splenic tissues that lead to its hypertrophy. The resulting pathological condition is a simple hyperplasia of all the splenic elements, and there is nothing, microscopical or otherwise, serving to distinguish this hyperplasia from that occurring in rickets and other infantile disorders. There may be, perhaps, some greater tendency in the syphilitic affection for thickening of the capsule to accompany the other splenic changes. Any conditions allied to gummata I have never seen in the spleen in syphilis. It is true that in one or two post-mortem examinations in children I have seen scarring of the splenic surface, but this fact in no way necessarily implies the former existence of anything like gummata in the organ.

After the spleen the liver is the viscus most frequently affected. The difficulties attaching to the recognition of the slighter degrees of enlargement of the liver may possibly lead to an under-estimation of the frequency of its affection. Writers of the time of Diday would seem to have regarded it as of almost universal occurrence, the last-named, indeed, somewhat fancifully suggesting that induration of the liver in the inherited form corresponded to the primary chancre of acquired syphilis. Mewis, in the statistics before referred to, in 92 syphilitic fœtuses found the liver diseased in 52 instances. The frequency with which it is found in the dead fœtus would suggest its early occurrence in the living subject, and most cases of syphilitic affection of the liver, I believe, date from birth. The changes in the organ are those of an interstitial hepatitis. Along with the increase of the interlobular tissue there is a certain amount of atrophy of the cells with destruction of the blood-vessels and thickening of the capsule. The interstitial hepatitis, as a rule, affects the whole organ, but in some cases

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certain lobes, or parts of them, entirely escape or are less affected than the rest. Even with extensive disease of the organ gummata of the liver are exceedingly rare, if not unknown, in infancy. In older children I have seen them post mortem, and in two cases have known them diagnosed during life with some degree of certainty. Considering what an important part the functions of the liver play in infancy it is reasonable to suppose that such a marked change in its structure as this interstitial hepatitis entails cannot be without serious detriment to the patient. The older writers, then, were possibly right in the importance they placed on the digestive disturbances arising from syphilitic liver disease in infants, and it may be that we do not sufficiently regard them. Marked enlargement of the liver and spleen is certainly an unfavourable factor in prognosis. But symptoms directly chargeable to the affection of the liver are extremely rare. A case recorded by Depasse is, as far as I know, the only one where ascites was clearly connected with syphilitic disease of the liver in an infant. Jaundice is much more frequent, but still a rarity considering how frequently the liver is diseased. Such jaundice, I believe, almost invariably dates from birth and is generally slight in amount, but if the bile vessels be involved in the liver changes may attain a high degree of intensity. Whether slight or intense, jaundice in infants arising from inherited syphilis is generally fatal. I have known several instances of it, all fatal, and Henoch records others where along with the jaundice he found hæmorrhage into the stomach from obstruction of the portal vein. Henoch, too, mentions the case of a syphilitic woman who bore three infants who all died soon after birth from congenital jaundice. As the effect of treatment, or independently of it, the enlargement of the liver disappears or largely diminishes during the first year of life. In some instances, however, the enlargement lasts for years. I have known two children eight or nine years old, with a clear history of inherited syphilis, in the East London Hospital for Children, in whom there was ascites with the enlargement of the liver, and where what were taken to be gummata in the latter could be felt through the abdominal wall. One case required repeated tapping, but both finally recovered under treatment with mercury and iodide.

Since Dubois first described a syphilitic affection of the thymus gland in 1850 many, if not most, writers have concurred with him in recognising a similar disease of that viscus in inherited syphilis. It is claimed by some that the thymus gland is the earliest of the viscera to be attacked and that it may even be the only one to show the syphilitic taint. Dubois described two varieties, or rather grades, of this syphilitic affection of the thymus. In the first the organ is but little, if at all, enlarged. On section it is found studded with cavities varying in size from that of a pin's head to that of a pea, from which a yellow, pus-like fluid exudes. In other cases no visible cavities are found, but the same fluid can be made to exude in drops by squeezing the gland. In the second class of cases the organ is considerably enlarged, and cavities as large as a walnut may be found containing the same yellow fluid as in the first class. This fluid, Diday states, had been carefully analysed, and was found to bear all the physical properties and microscopical tests of pus. Without at all wishing to deny a syphilitic affection of the thymus, I would beg to state that a further proof of its reality is needed than that furnished by Dubois and his successors. I have seen the condition of thymus described by Dubois in syphilitic infants, but more often in infants in whom there was no reason to suspect such complaint. In one infant who died from croupous pneumonia, and who had been perfectly healthy until the commencement of the fatal illness, I saw the thymus immensely enlarged and containing a cavity filled with about half an ounce of the yellow fluid. I have never analysed this fluid, but to me the naked-eye appearances of it are not identical with those of ordinary pus. Since preparations of the thymus, too, have found a therapeutic use I hear that the manufacturers have to reject a fairly large percentage of the glands supplied to them owing to the presence of these fluid-containing cavities. It is in cases of inherited syphilis, possibly, that necropsies on very young infants are most often performed and where special attention is paid to the state of the thymus. Were necropsies as regularly made on very young infants dying from other causes than syphilis, and equal attention paid in them to the state of the thymus, I have a suspicion that the cavities in question would be found as often in these cases as in the syphilitic ones. On these grounds, then, I feel justified in my belief that up to the present the involvement of the thymus in inherited syphilis is at least not proven.

What has been stated as to the thymus applies also to the pancreas. Many writers describe a syphilitic affection of this latter in the inherited forms of the complaint. As far as I can gather the chief reason for the belief in such an affection has been an unnatural hardness in the pancreas. Now I have seldom attended a necropsy on an infant a few months old without being struck with the much firmer consistence of the pancreas than that obtaining in the case of older children. It is, I believe, a physiological and not a pathological condition and due to the active developmental and functional changes taking place in the viscus in early infancy. Before assuming, then, the reality of a syphilitic affection of the pancreas I consider that further evidence is necessary beyond a mere increase in the consistency of the organ.

An Address

ON

THE NEXT GREAT ADVANCE IN ANÆSTHESIA; INCLUDING A NEW EXPOSITION OF COMMON SENSIBILITY.

Delivered before the Society of Anæsthetists on March 19th, 1896,

BY SIR BENJAMIN WARD RICHARDSON, M.D., F.R.C.P. LOND., F.R.S.

MR. PRESIDENT AND GENTLEMEN,—I remember no event in the course of this century that ever filled the public mind with greater wonder than did the discovery of anæsthesia fifty years ago. It was not altogether an unexpected discovery, for many men in the background of history, as we may say, had for ages been working at it; but the general mind had become primed with the idea that pain was a necessary part of creation; that it entered the scheme of nature as a necessity; and that to try to abolish it would be sure to be a failure. The first part of this objection was urged after the discovery of abolition of pain had become a successful fact, and the wonder, altogether, has not passed absolutely away even in the present hour. At this time, however, we are confronted with a new difficulty; we are hearing week by week about the deaths that are taking place through anæsthesia. At first the deaths were very few, and had it been otherwise, that is to say, had there been many deaths previous to that of Hannah Greener, which occurred at Winlaton, near Newcastle, on Jan. 28th, 1848, anæsthesia would probably have died out as a practical part of surgical science. As it happened, a rare death from it did not materially affect the process of anæsthesia, and it is not until now, when the process of administration has become all but universal, that we find the public, as well as the professional, mind becoming astonished and perplexed at reading of the frequency of the occurrence. I do not know that there are more deaths now amongst those who take chloroform than there were in the early days of which I have spoken, for I remember very well, at the time when Hannah Greener died, a practitioner named Mr. Robinson, who lived at Haverhill in Essex, telling me privately of a similar disaster that occurred to him in his own practice and that was never made public, the tendency in those days being less strong in the matter of publicity. As time passed away the tendency to publish such details as those noted above became more and more marked, so that in the time of Dr. Snow we had such a number of deaths collected that he was able to announce no fewer than fifty, a number which included all that he was himself acquainted with from administration, but which did not account for two deaths, which he himself saw, from amylene. Snow collected his facts about the year 1857, and I published them from his manuscript in the following year 1858, anæsthesia having been in use in England for a

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period of about twelve years. It looks, therefore, as if we only recorded five chloroform deaths a year for ten years or a tenth part of those recorded in the year 1895.

A few years after the death of Snow I made a tour through England and collected facts of the deaths which had occurred in various parts. I visited hospitals in which not less than 17,000 administrations had occurred without a death, but as I went on the deaths continued to increase on my register, not depending, as far as I then understood, on the hospital, the operator, the patient, or the mode of administration, but on accumulation of numbers of cases, so that I was brought to the conclusion in the years 1865–66 that deaths ought to be reckoned as one in every 2500, a figure which has been very particularly relied upon since I calculated it out, and which, I take it, is very close to the truth up to that date. It is not extremely difficult to account for this figure, quite apart from its having been based originally upon recorded facts, for it seems that there is always in a community a certain number of persons who, from one cause or another, are ready to die under unfavourable circumstances. I have named this class of mankind the "morituri" because of this readiness to die, and I estimate that there never exists a collection of 3000 middle-aged people but that there is sure to be one who is possessed of some fatal tendency which might lead to the occurrence of death, so that the administration of anæsthetics does not necessarily modify or intensify the chances of death amongst them. This is satisfactory as far as it goes, but at the same time, as all are not "morituri," it does not do away with the necessity of inquiry as to why death appears in the proportion named from anæsthesia. Neither does it limit our investigations into a mode of killing pain that could not possibly at the same time kill the person who would have to be anæsthetised. Dr. E. Andrews, the Professor of Principles and Practice of Surgery in Chicago Medical College, summed up his observations in 1870 almost in similar figures as mine. He calculated the deaths from chloroform as one in 2723, but he added other figures. He said that the deaths from sulphuric ether were one in 23,204 administrations; from mixture of chloroform and ether one in 5588; from bichloride of methylene one in 7000; while to nitrous oxide he gave the credit of not one death in 75,000 administrations.

Without staying to enter into any analysis of these figures we are obliged, as practical men, to ask the reason why there should be any deaths at all from anæsthesia, in which question we shall include why there are so many deaths from one anæsthetic and so few from others. If it be true that there are no deaths in 75,000 administrations of nitrous oxide there can be no reason, whatever may be our theoretical generalisations, why there should be so many from other anæsthetics except there be some error either in the anæsthetic employed or in the mode of giving it. Some will argue that season, temperature, and all the meteorological conditions are favourable to death in the case of one anæsthetic and not in another; but this is hardly fair, because we calculate, or rather include, the same facts in one anæsthetic as we do in another, and we, therefore, ought to have the same results from one as from another. If I administer nitrous oxide as many times to 2500 different people and have no death, and administer chloroform to the same number of people and have one death, it is clear that, *ceteris paribus*, there is something in the nature of the anæsthetic that determines the result; or if I administer ether to 23,000 persons with one death, and administer chloroform the same number of times with more than nine deaths, which is about the estimate, it must turn out there is something in the composition of the two substances—ether and chloroform—which determines the result. It may be urged by other argumentatists that whilst there is a distinction between the composition of the two substances which yields such varying conclusions, a great deal has to be said in favour of the worst of them because of other virtues they possess. Thus the most fatal of the anæsthetics may have the virtue of being rapid in its action, convenient in its administration, and, while the patient is unconscious, certain in its effect. I have heard this urged ever since I can remember, and I recall, as if they were only at this moment spoken, the words of Snow himself to the effect that chloroform was to ether like the lucifer match to flint and steel; he preferred its readier application and accepted its risks. But this, I think, is not a good argument, for the reason that it only requires more industrious examination and consideration to obtain an agent which shall be just as safe as ether, or even as nitrous oxide, and yet shall possess all the qualities and characteristics in administration that chloroform possesses; that shall be as rapid as chloroform, as convenient, as certain, and, at the same time, as safe as any other.

This particular thought has been on my mind for half a century, and though I have not been able to solve the difficulties as I could have wished, they are what I would still like to press forward, and which I would rejoice to leave to the investigation and exposition of the future man who shall solve the problem. I perhaps cannot do better in this place and at this moment than point out what these difficulties are, and the mode in which I have laboured to overcome them, because in so doing I may lead someone else in the direction in which I have not had time to continue myself.

In promoting anæsthesia the thing we do is to make the person about to be anæsthetised imbibe and take into his blood and nervous system an atmosphere which shall so entirely change his whole nature that he shall go to sleep, and shall lose all that sensitiveness of his nervous system which, under ordinary circumstances, causes what is known as sensation, and in extreme circumstances produces what is called pain. A double or duplicate action is thus implied—one of sleep and one of insensibility. According to our present knowledge sleep and insensibility happen to be united, but there is no definite reason why there should be such unity. It is not absolutely necessary that there should be sleep, and impossible as it seems to be that a human body should have no consciousness of the surgeon's knife and yet be awake, there is no absolute reason why consciousness and insensibility should not be separated. We see, in fact, this phenomenon. I have known a person suffering from what is termed anæsthetic hysteria, who had no sensitiveness in any part of the skin, and who was yet able to carry on a conversation and to take food the same as if there was perfect sensitiveness. Moreover, I have had under my observation a patient suffering from partial paralysis, motory and sensory, who would not have suffered at all if the affected part of his body had been cut away, but who yet would have been conscious of all that was going on round about him. I have also met with some drugs which produce a partial insensibility and yet do not materially affect consciousness, and *vice versâ*. It is, therefore, not too much to expect that we may find agents which do really destroy sensibility without materially interfering with consciousness, and this is the direction in which we have to explore, a direction I have myself constantly been on the look-out for, but have never perfectly succeeded in completing. What the atmosphere is we want to introduce into the body which shall destroy sensibility, and, at the same time sustain consciousness, is the thing we have to look for, and we have also to consider what condition of the nervous system is induced which interferes with one function and does not interfere with the other, or *vice versâ*.

The first and most telling effect is that we can put the body in such a condition as absolutely to destroy all feeling and yet apparently not touch so as to injure those centres by which we think and act. This is precisely what we do under the influence of cold; we put a part of the body into such a condition that there shall apparently be nothing going on in it whatever in the way of chemical change; we freeze such a part and we say that it fails to receive those vibrations which we call sensory or sensational. We see a surgeon put a knife into such a part, and though we be the patient ourselves we do nothing but look on, nor do we from any local manifestation become aware of the most refined dissection or manipulation which the surgeon is effecting. When this is the fact it is certain that we are rendering benumbed or practically dead those parts of the nervous system which ordinarily are the seats of impressions which signify the person's sensibility, while there has been no injury to the other parts of the nervous system which convey to us intelligence of the vibrations leading to the manifestations of consciousness. This is a most singular circumstance, showing as clearly as can possibly be shown the duality of the animal system; the truth that duality can be distinctly separated, and that what we actually want to do is to find out how, through the whole system, to make such a duality and to let life, however low, continue in progress. In hibernating animals Nature, who is cleverer than we are, is apparently carrying on the very

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ocess which I would define—that is to say, she is maintain- ; life without the necessary connexion of sensibility, for ave seen a hibernating animal which did not feel, and I pect that hibernation will be the final triumph of anæs- esia. I have also seen an animal become insensible during inhalation of oxygen condensed by cold, and if we could, any fortunate method, discover a plan of making perfectly d oxygen pass into the body the ends we have in view uld for the time be completely attained.

While we wait for so grand an attainment we are bound endeavour to produce a similar result by submitting the ganisation to a series of gaseous or vaporous substances ich, by their presence, shall have the power of performing task that might come from mere cold.

NATURE OF COMMON SENSIBILITY.

I feel it will be best in this paper to place before the iety the conclusions to which I have been led after a riod longer than, perhaps, has been known to any other n and attended with more experimental research. I know at in what is about to be stated I am breaking completely ay from the common dogmas of a physiological kind and advancing entirely on new ground, but this I cannot help cause I am merely following the facts that have been put fore me by Nature herself in the course of my work. I ld, then, that we live obedient to the outer world, and that e live from the outer world and from nothing else, and e always picking up its vibrations as we do its food d drink. It is usually conceived that in the body the rebro-spinal system is a kind of independent organisa- on and that all impressions are received by it and all mmands are given forth from it; and this, no doubt, ay be held in a certain way as the fact. But it is mmonly assumed that the brain is fed by the blood and at upon such feeding it exercises its own independent nctions. I do not myself accept this reading. I conceive at as we own nervous expansions like the retina, which izes impressions from without by a very simple mechanism, o we have distributed over the whole surface of the body n impressionable nervous root or expansion which receives ibrations from all the universe; that enter us in the same ay that the retina receives special impressions; that the ervous expanse distributed over us is made up of, and con- entrated into, nervous fibres, and that nerves thus formed arry to the brain the impressions we have received just the same way as the optic nerve carries the picture. hus every vibration made upon the outer surface of our odies—from the mere vibration incident to heat and ld, from the vibration incident to the merest touch, or e vibration incident to the surgeon's knife—are all athered up by the nerves from the nervous expanse and conveyed to the central organ of the nervous system. his universal expansion from which sensitive nerves spring , in my opinion, everywhere in the body where blood can enetrate, where blood can burn, and where, by burning, imal heat is generated, and can not only find its way in erve tracts, but can also yield the substance out of which e tracts themselves are formed. That the natural brain mass of nervous matter so carefully sealed up can receive l the impressions given to it, and, receiving such, make e body the companion and—it may be said—a part of l the universe, is a clear and simple proposition. is not strange that centres which can thus receive pressions can lie by and give them out in their m—acts that the nervous system performs, taking in hatever vibration is presented to the nervous expansion which it receives sensation, and giving back that with hich it is surcharged in the form of motion. The planation given tells with special effect in regard to esthesia because it conveys that whenever through the od current we diffuse over the whole nervous expanse, which vibrations arise, some substance possessing the wer of modifying natural vibration, we, by necessity, an effect. To my mind, therefore, when with the air the blood we spread, to every part of the body the air can ich, a foreign substance like chloroform or any of its allies, so modify vibration that the sense is lost to the full ent of the diffusion of the substance we have introduced. In the course of my life I have tested the effects of over nty-five different substances which are capable of passing diffusion with the blood over the universal nervous face, and I have divided these substances according to ir nature, or rather according to their constitution. rting with what I have considered an anæsthetic base, or basic element, I have followed the action of each substance and placed it under what seemed to be its true head; thus, taking carbon as a base, I have followed it through the amyl, the butyl, the benzine, the true carbon, the ethyl and ethene series, the methyl and methene series, and the turpene series. I have also, taking nitrogen and hydrogen as bases, followed the series apparently depending upon it, and by this increase have learned so truly the nature of results that, if the chemist can place before me any substance he may possess, telling me its composition, weight, solubility in water, vapour density, and boiling point, I can on pure grounds of calculation tell whether it is or is not an anæsthetic, and if it is an anæsthetic how much, according to the weight of the animal, it will take to produce narcotism; how long it would take in a given quantity, and what would be the termination of the phenomena before it escaped from the organism. I need not trouble the society with the details of these researches, but I may indicate that they have been repeatedly stated in the various papers I have read at different times; but what I would say is that no group of phenomena has ever occurred to me that has not to some degree resembled the effects arising from cold—that model anæsthetic which has already been referred to, and which seems to prevent the nervous expansion, either locally or generally, from absorbing and transmitting to the nervous fibres, which spring from it, vibrations of sensibility.

From these observations I am led to infer that anæsthesia whether local or general depends always upon the same condition, namely, the suppression of vibrations from the origins, or expansion, of the peripheral nervous fibres spread out in the membranous structures; nerves—according to my interpretation—commencing there, not terminating, and forming afterwards the nervous cords that pass and carry direct vibrations to the brain.

It seems to me also that there is a special arrangement for the commencement of the vibration, as in the act of vision, where the picture is directly imposed upon a special surface like the retina. Again, as in the case of hearing, the impression is made upon a vibratory membrane and is thus communicated to a nervous surface. Again, in regard to smell, the membrane is a nervous surface, the Schneiderian, and the impression is conveyed by special nerves rising from it; but the sensation we call feeling, which, indeed, is a sense as certainly as is seeing and smelling, is that common sensibility which springs from the vibration in the extreme termination of nerves in all parts; the vibratory movement which usually excites it being the oxidation which is taking place at every point between the oxygen of the blood and the structures it laves, a vibration easily communicable to all parts and easily transmissible from all parts to the centre through the nerves which originate in the periphery, to be reflected back again in the centre, when it is necessary, in the form of motion.

Under these observations we must consider every anæsthetic the same in action; if we freeze a part we stop peripheral vibration; if we abstract all the blood from a part we stop peripheral vibration; if we make extreme pressure we stop peripheral vibration; if we introduce some other agent locally we stop peripheral vibration; if we divide the filaments of nerves which conduct vibration we do the same thing; and, to crown the whole, if we introduce into the blood by the lungs some vaporous substance which the blood can absorb, and get that vaporous substance carried into the peripheral surface, we stop vibration everywhere and create universal anæsthesia. This propositon brings us direct to the agents which, being absorbed by the blood and carried by it over the whole system, interfere with the animal fire and suppress the vibratory origin of feeling—creating anæsthesia. It is this I have ever had in mind in considering what a true anæsthetic should be. Nitrous oxide is for a moment an anæsthetic simply, because it replaces oxygen and does not sustain universal vibration—is, in fact, an asphyxiated substance. Carbonic acid holds precisely a similar place. Ether stands practically in the same position, but with the difference that a little oxygen travels with it, so that vibratory phenomena are reduced rather than checked, and in the long list of anæsthetics which have passed through my hands I have seen not one the quality of which cannot be read off in a similar manner. Turning to chloroform, which we may still consider the king of anæsthetics, though it may be the most fatal, its action admits of ready explanation. It is quite certain to those of us who remember its origin that it came in first as an ether—the so-called "chloric ether." It did not come

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from any theory as to mode of action, but simply from observation of effects; as a vapour it has the power of being slightly absorbed by blood; the blood does not take up a great deal of it, the whole mass of blood being able to absorb not more than 20 grains of chloroform so as to make a uniform diffusion. If more than this be introduced into the blood the chloroform begins to separate; its molecules begin to attract one another and form minute points or blocks, which refuse to make the complete round of the circulation, and which I have actually found in the blood as direct modifiers of its course through the minutest vessels. But when it is simply homogeneously diffused through blood itself, its properties are those of suppressing heat and interfering with the vibration which springs from the chemical change in progress. The way in which chloroform acts in this particular is, I think, not difficult to explain, and is due to one of its elements which is too heavy for the quick vibration which constitutes feeling; that element is chlorine, which forms a large part of the fluid, which is as 32 to 12 compared with the carbon, and 32 to 1 compared with hydrogen in the same quantity of fluid. No wonder, therefore, that it stops sensation and that in its presence the surgeon's knife or the burning cautery are not detected.

I have at all times seen that the chlorine has been the danger in regard to chloroform, and I once traced the direct action of chlorine in a specimen which I was administering to the subject. Fortunately, I saw this in time, and inhaling a little of the chlorine myself detected the cause of danger and did no further mischief. I have also observed that in tetrachloride of carbon, where the hydrogen is entirely removed, there were always signs of the influence of chlorine, and a great many years ago I was so impressed at these effects that I thought it would be possible to remove certain portions of the chlorine and to make a lighter compound. This led me to the employment of bichloride of methylene, which means a fluid from which one atom of the chlorine is extracted from the chloroform. The extraction is made by the action of zinc, which, in contact with chloroform, takes up a particle of the chlorine in the presence of a little alcohol, producing chloride of zinc and leaving a fluid containing a trace of alcohol with bichloride of methylene. In the first of these experiments I succeeded very remarkably, and from that time I have always administered methylene, instead of chloroform, with success. I treat with the silence it deserves the continental rumour that the great French chemist Regnault—who died on Jan. 19th, 1878—made a specimen of the bichloride, from which, in my opinion, the chlorine could not have been properly removed, and which was, therefore, fatal. I treat also with the same silence the widespread absurdity that bichloride of methylene is a mixture of chloroform and alcohol. At the same time I would never unduly press forward bichloride of methylene, first, because it is rather a difficult product to make, and, secondly, because it contains chlorine, which always has been, and is, a dangerous element. Chloride of methylene would, in fact, be a better compound to use than the bichloride, as it gets rid of two of the chlorine elements; but it is a gas, is managed with difficulty, and, again, it has the objection of containing chlorine. You will gather from these observations that the temporary introduction of a member of the chlorine series into the anæsthetic series has been from the first a mistake—a mistake which must by necessity be met in the future by the exclusion of so objectionable an element. What, then, you will say, ought to be put in its place? This is the grand question which is left to be solved. Many think that ether is sufficient; many do not think so, and it must of necessity be slower in its action because it contains oxygen. Bromine and iodine, which in many points play the part of chlorine, are objectionable on the same grounds, and all the amyl series, in which hydrogen is an important element, are objectionable because they are not easily soluble, but separate in the blood, and producing minute globules of themselves are obstructive to the course of the blood, and though I have tried them all, as well as the hydrides and olefiant gas—which is a pure hydro-carbon—I have found one or other objection against their use.

The body that has seemed to me to present the best qualities for general anæsthesia is what is called methylic ether, a substance on which I have reported several times and have administered over thirty times in surgical operations. It is an objection that it is a gas. I discovered it in 1867, and I repeat what I then said—namely, that it may be considered the safest anæsthetic that has yet been discovered, although it is troublesome to administer and would have to be condensed like laughing-gas if it were to be brought into use. It has a curious faculty of destroying sensibility before it destroys consciousness, and recovery from it is exceedingly rapid. Its effects were very well manifested in a patient to whom I once administered the gas for Mr. Brudenell Carter. The patient, though feeling nothing, was quite conscious of all that went on during the operation. I observed also—and reported—that the gas is so safe that an animal under its influence may remain breathing it for twelve minutes without dying, and, if allowed apparently to die, may be recovered by artificial respiration so long as seven minutes after the cessation of respiration—that is to say, after what appears to be actual death.

CONSCIOUSNESS AND COMMON SENSATION.

It is time now that I concluded this paper, and I do not think I can do so at any better point. Thirty years ago I showed that it was quite possible to destroy common sensation and yet not destroy consciousness, and I press this matter once again as of vital importance. In several cases where I administered the methylic ether for removing pain in surgical operations the patients, when quite insensible to pain, were so conscious that they were able to obey every request asked of them, and in some instances were even anxious to reason, stating that they knew what was going on, and arguing that they were not ready for the operation because they were sure they should feel pain. Nevertheless, in this state of mental activity they were operated upon, and afterwards, while remembering every incident, were firm in their assertion that they felt no pain whatever during the operation. One patient who sat for the extraction of two teeth selected the tooth to be first extracted, putting her finger to it, and afterwards rearranging her position for the second removal. To the looker-on it seemed, in fact, as though no change in her life had occurred, yet she affirmed that she was sensible of no pain whatever; and several other less striking, but hardly less singular, examples came before me. We may then, I think, fairly assume that in course of time we shall discover manageable and certain anæsthetic substances which will paralyse sensation only, leaving the muscular power unaltered and the mental little disturbed; and we gather from this either that in the cerebral hemisphere there is some distinct and simple centre of common sensation which may be acted upon by certain agents without involving all the cerebral mass, or that the peripheral nervous matter may be influenced without involving the other portions of the nervous system. On the whole I incline to the view that the action of those agents which destroy pain before they remove consciousness, is primarily on the peripheral system; for we know from the process of local anæsthesia that it is easy to destroy sensation at the extremities without destroying or even interfering with consciousness, while those who have inhaled the vapours which destroy common sensation before interfering with consciousness describe the experience of a numbness and insensibility in the extreme parts of the body.

That which we medical men most require is an agent that shall be easily applied, and shall admit of being so applied generally as to induce insensibility to pain with or without destruction of consciousness, as the case before us may demand. There are many minor surgical operations for which consciousness need not be destroyed, although pain ought to be; there are other operations in which the consciousness of the person operated upon is of great service to the operator; and there is a third class of cases in which it is essential to suspend both sensation and consciousness. Now those agents which first destroy common sensation can always be pushed to the extent of destroying consciousness, so that if we could get a perfect agent of the kind we should have the full requirements in our hand. Up to the present moment we have been content with two classes of agents, one which destroys consciousness and sensation at the same time; the other which locally destroys sensation and has no further influence. I look hopefully for a method in which, by means of a single agent, we shall be able at will to suspend common sensation alone, or to exalt the process into suspension of consciousness. When this object is attained with safety and facility the science of anæsthesia may be considered as perfected.

Postscript.

As I peruse the above MS. on this day, March 18th, 18[illegible] I recall with great regret that the fatality from the administration of chloroform does not show any signs of decrease

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and that the patients in whom the deaths occur are, as heretofore, often sufferers from trifling ailments. I also notice that the symptoms of deaths are very rapid; that the amounts of chloroform administered are exceedingly varied, and that the mode of death seems usually to be the same as that in which Hannah Greener—who was the first to succumb to chloroform—died, some fifty years ago. I observe, further, that in one of the deaths from chloroform, which took place at Dudley, the patient was a healthy young man who submitted himself to the narcotic for the operation of tooth extraction; that he was fully examined beforehand and gave no indications of disease; that he inhaled with readiness; that the operation was performed dexterously; that the chloroform was perfectly pure; and that the post-mortem appearances afforded no evidence of the cause of the collapse. These frequent recurrences of death support the conclusions already advanced as to the danger attendant upon the reception of all bodies of the chlorine series, and they also suggest that every specimen of that series should be administered slowly in small quantities, so that narcotism should be induced by eighteen to twenty minims at the most. The question of small and slow administrations is one of the most critical, and makes a distinction between surgery proper and anæsthesia, which is of vital importance. When there was no anæsthesia, surgical art was, of necessity, predominant. The surgeon was the most brilliant man who could operate most quickly, and, with a steady nerve, could perform any possible operation. As a result of the work of ages it became natural that surgery should still in our days hold the first place, and that although in nineteen cases out of twenty the surgical operations might be mere bagatelles as compared with the production of unconsciousness by a narcotic agent, it has required a long time and a hecatomb of deaths for the fact to be demonstrated that the work of the anæsthetist calls for the first and most serious consideration. The old conception has continued to keep surgery in its original state and to cause anæsthesia to be looked upon as a mere adjunct. There is another element of danger in respect to the question of time. As in surgery brevity was the primary process, it came to be expected, both by the public and by the profession, that brevity in anæsthesia ought to keep pace. Thus during an operation the surgeon expects the completest insensibility, and, not getting it, spurs on the anæsthetist to be as brief as he wishes to be himself—a direction which the administrator, by habit, is as willing to obey as if he were simply an adjunctive aid. In the future all this must be changed. The anæsthetist must know and feel that he must be left quite independent in producing painlessness, while the surgeon, however brilliant, must follow his lead and not think of operating until the patient has been pronounced by the administrator safe, senseless, and ready for the knife.

LITHOTRITY IN CASES OF STONE: SIMPLE AND COMPLICATED.

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LIKE most surgeons called upon to treat a large number of calculous patients I consider that Bigelow's operation has proved itself to be in expert hands capable of yielding the best results in all simple cases of stone in children and in adults. I do not intend, therefore, to enter into any discussion as to the relative values of the different operations practised for the relief of vesical calculus, but simply to record my experience of lithotrity, to describe a few modifications which I have found useful in its practice, and, finally, to consider how far it is capable of maintaining its superiority in the presence of the complications most frequently met with in cases of bladder stone. I have in the title of this paper divided cases into two categories—simple and complicated. By a simple case I mean a stone of moderate dimensions and hardness situated in the bladder cavity of an adult or adolescent patient whose urethra is of at least normal dimensions, and who is free from any other important disease either of the urinary or of the general system. By a stone of moderate dimensions and hardness I mean one not exceeding 50 grammes (about 2 oz.) in weight and capable of being crushed by a No. 12 or 14 lithotrite. By a urethra of normal dimensions I mean one which will take without strain a No. 12 or 14 catheter of the English scale. Other cases I consider to be complicated, and it is evident, therefore, that a large proportion of all stones met with enter into this category. The complications to which I propose to refer are those arising from: (1) the size of the stone and its hardness; (2) its position; (3) the incomplete development of infancy and childhood; (4) old age and its associated degenerations; (5) various pathological conditions of the urinary system; and (6) the general condition of the patient. My remarks are based on the records of 209 cases contained in the following tables.

Table I. contains every case of stone in the bladder that I have operated on since the beginning of 1892 up to No. 200 with two exceptions. The first case not included occurred in a boy admitted with typhus fever, during the progress of which he was attacked with retention of urine. On passing a catheter a stone was detected, and it was decided to operate in order to prevent the urinary retention and other symptoms of stone from aggravating his disease. The stone was small and the operation (lithotomy) very simple; but the boy succumbed three days later to the typhus fever. The second case not included died under chloroform from chloroform poisoning. I had performed a few stone operations before 1892, but unless there was some great peculiarity had kept neither notes nor stones. In the beginning of that year I took over the whole of the operations for stone in the Cairo Hospital and commenced my collection and my record. In composing the tables I have taken advantage of the principle of the magic square. Having classified the cases according to the various conditions usually considered important in stone operations, age and sex of the patient, nature of operation and its result, the size of the stone and its chemical composition, I have been able, by adopting this principle, to show the relation of each one of these conditions to each one of the others. Under the heading of age I have divided my patients into the three periods of youth, middle age, and old age, allotting thirty years to each of the first two periods. The usual tendency in modern classifications has been to divide cases into children and others, or in the case of one of our greatest operators into old men and others. My experience has been, as with other surgeons, that the older the patient the more dangerous the operation becomes, with the proviso, however, that the age of the patient does not depend solely on the number of years he has lived. The other headings require no special notice, but I would draw attention to the columns showing the composition of the stones. It is remarkable that in so small a collection there should be so many examples of the rarer constituents. The analyses are above suspicion, having been made by a first-class analytical chemist, who has examined every stone for every possible constituent. I think that the remarkable results are due to the accuracy of the examinations, many constituents being detected which a more superficial examiner might have missed. In any case the presence of two stones containing cystine, of one composed almost entirely of urostealith, and of one containing xanthine in such a small collection is not in accordance with the experience of other operators. It is difficult to determine what proportion of the above cases should come under the category of "simple," for the reason that my records are not accurate enough as to the condition of the urinary and other organs, and I cannot, therefore, say what proportion of the simple cases have been treated by each of the various forms of operation. It will be seen, however, that 141 of the patients have been treated by urethral lithotrity, with a total mortality of 3. In one of three fatal cases the patient was more than eighty years old and had a stone of nearly two ounces; in the second the patient's age was about fifty-five, and his condition was complicated by fœtid cystitis in a very sacculated bladder; while the third patient was thirty-five years old and the subject of advanced kidney disease.

In performing lithotrity I have always carried out the method recommended by Bigelow—viz., complete evacuation of the stone at a single sitting. The patient has been in all cases prepared by one day's milk diet followed by a brisk purge. The operation has always been performed under chloroform narcosis. It is quite needless for me to describe in any way the technique of this operation, which has been brought to great perfection in many parts of the world, and more especially at the hands of some of our Indian surgeons. I doubt whether any other method will or can ever give in

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TABLE I.—ANALYSIS OF 200 CASES OF STONE.

—	—	Total.	Age. 0–29	Age. 30–59	Age. 60+	Sex. Male.	Sex. Female.	Result. Cured.	Result. Died.	Nature of operation. Lateral lithotomy.	Nature of operation. Supra-pubic lithotomy.	Nature of operation. Lithotrity.	Nature of operation. Perineal lithotrity.	Nature of operation. Laparotomy.	Nature of operation. Others.	Weight of stone in grammes. 0–24	25–49	50–74	75–99	100–149	150–199	200–299	300+	Composition of stone. Oxalates.	Oxalates and Phosphates.	Urates.	Urates and Phosphates.	Oxalates and Urates.	Oxalates, Urates, and Phosphates.	Phosphate of lime.	Mixed phosphates.	Cystine.	Urostealith.	Xanthine.
—	Total.	200	67	113	20	198	2	190	10	28	6	141	21	3	1	118	49	12	11	3	5	1	1	13	16	20	68	16	14	3	46	2	1	1
Age	0–29	67	67	—	—	65	2	67	—	18	1	37	11	—	—	40	15	4	5	—	3	—	—	4	2	9	24	7	2	—	17	2	—	—
	30–59	113	—	113	—	113	—	106	7	8	5	90	8	1	1	66	29	7	6	3	1	1	—	8	13	7	36	9	11	3	24	—	1	1
	60+	20	—	—	20	20	—	17	3	2	—	14	2	2	—	12	5	1	—	—	1	—	1	1	1	4	8	—	1	—	5	—	—	—
Sex	Male	198	65	113	20	198	—	188	10	27	6	140	20	3	1	116	49	12	11	3	5	1	1	13	16	20	68	16	14	3	44	2	1	1
	Female	2	2	—	—	—	2	2	—	1	—	1	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—
Result	Cured	190	67	106	17	188	2	190	—	23	3	138	20	1	—	117	45	12	10	3	5	—	1	12	16	20	63	16	14	3	42	2	1	1
	Died	10	—	7	3	10	—	—	10	—	3	3	1	2	1	1	4	—	1	1	2	1	—	1	—	—	5	—	—	—	4	—	—	—
Operation	Lateral	28	18	8	2	27	1	28	—	28	—	—	—	—	—	25	3	—	—	—	—	—	—	2	3	5	8	2	—	—	7	1	—	—
	Suprapubic	6	1	5	—	6	—	3	3	—	6	—	—	—	—	1	1	—	2	1	1	—	—	—	—	3	1	—	—	—	2	—	—	—
	Lithotrity	141	37	90	14	140	1	138	3	—	—	141	—	—	—	89	41	9	2	—	—	—	—	10	10	11	52	10	11	3	31	1	1	1
	Perineal	21	11	8	2	21	—	20	1	—	—	—	21	—	—	3	4	—	6	2	3	—	—	1	2	1	5	4	3	—	5	—	—	—
	Laparotomy	3	—	1	2	3	—	1	2	—	—	—	—	3	—	—	—	—	—	—	1	1	1	—	1	—	1	—	—	—	1	—	—	—
	Other	1	—	—	1	1	—	—	1	—	—	—	—	—	1	—	—	—	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
Weight in grammes	0–24	118	40	66	12	115	2	116	1	25	1	89	3	—	—	118	—	—	—	—	—	—	—	12	9	14	40	8	9	1	21	2	1	1
	25–49	49	15	29	5	49	—	45	4	3	1	41	4	—	—	—	49	—	—	—	—	—	—	1	3	1	17	3	4	2	18	—	—	—
	50–74	12	4	7	1	12	—	12	—	—	—	9	3	—	—	—	—	12	—	—	—	—	—	—	—	1	5	2	—	—	4	—	—	—
	75–99	11	5	6	—	11	—	11	1	—	2	2	6	—	1	—	—	—	11	—	—	—	—	—	1	4	3	1	1	—	1	—	—	—
	100–149	3	—	3	—	3	—	2	1	—	1	—	2	—	—	—	—	—	—	3	—	—	—	—	1	—	1	1	—	—	—	—	—	—
	150–199	5	3	1	1	5	—	3	2	—	1	—	3	1	—	—	—	—	—	—	5	—	—	—	1	—	2	1	—	1	—	—	—	—
	200–300	1	—	1	—	1	—	—	1	—	—	—	—	1	—	—	—	—	—	—	—	1	—	—	1	—	—	—	—	—	—	—	—	—
	300+	1	—	—	1	1	—	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	—	—	—
Nature	Oxalates	13	4	8	1	13	—	12	1	2	—	10	1	—	—	12	1	—	—	—	—	—	—	13	—	—	—	—	—	—	—	—	—	—
	Oxalates and phosphates	16	2	13	1	16	—	16	—	3	—	10	2	1	—	9	3	—	1	1	1	1	—	—	16	—	—	—	—	—	—	—	—	—
	Urates	20	9	7	4	20	—	20	—	5	3	11	1	—	—	14	1	1	4	—	—	—	—	—	—	20	—	—	—	—	—	—	—	—
	Urates and phosphates	68	24	36	8	68	—	63	5	8	1	52	5	1	1	40	17	5	3	1	2	—	—	—	—	—	68	—	—	—	—	—	—	—
	Oxalates and urates	16	7	9	—	16	—	16	—	2	—	10	4	—	—	8	3	2	1	1	1	—	—	—	—	—	—	16	—	—	—	—	—	—
	Oxalates, urates, and phosphates	14	2	11	1	14	—	14	—	—	—	11	3	—	—	9	4	—	1	—	—	—	—	—	—	—	—	—	14	—	—	—	—	—
	Phosphate of lime	3	—	3	—	3	—	3	—	—	—	3	—	—	—	1	2	—	—	—	—	—	—	—	—	—	—	—	—	3	—	—	—	—
	Mixed phosphates	46	17	24	5	44	2	42	4	7	2	31	5	1	—	21	18	4	1	—	1	—	1	—	—	—	—	—	—	—	43	—	—	—
	Cystine	2	2	—	—	2	—	2	—	1	—	1	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—
	Urostealith	1	—	1	—	1	—	1	—	—	—	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—
	Xanthine	1	—	1	—	1	—	1	—	—	—	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1

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TABLE II.—ANALYSIS OF STONES WEIGHING FIFTY GRAMMES AND OVER.

—		Total.	Age.				Sex.		Result.		Nature of operation.						Weight of stone in grammes.								Composition of stone.							
			0–29	30–59	60+		Male.	Female.	Cured.	Died.	Lateral lithotomy.	Supra-public lithotomy.	Lithotomy.	Perineal lithotomy.	Laparotomy.	Others.	0–24	25–74	75–99	100–149	150–199	200–299	300+		Oxalates.	Oxalates and phosphates.	Urates.	Urates and phosphates.	Oxalates and urates.	Phosphate of lime.	Mixed phosphates.	Cystine.	Urostealith.
—		50	17	28	5		50	—	42	8	—	11	15	20	3	1	—	—	—	—	—	—	—		2	4	12	15	6	1	10	—	—
	Total																															
Age	0–29	17	17	—	—		17	—	16	1	—	3	3	11	—	—	—	—	—	—	—	—	—		—	1	6	4	—	—	2	—	—
	30–59	28	—	28	—		28	—	23	5	—	7	11	8	1	—	—	—	—	—	—	—	—		—	3	5	9	1	—	6	—	—
	60+	5	—	—	5		5	—	3	2	—	1	1	1	2	—	—	—	—	—	—	—	—		—	—	1	2	—	—	—	—	—
Sex	Male	50	17	28	5		50	—	42	8	—	11	15	20	3	1	—	—	—	—	—	—	—		2	4	12	15	6	1	10	—	—
	Female	—	—	—	—		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		—	—	—	—	—	—	—	—	—
Result	Cured	42	16	23	3		42	—	42	—	—	6	15	20	1	—	—	—	—	—	—	—	—		2	3	11	15	6	1	8	—	—
	Died	8	1	5	2		8	—	—	8	—	5	—	—	2	1	—	—	—	—	—	—	—		—	1	1	—	—	—	2	—	—
Operation	Lateral	—	—	—	—		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		—	—	—	—	—	—	—	—	—
	Supra-pubic	11	3	7	1		11	—	6	5	—	11	—	—	—	—	—	—	—	—	—	—	—		—	—	2	1	—	—	—	—	—
	Lithotrity	15	3	11	1		15	—	15	—	—	—	15	—	—	—	—	—	—	—	—	—	—		—	1	3	6	1	—	4	—	—
	Perineal	20	11	8	1		20	—	20	—	—	—	—	20	—	—	—	—	—	—	—	—	—		—	—	1	5	1	—	3	—	—
	Laparotomy	3	1	1	2		3	—	1	2	—	—	—	—	3	—	—	—	—	—	—	—	—		—	—	—	1	—	—	1	—	—
	Other	1	—	—	—		1	—	—	1	—	—	—	—	—	1	—	—	—	—	—	—	—		—	—	—	—	—	—	—	—	—
Weight in grammes ...	0–24	—	—	—	—		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		—	—	—	—	—	—	—	—	—
	25–49	11	3	7	1		11	—	6	5	—	11	—	—	—	—	—	—	—	—	—	—	—		—	—	2	1	—	—	—	—	—
	50–74	15	3	11	1		15	—	15	—	—	—	15	—	—	—	—	—	—	—	—	—	—		—	1	3	6	1	—	4	—	—
	75–99	20	11	8	1		20	—	20	—	—	—	—	20	—	—	—	—	—	—	—	—	—		—	—	1	5	1	—	2	—	—
	100–149	8	1	6	1		8	—	8	—	—	2	3	4	1	—	—	—	—	—	—	—	—		—	—	1	2	—	—	1	—	—
	150–199	6	4	1	1		6	—	5	1	—	4	—	4	1	—	—	—	—	—	—	—	—		—	—	1	1	—	—	—	—	—
	200–299	1	—	1	—		1	—	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—		—	—	—	—	—	—	—	—	—
	300+	3	1	1	1		3	—	2	1	—	2	1	3	1	—	—	—	—	—	—	—	—		—	—	—	2	—	—	—	—	—
Nature	Oxalates	2	—	2	—		2	—	2	—	—	2	—	—	—	—	—	—	—	—	—	—	—		2	—	—	—	—	—	—	—	—
	Oxalates and phosphates	4	1	3	—		4	—	3	1	—	—	—	1	1	—	—	—	—	—	—	—	—		—	4	—	—	—	—	—	—	—
	Urates	12	6	5	1		12	—	11	1	—	5	2	3	1	—	—	—	—	—	—	—	—		—	—	12	—	—	—	—	—	—
	Urates and phosphates	15	4	9	2		15	—	11	4	—	2	6	5	1	—	—	—	—	—	—	—	—		—	—	—	15	—	—	—	—	—
	Oxalates and urates	6	4	2	—		6	—	6	—	—	—	1	5	1	—	—	—	—	—	—	—	—		—	—	—	—	6	—	—	—	—
	Oxalates, urates, and phosphates	1	—	1	—		1	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—		—	—	—	—	—	1	—	—	—
	Phosphates of lime	—	—	—	—		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		—	—	—	—	—	—	—	—	—
	Mixed phosphates	10	2	6	2		10	—	8	2	—	2	4	3	1	—	—	—	—	—	—	—	—		—	—	—	—	—	—	10	—	—
	Cystine	—	—	—	—		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		—	—	—	—	—	—	—	—	—
	Urostealith	—	—	—	—		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		—	—	—	—	—	—	—	—	—

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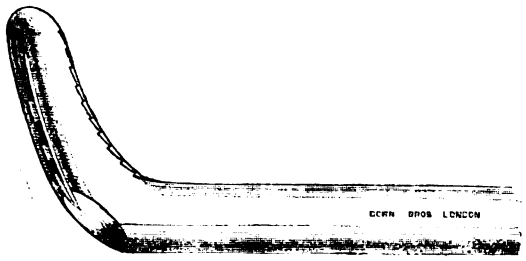
simple cases better results than this has given and it seems almost futile to attempt to modify it. I have, however, been induced to attempt a modification which, though unlikely to be attended by better results in simple cases, may be of service in a complication to be referred to later, and may, perhaps, recommend itself to the patient and surgeon from the simplicity and ease with which it may be carried out. Bigelow's operation necessitates the introduction into the bladder of two different instruments—the lithotrite and the evacuating tube. Each of these may require to be introduced several times before all the fragments are brought away. My object has been to construct a single instrument combining the functions of the two, and therefore capable of completing the operation with a single introduction. After the expenditure of much careful labour and the exercise of much ingenuity Messrs. Down Brothers have manufactured for me a lithotrite (Figs. 1 and 2) which partly, at all events, fulfils both those functions. This instrument in general

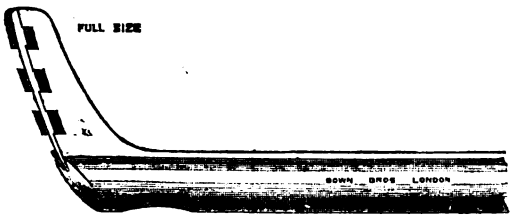
FIG. 1.



Distal end of lithotrite.

shape and appearance resembles an ordinary lithotrite. The female blade is, however, hollowed out to a larger extent than usual, so as to receive the tube which is attached along the whole length of the male blade. This tube presents

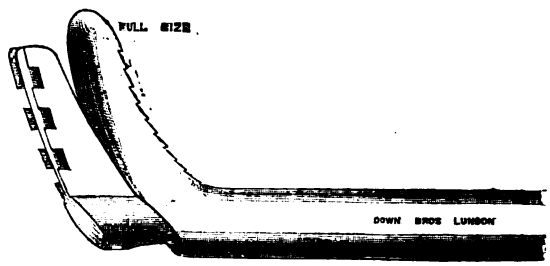
FIG. 2.



Distal end of male blade.

on its lower surface, just below the jaw of the male blade, a large opening, beyond which its end is filled up as in an aseptic catheter. The tube, continued through the centre of the screw, expands beyond the handle (Fig. 3) to receive the evacuating syringe. The male and female blades are so adjusted that when it is desired to aspirate the male jaw can be made to pass right through the female jaw, protruding to the extent of about four lines (Fig. 4) sufficiently to expose the eye of the male blade beyond the heel of the female.

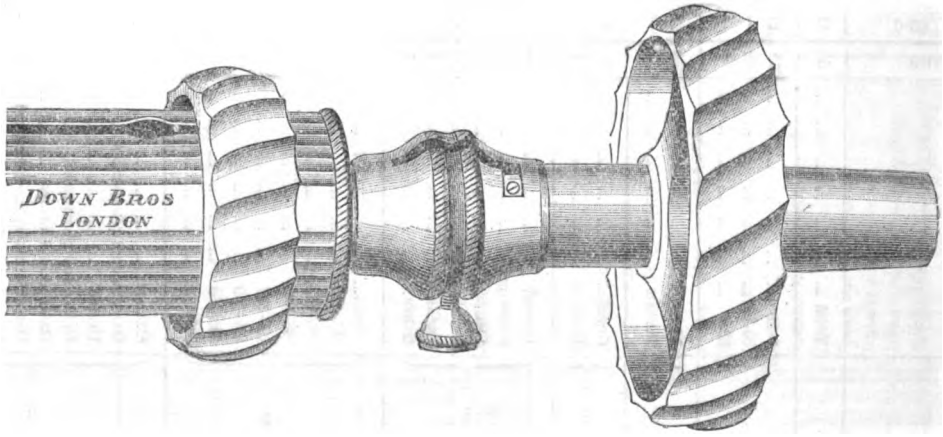
FIG. 4.



Protrusion of male blade through female during evacuation.

A stop situated in the handle of the instrument prevents this protrusion during such time as the instrument is being used for crushing. The reunion of the two functions of crusher and evacuator limits, as might be expected, the range of each. The instrument is of necessity weaker than an ordinary lithotrite of the same calibre. This has to a certain extent been remedied by the addition of a solid steel core, which, passing down the whole length of the tube, greatly adds to the strength of the instrument when crushing. This lithotrite is capable of crushing, and has crushed, a fairly hard calculus of 50 grammes; it must, however, always be used with great care and delicacy when dealing with such stones. The vast majority of stones, however, fall short of these dimensions and are such as to be quite readily crushed by this instrument. It is, moreover, chiefly in the case of old subjects that I think this method is likely to be most useful. When dealing with such cases it becomes of vital importance to treat the prostate as delicately as possible, and it is here that the great advantage of the single introduction will be found to lie. In these subjects, also, the stone, although apt to be large, is generally phosphatic in nature and friable, and under such circumstances the lithotrite is capable of dealing with quite large masses. As an evacuator, also, the instrument is less efficient than an evacuating tube of a similar gauge. The bore of the tube of a No. 14 evacuating lithotrite is equal only to that of a No. 11 or No. 12 catheter. The operation is necessarily, therefore, more prolonged, as the fragments must be broken up more finely. The instrument has, however, advantages which I think more than counterbalance these drawbacks. The single introduction which alone is necessary greatly diminishes the injury done to the urethra and prostate. In a healthy adult this has not the same importance as in an old man suffering from a large prostate. It is, however, especially in the latter class of cases that lithotrity becomes attended with danger, and it is in these cases that I think the modification is most likely to be of use. Secondly, it enables the operation to be made without anæsthesia where there is no special difficulty and where the patient prefers to avoid the administration of an anæsthetic. The operation

FIG. 3.



Handle of lithotrite.

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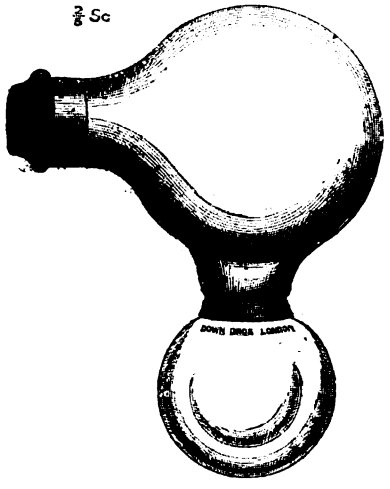
without anæsthetics, however, requires very careful and very delicate manipulations, and should only be attempted when the patient objects to the narcosis or when there are other reasons against it. It must be limited further to cases in which the stone is small and easily friable. After the short experience I have had I would say that while advocating the evacuating lithotrite for use in the removal of small stones I can adduce no evidence to show its superiority in such cases to the ordinary instrument, and that I do not think it possible that its use will give any better results than those obtainable with Bigelow's method and instruments. The only advantage that I can see for it is in the possible diminution of the necessity for narcosis. I shall refer to the use of the instrument in complicated cases further on. I wish to say here a few words as to the evacuating syringe. I have used chiefly the syringes introduced by Thompson and by Golding-Bird. Of the two I consider the latter to be preferable; it is simple in construction, easily filled, and readily used. I have lately had made for me by Messrs. Down Brothers a syringe (Fig. 5) which possesses these advantages to a still greater extent. It consists of an indiarubber syringe shaped like a pear, with two stems, the one at right angles to the other. The horizontal stem carries a vulcanite socket to receive the evacuating tube. The vertical stem terminates in a glass receptacle for the débris. There are no valves and no taps,

FIG. 5.



Evacuating syringe.

the action of gravity alone being sufficient to prevent the return of the débris into the bladder cavity. The filling of this syringe is quite simple. The hole being held uppermost, water is poured in from the tap or jug. When three-quarters full the syringe must be slightly tilted to empty the glass receptacle of air. The removal of débris from the syringe is equally simple. The orifice should be closed with the thumb and the syringe inverted, so that, the glass receptacle being the highest part, the fragments fall into the ball cavity. The syringe is then turned so that the orifice becomes the lowest part, and the débris escapes with the water, one or two squeezes serving to expedite the escape. In addition to these advantages which it shares with other models this instrument possesses two peculiarly its own. In the first place, the mounts being of vulcanite, it can be easily sterilised. This point has not received, I think, sufficient consideration, and it is very easy to see that an infected syringe might have a very prejudicial effect on the result of an operation. Secondly, it enables the operator to have full control over the movements of the evacuating tube in the bladder. This is a point of very great importance, especially towards the close of an operation, and is not possessed by any of the more modern evacuators. It may further be added that it is greatly cheaper than any other form. The manipulation of the syringe when in use is very simple. The compression should always be gradual and but little water should be injected into the bladder. The expansion of the syringe should be sudden so that all fragments are easily lifted by the current. A very slight pause should be made before each compression of the syringe so as to allow the fragments to settle into the recipient. Having used this evacuator some sixty times I can confidently recommend it to other operators. In general I would say, therefore, with regard to simple cases of stone in the bladder that by far the best operation and the one which gives the best results is lithotrity at a single sitting, and that the use of an evacuating lithotrite may be useful in some cases.

With regard to complicated cases of stone, I have already mentioned the complications I propose to refer to and shall consider them in the order given. The first is that arising from the largeness and hardness of the stone. Table II. has been drawn up with reference to this complication and contains all the stones that I have operated on whose weight has reached 50 grammes. Thirty-two of these cases are taken from Table I.; nine of them were operated on before 1892. The specimens and records of these nine cases were preserved on account of the abnormal dimensions of the stones. Being selected cases they are not admissible in the general table, but the reason for their selection makes them specially suitable for Table II. The remaining nine form a portion of my third hundred, which is not yet completed. I have fixed the minimum weight for a large stone at 50 grammes, or a little less than two ounces. This limit is of course arbitrary. My reasons for choosing it are (1) it is numerically convenient; (2) few stones reach this size; (3) in all tables, old and new, the mortality attending operations on stones over this limit rises greatly; (4) I consider this to be about the limit at which a stone can be extracted from the wound of a perineal cystotomy in an adult without bruising or laceration of the tissues; and (5) it is about this limit that the difficulties of lithotrity begin. The arrangement of this table resembles that of Table I. and requires no further remark except with regard to the one operation classified as "other." This was a case in which the stone was lodged partly in the bladder and partly in the right ureter. It required for its removal a special operation, which is referred to later. Of the 50 cases here classified, 35 were operated on by lithotrity; of these not a single one died. When it is considered that in 8 of these cases the stone weighed between 2 and 3 ounces, in 10 between 3 and 4, in 8 between 4 and 8, and in one case over 12 ounces, it will, I think, be granted that no other operation has ever yielded such favourable results.[1] The cases have in no ways been picked and none have been refused operation. When I first began to operate I performed suprapubic cystotomy for nearly all large stones. Up to June, 1892, I had operated on 14 such cases, 11 by suprapubic cystotomy with 5 deaths, and 3 by lithotrity, all successful. Of the 36 similar cases operated since then, 32 were treated with lithotrity, 3 by laparotomy, and 1, complicated by stone in the ureter, required a special operation. The last 16 big stones have been removed by lithotrity and all successfully. I consider this result to be such a striking evidence in favour of lithotrity as a treatment for large stones that I have extracted the following small table of lithotrities from the general one.

TABLE III.—*Lithotrities performed for Large Stones.*

		Total.	Age.			Weight in ounces.				
			0–29	30–59	60+	2·3	3·4	4·6	6·8	12
Lithotrity	Urethral ...	15	3	11	1	11	3	—	—	1
	Perineal ...	20	11	8	1	5	7	4	4	—

N.B.—All the 35 cases were cured without fistula.

It will be noted that in the tables above given the lithotrity cases are divided into two classes—urethral lithotrity and perineal lithotrity. By urethral lithotrity I mean Bigelow's operation; that is to say, the crushing of the stone and the removal of all the fragments at one sitting by instruments introduced through the entire urethra. By perineal lithotrity I mean the crushing of the stone by a lithoclast introduced into the bladder through a perineal incision and the removal of all the fragments through the same opening at one sitting. Bigelow's operation was performed in 15 of the 35 cases, and the more experience I have in this operation the more I am convinced that there are very few cases indeed which it cannot cope with. It is true that in the larger portion of the 35 cases I

[1] I have on another occasion (St. Thomas's Hospital Reports, London, 1891) referred to the extraordinary tolerance of Orientals to all operations and diseases connected with the urinary apparatus.

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have performed the perineal operation. I have done so for one very sufficient reason. The operations are done before students and practically their only experience of stone operations is what they see me do. They will be called upon to operate on large stone cases, and for them and for the great majority of practitioners the perineal operation is by far the better. I therefore take frequent opportunities of demonstrating it to them. In the hands of a surgeon constantly operating, however, Bigelow's operation is practically capable of removing any stone however big. Very large stones have been successfully removed by it. Cunningham[2] records one of eight ounces, but even this has been surpassed by one of my recent cases, which I take the opportunity of recording here. The patient was an Egyptian fellah aged about forty-five years. The stone having been recognised as very big the largest lithotrite, having a gape of 5 inches (made to order for me by Messrs. Down Brothers), was introduced. After some difficulty the stone was grasped, the separation of the blades being to the extent of 4¾ inches. My whole force was necessary to crack the stone, and after a very tiring operation lasting 125 minutes the débris, amounting to 340 grammes, or over 12 ounces (dry weight), was entirely removed. The patient's convalescence was rapid and his cure complete. This is by far the largest stone I have ever crushed, and I believe it to be the biggest ever removed by Bigelow's operation. The stone was composed of urates and phosphates and was more than usually dense.

(To be continued.)

THE BRONCHITIS KETTLE, POULTICES, AND OVER-FEEDING IN ACUTE LUNG AFFECTIONS.

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IN these days of almost exclusive devotion to the study of micro-organisms and of abstruse chemical changes taking place in the body there is some fear lest the attention of the ordinary medical student should not be sufficiently concentrated on what, after all, is to be his main object in life—viz., the cure or alleviation of the maladies from which his patients are suffering. Dr. Church, in his recent Harveian Oration,[1] has pointed out in emphatic language that "the very brilliancy of recent discoveries and the vast increase in our knowledge may for a time react prejudicially on the art of medicine." I frequently hear complaints from the older practitioners with whom I come in contact that recently qualified men fresh from the hospital are almost useless as assistants; their theoretical knowledge may be excellent, but they are at a loss when they are confronted with the small details of general practice. May I, therefore, be allowed a little space in the columns of THE LANCET to discuss the prosaic questions of steam kettles, poultices, and diet? As a text for my sermon let me quote the treatment of a case of pneumonia as it is too often carried out—the unfortunate patient is kept in a room with the atmosphere saturated with moisture from a bronchitis kettle, enveloped in huge linseed meal poultices, and is given nourishment every half hour or so.

First of all as regards the practice of charging the air with moisture from what Sir Benjamin Richardson says is not inaptly called a "bronchitis kettle." The folly of this practice has recently been commented on in a monthly medical journal and attention was therein directed to Richardson's able article on "Hydrops Bronchialis" in the *Medical Press and Circular* of Jan. 25th, 1888. I am strongly of opinion that the bronchitis kettle should be practically banished from the sick room; the only instances in which benefit is likely to ensue from its use are cases of dry bronchitis, in which patients have difficulty in bringing up tough pellets of mucus, and even then I would not order it unless there was a dry easterly wind. In cases of pneumonia I have seen nothing but harm resulting from the employment of the bronchitis kettle, and I always advise that it should be taken away when I find it in use. I do not think that too great stress can be laid on the importance of a free supply of fresh air in cases of pneumonia, and this cannot usually be attained if the bronchitis kettle is at work.

The next point I would raise is as to the routine use of poultices. The longer I practise the fewer poultices I order, and at the present time I have come to the conclusion that except for the relief of pain poultices are of little or no value in the treatment of chest affections, or perhaps I might put it in another way—that the drawbacks inseparable from the use of poultices are not compensated for by the amount of benefit which can reasonably be expected to result from them. To watch a small child with extensive bronchopneumonia fighting for breath, and then to further hamper its efforts by ordering poultices weighing about a pound seems to me hardly a scientific procedure. I prefer a light jacket of Gamgee tissue or cotton-wool over which some stimulating liniment may be sprinkled. This may be left for hours or even days without disturbing the patient, whereas poultices require to be changed every three or four hours and there is always the risk of the patient being chilled by a cold poultice or scalded by one too hot.

Lastly comes the question of feeding. It seems to me that during acute pulmonary affections more food is forced down the patient's throat than he requires and, moreover, that nourishment is given at too frequent intervals. The drawbacks of over-feeding the patient are very forcibly put in a paper read at the International Medical Congress at Berlin by Dr. Andrew Smith of New York. "The anxiety 'to keep up the strength' and the apprehension excited by the small and feeble radial pulse are apt to suggest the administration of more food than is necessary or beneficial. We forget that the digestive organs are not in a condition to do the work demanded of them in health and also that the pulmonary obstruction interferes with the process of hæmatosis. Giving an excess of food therefore entails a double embarrassment. There is the burden arising from undigested food in the stomach giving rise to flatulent distension and thus rendering respiration more difficult, and there is also the risk of loading the blood with more nutritive material than the imperfect respiration can act upon in the process of sanguinification." In all acute affections, unless vomiting be present, nourishment should not, as a rule, be given oftener than every two hours, and about five ounces of milk, or the equivalent, are usually sufficient. I cannot help thinking that the success which attends one's treatment of pneumonia and enteric fever in hospital practice is largely due to the regular administration of a moderate quantity of nourishment.

In the above remarks I have only briefly touched upon some of the important points in the care of the sick, but from my experience in consulting practice I am convinced that too little attention is bestowed on the necessity of laying down clear and precise directions as to the hygiene of the sick room and the diet of the patient.

Wimpole-street, W.

[2] Brit. Med. Jour., 1891, vol. i., p. 1008.
[1] THE LANCET, Oct. 26th, 1895.

SOME UNUSUAL CASES OF SWELLING OF THE PAROTID GLAND.[1]

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I HAVE thought the following group of cases worthy of notice, imperfect as are the records of more than one of them, because they illustrate a minor ailment which appears to have passed almost unnoticed, at any rate in this country. It will be convenient in the first instance to record the brief notes of the cases as they have come under my observation and then to consider their probable nature and refer to cases presumably of the same nature which have been recorded by others.

CASE 1.—A thin, anæmic boy thirteen years of age came to the out-patient department of the Victoria Hospital for Children on Jan. 1st, 1892, on account of a swelling of the right side of his face which had appeared somewhat suddenly

[1] A paper read before the Harveian Society on April 16th, 1896.

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during a meal a month previously and since then had become somewhat larger and harder. The boy had never had mumps nor was there any evidence that he had recently been exposed to the infection of that disease. On examination it was at once obvious that the swelling was due to enlargement of the right parotid salivary gland. The swelling was slightly lobulated, tender on pressure, in most parts hard, but, especially below the ear, slightly elastic. On squeezing the gland a string of turbid, ropy mucus could be expressed from the orifice of Stensen's duct into the mouth and this was followed by several drops of saliva. A fine probe could easily be passed along the duct, and no calculus or other obstruction could be detected. On the 6th the boy was admitted to the hospital on account of the increasing size of the swelling. It was still found easy to press a long plug of turbid mucus from the duct, after which a free escape of saliva always followed. Hot fomentations were applied externally and hot water mouth-washes were ordered to be repeated frequently. On the 17th the gland was still larger and the swollen socia parotidis was very obvious. The skin over the gland was reddened and the temperature reached 103·6° F. Movements of the lower jaw were very painful, but no increase in the size of the swelling was observed when food was taken. On the 19th the redness and œdema over the gland were so marked that suppuration was suspected. A short incision was therefore made below the ear and a Lister's sinus forceps cautiously pushed into the gland, without, however, finding pus. From this time the swelling slowly diminished, and on the 28th it was noted that the boy was free from pain. On Feb. 2nd the whole gland was still obviously enlarged and remarkably hard. On the 16th it was suggested that iodide of potassium liniment should be rubbed into the gland once daily. When the boy was last examined, on March 22nd, nearly four months after the onset, the gland was smaller but still very hard.

CASE 2.—A healthy-looking boy aged eleven years came to the Great Northern Central Hospital on April 4th, 1892, on account of a swelling of the left side of his face of about one month's duration. The swelling was said to have diminished slightly in size during the last fortnight. It was painful, especially at meals, but it was not stated that the swelling increased at these times. The boy was not known to have been exposed to the contagion of mumps. There was no history of any inflammatory affection of the mouth or throat. On examination the left parotid gland was found to be considerably swollen and tender. The swelling was slightly lobulated, but the socia parotidis could not be defined. Below the salivary gland a few slightly enlarged lymphatic glands could be felt. On pressing the parotid saliva flowed into the mouth from Stensen's duct. Hot water mouth douches were prescribed and belladonna liniment was rubbed into the parotid region. On the 7th pressure on the gland caused an escape of turbid mucus from the duct; the swelling was smaller and softer. A week later, when the boy was last seen, there was still further diminution in the swelling and mucus could no longer be squeezed from the duct.

CASE 3.—A man twenty-six years of age, whilst on a short railway journey in September, 1889, experienced a feeling of discomfort and slight fulness in the left parotid region. On the following day the swelling was much more marked and was exactly limited to the area occupied by the parotid salivary gland. It was very tender on pressure, and mastication was difficult on account of pain. With the taking of food the swelling appeared to increase. Although there was a history of mumps in childhood affecting, it was believed, both parotids, the diagnosis of mumps was made and isolation for a fortnight was strictly observed. At the end of a week the swelling had practically disappeared. During the next three or four years several milder attacks occurred in which the left parotid gland was obviously swollen and slightly tender for periods of a few days. Frequent abortive attacks were noticed in which the socia parotidis alone was swollen and tender for a day or two, and at the present time, six and a half years after the first attack, this part of the gland can still be felt to be slightly enlarged and indurated.

CASE 4.—A thin, ill-tended child aged fifteen months was brought to the Victoria Hospital for Children on Jan. 7th, 1896, on account of a swelling of the left side of the face and neck, which when it was first noticed, five weeks previously, was thought to be mumps. The swelling had gradually increased, but appeared to cause the child no pain. No history of any trouble with the mouth or throat could be obtained. The child, although very ill-nourished, presented no other symptom of inherited syphilis. There was congenital ptosis on the left side. The swelling for which advice was sought was due to uniform enlargement of the left parotid salivary gland, which was sufficiently marked at once to attract attention. The swelling was very hard, but did not appear to be tender. Nothing abnormal could be seen in the position of Stensen's duct. A week later the gland was perhaps slightly smaller.

CASE 5.—A man aged thirty-three years came to University College Hospital on Feb. 19th, 1896, on account of a swelling in the left parotid region. This had gradually been increasing for two months; it was said to be most marked in the morning, but had not been noticed to increase during meals. The swelling had the characteristic outline of the parotid gland, but the socia parotidis could not be separately defined. The swelling was uniformly firm to the touch; it was free from pain and tenderness, but caused some discomfort during eating. The skin over the gland was normal. Pressure failed to squeeze anything from Stensen's duct, and I was unable to pass a fine probe along it. There was no evidence of the presence of a calculus. The mucous membrane of the mouth and throat appeared normal. The patient's general health was not good and for several years he had been under treatment for stricture of the urethra.

In reviewing these short records it will be observed that in each instance we have to deal with swelling of one parotid salivary gland. In none of them was there any difficulty in excluding a swelling due to enlarged lymphatic glands, for although this may sometimes closely resemble a swelling of the parotid itself, in these cases the outline of the enlargement was quite characteristic.

Passing to the consideration of the probable nature of the cases, it may be remarked in the first instance that they were not mumps, although in more than one case the condition had been confused with that affection. Amongst the many reasons which might be adduced in connexion with this point I may mention (1) the absence of any known exposure to the contagion of mumps; (2) the prolonged course of the swelling; (3) the limitation of the swelling to one parotid gland; and (4) the absence of infection of other individuals. Continuing the process of exclusion I may say that in each case the presence of a salivary calculus was duly considered and negatived. In the large majority of cases the essential symptom of a salivary calculus is swelling of the gland due to obstruction of the duct, but there is a specimen in the museum of University College illustrating chronic enlargement and induration of the submaxillary gland resulting from the presence of small calculi in its substance. The gland was excised by Mr. Godlee, who, before proceeding to the operation, believed that he had to deal with a tuberculous lymphatic gland. The course pursued by my cases excluded such a condition. Lastly, there were no grounds in any instance for referring the case to the parotid inflammations which are known as "symptomatic parotitis" or "parotid bubo," such as may occur in the course of pyæmic processes, typhoid fever, &c., or to the group, for our knowledge of which we are so much indebted to Mr. Stephen Paget, in which parotitis complicates various abdominal diseases and injuries, at times apparently independently of sepsis.

Passing from the negative to the positive, I may express my belief that the above cases are examples of swelling of the parotid gland resulting from interference with the escape of its secretion due to inflammation of the lining of Stensen's duct. This conclusion was suggested by the fact that in Cases 1 and 2 pressure on the swollen gland caused the escape of a plug of thick, turbid mucus from the duct, followed by a free flow of saliva. In Case 3 also it will be observed that in each attack the swelling affected first the socia parotidis and in the slighter attacks did not extend beyond it. Remembering that the socia parotidis has a small duct of its own which enters Stensen's duct, it is easy to understand that a slight degree of inflammation, insufficient to block the main duct, might completely obstruct the smaller one.

I have been unable to discover that any particular attention has been drawn to such a condition in this country, but in the article on Diseases of the Salivary Glands in Duplay and Reclus's "Traité de Chirurgie" I have found several interesting references to cases probably belonging to this category. Kussmaul[2] records a case of "recurring salivary tumour resulting from fibrino-purulent inflammation of Stensen's

[2] Berliner Klinische Wochenschrift, 1879, No. 15.

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duct." The patient, a woman thirty-two years of age, experienced attacks of swelling of the right parotid gland, recurring every five or six months between the summers of 1875 and 1877. The swelling always appeared somewhat suddenly during meals, and was attended with a feeling of discomfort but no actual pain; it lasted for about half an hour and then rapidly subsided. In the summer of 1878 an attack of more considerable swelling occurred, of longer duration and attended with much pain, especially during meals. The swelling subsided after the escape of some drops of thick pus from Stensen's duct. The attacks now recurred more frequently, sometimes after intervals of not more than two or three weeks, and on one occasion the swelling lasted eight days. No treatment beyond the application of dry warmth to the cheek was adopted. Dr. Krieger, who treated the patient, found that the masses which escaped from the duct consisted of pus and fine filamentous cylinders, the fibrinous nature of which was demonstrated microscopically by Dr. Friedländer. The patient was taught to pass a fine platinum wire sound along the duct and thus obtained relief, for on withdrawing it thick fibrino-purulent matter escaped and after this a free flow of saliva. At the beginning of November, 1878, another attack occurred in which not only the right gland, but to a much slighter degree the left, was affected. After the patient's midday meal Kussmaul found great swelling in front of and below the right ear, the skin was red and hot, and pressure was painful. The sound could be passed only a few millimetres along the duct, but on withdrawing it some yellow, creamy pus escaped, followed by a filamentous thread and clear saliva, after which the sound could be introduced for four centimetres. In an attack in January, 1879, the thread which escaped was three centimetres long and as thick as a knitting needle. This was examined by von Recklinghausen, who found that it consisted of a fine membranous deposit composed of a network of fibrin containing pus and epithelial cells. The patient was seen some time subsequently and had had no further attacks. A chlorate of potash lozenge was taken daily. Another case which is worthy of notice was published by Berthold Stiller of Budapest.[3] A man aged thirty-six hurriedly summoned Dr. Stiller on account of a rapidly increasing swelling of the right cheek which appeared during dinner. The swelling corresponded with the right parotid gland and was the seat of a sensation of warmth and discomfort but not of actual pain. Nothing unnatural could be seen in the mouth. Dry heat was applied to the cheek but did no good, for on the following day the swelling was larger and painful. Whilst the patient was handling and squeezing the swelling he spat out a shreddy purulent mass, whereupon the mouth filled with a clear watery fluid. The swelling rapidly diminished and on the following day had disappeared. Subsequently the patient experienced milder attacks every three to six months, and the swelling was invariably relieved by pressure applied to the gland. These two cases afford strong support to the view that I had independently formed as to the nature of at least the first three of those which I have recorded. In both the rapid subsidence of the swelling after relief of the obstruction in the duct shows that it was due simply to retention of secretion and not to inflammation of the gland. In my cases, on the other hand, the persistence of the swelling and induration would point to the occurrence of inflammation of the gland lobules of a kind comparable to that which may occur under similar circumstances in other secreting glands, notably the breast. In Cases 4 and 5 evidence that the primary mischief was in Stensen's duct is wanting, but I strongly suspect that these were also of the same nature.

As perhaps throwing a side light on the subject it may be mentioned that two cases of recurrent swelling of both parotid glands in association with xerostomia or "dry-mouth" have recently been recorded. In Battle's case[4] both parotids had alternately increased and diminished in size for a period of two years, and whilst the patient was under observation and the glands were at their minimum size the smaller was as large as a walnut, and both were firm and lobulated. In Chappell's case[5] the parotid glands "would suddenly enlarge at times, become tender, and after two or three days gradually subside." Whilst the patient was first under observation, in May, 1894, "both parotids were much enlarged, especially the right, and seemingly consisted of three or four nodular masses which were hard and non-sensitive and resembled those of a patient with mumps." In February, 1895, the glands had increased considerably in size. It may be considered probable that in these cases an inflammation of Stensen's duct, associated with the unhealthy condition of the mouth, was the cause of the parotid swellings. A condition similar to that under consideration has been met with in the submaxillary gland by Ipscher.[6] He was hurriedly summoned to a man aged thirty on account of a swelling which had suddenly formed in the right submaxillary region. Before Dr. Ipscher arrived the patient had relieved himself by pressing on the swelling when "a small white thread" appeared in the mouth followed by "a quantity of sour-tasting water." The right submaxillary gland was still considerably swollen, and the corresponding part of the floor of the mouth was reddened. This was the third attack, and in each of the two previous ones pressure on the swelling had been followed by a similar result. This case was published as the result of Kussmaul's communication, and was regarded by Ipscher as of the same nature. The only instance of swelling of the submaxillary gland, possibly belonging to this class of cases, which I have observed was that of a boy eight years of age who was brought to the Victoria Hospital on Feb. 9th, 1894. The swelling in the neck formed during the night in the winter of 1892 and did not subside for eight months. In November, 1893, it reappeared, and when I saw the boy the swelling evidently involved the right submaxillary salivary gland. There was nothing abnormal in the appearance of Wharton's duct, and a probe could easily be passed along it. Three weeks later the gland was smaller. The nature of this case was obviously doubtful.

I have thought these cases worthy of being recorded, although necessarily incomplete in many respects, because they illustrate a condition of some importance, if only on account of its superficial resemblance to mumps. It is a useful rule of practice always to examine the duct of a swollen salivary gland. If there is any probability that the swelling results from blockage of the duct by inflammatory products the regular passage of a fine probe may be expected to give relief, but induration of the gland is likely to persist for a considerable period.

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[3] Wiener Medicinische Wochenschrift, 1881, No. 19.
[4] Transactions of the Clinical Society, 1895, p. 282.
[5] New York Medical Journal, Feb. 29th, 1896.
[6] Berliner Klinische Wochenschrift, 1879, No. 36.

SOME CASES OF VENTROFIXATION OF THE UTERUS.

BY HASTINGS GILFORD, F.R.C.S. ENG.

I VENTURE to bring forward these few cases because the discussion on the subject of ventrofixation of the uterus by the British Gynæcological Society gives them some value from a statistical point of view. But apart from this they are, I think, worthy of publication owing to certain special features of interest. Thus, in one case the operation was done because of the perforation of the uterus by a curette. In another intussusception of the bowel set in after the operation, resulting in self-cure. In two of them both ovaries were also removed. In four Keith's operation was performed.

CASE 1.—A woman aged thirty-five years had severe prolapse of the uterus for five years and had suffered much from enlarged and painful ovaries. No pessary could be tolerated and she became thin, haggard, and utterly dispirited from constant pain and uneasiness. Both ovaries were removed in June, 1893, and the uterus was sewn to the edges of the wound with four silk sutures. It was nearly eighteen months before she had fully recovered her health, but now she is in an excellent condition.

CASE 2.—This patient was a woman aged thirty years. Keith's operation was advised owing to persistent pain in the right ovary and retroflexion of the uterus, but the left ovary being found unhealthy at the time of operation was also removed. This was done on April 18th, 1895, and so far as the displacement is concerned the result is satisfactory, but the ovarian disturbance, though better, has not yet disappeared.

CASE 3.—In November, 1894, I was asked to see a woman

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aged twenty-six years with a view to the operative treatment of a band which could be felt in the upper part of the vagina, apparently dragging the cervix towards the right and tilting the uterus to the left. The uterus was also displaced backwards and the left ovary was large, prolapsed, and excessively tender. The patient herself was anæmic and depressed by two years of ovarian disturbance which had resisted all treatment. The band was first cautiously divided without influencing the displacement, and then Keith's operation was performed by clamping the left ovary externally. Convalescence was retarded by the appearance of white leg on the left side on the fourteenth day. She is now, however, in good health.

CASE 4.—This patient had suffered from pelvic trouble for six years and had been treated by various gynæcologists without permanent benefit. In the beginning of 1892, when I first saw her, her husband was abroad. Her symptoms were then not of sufficient severity to render an operation necessary, but in the summer of 1894 her husband returned and, her symptoms becoming progressively worse, it was decided that the case should be taken in hand. I found, on examining under ether, that the right ovary was enlarged and so displaced as to bring it under the fundus of the uterus, which was bent down over it. After six weeks' futile treatment by rest in bed, hot-water irrigations, and pessaries I removed the ovary by clamping the pedicle in the wound. She made a speedy recovery and is now quite well.

CASE 5.—In January, 1893, I was consulted by a woman aged twenty-nine years for pelvic pain and metrorrhagia. I found she had an enlarged and retroflexed uterus from which there had been a discharge of blood for five weeks, following amenorrhœa of six weeks' duration. She was given an anæsthetic, and after I had removed the products of conception the uterus was carefully curetted with a blunted "sharp" curette and irrigated with boiled water. It was then noticed that less water came out than flowed in, and a sound was passed which, to my horror, went in up to the handle without a hitch. It was now evident that the fundus of the uterus had been perforated by the curette, and on taking into consideration the size of the aperture, the fact that the discharge from the vagina was offensive, and that some of the contents of the uterus had been washed into the abdominal cavity, it seemed best to perform an abdominal section. The necessary instruments were therefore sent for and prepared while the anæsthetic was continued. On opening the abdomen and inspecting the uterus it was found that an irregularly star-shaped hole had been made through the highest part of the fundus. It was quite closed, and the edges, though ragged, were neither soft nor bruised. After washing out the abdominal cavity with boiled water the fundus of the uterus was sewn to the anterior abdominal wall in such a way that the part adjacent to the perforation was extra-peritoneal. Catgut sutures were used to attach the superficial layer of the uterus to the peritoneum of the abdominal wall, while two silk sutures transfixed the parietes and went deep into the substance of the uterus, one above the aperture and the other below it. A little bloody discharge afterwards oozed from the fundus of the uterus, but in fourteen days the wound had closed and the uterus now remains firmly fixed in place. That which most surprised me in this case was not so much the complete absence at the time of any indications of the mischief I had done with the curette, though I had it well under control, as the lack of that softness or œdema of the uterine wall which one is led to suppose is usually present in these cases. The tissue of the uterus on inspection was seemingly of normal consistency. Moreover, the curette was apparently pushed and not scraped through the uterus, for the perforation was not at the sides where the scraping action of the instrument would come into play, but at the fundus where such an action would have been at a minimum. Writers (e.g., Mr. Lawson Tait[1]) have often called attention to the frequency of this accident, of the impossibility of always avoiding it, and of the rarity with which it is attended with evil results. But under the circumstances I have detailed I think it must be safer to deal with the uterus in the way I have indicated than to leave the matter to chance. The cure of the displacement is also of positive advantage to the patient. I do not think there can be any question that such a course is preferable to that of removal of the uterus, which has been suggested by some continental operators.

CASE 6.—This was of a similar nature to the preceding, except that the symptoms were more severe and the displacement had resisted all treatment. At the time the patient was placed under my care the bleeding had been going on for nearly three months and the discharge was offensive. After curetting the uterus Keith's operation was performed, the right ovary being clamped. On the second day, after the subsidence of the nausea due to the ether, she complained of griping pain across the middle of the abdomen attended with nausea and occasional eructations and vomiting. The pulse was 98. Sulphate of magnesium and enemata of soap and water, of turpentine, and of glycerine (4 oz.) were successively tried without result. Nothing but hot water was now given by the mouth, and after twelve hours the same aperients were tried again with good effect. The pinching pain and nausea and vomiting still continued at increasing intervals for nearly a month after this date, and the bowels acted loosely from two to six times a day. The temperature also went up each evening to 102° F., and dropped to the normal point in the morning. The abdomen became slightly tender and distended, but there were no local signs indicative of pelvic or abdominal mischief. On the fifth day the patient had a shivering attack, when the temperature rose to 102·5°. The uneasiness with which one regarded the continuance of these symptoms was, however, much lessened by the fact that the pulse was of good volume and not rapid, the tongue was moist, and the patient herself looked well and was free from the feeling of illness. On the sixth day the motions became exceedingly offensive. On the fourteenth day the mystery was partly cleared up by the protusion from the anus of a shred of membrane which stank horribly, and proved on inspection to be a piece of the entire thickness of the large intestine, triangular in shape, the base being six inches and the sides five inches long. No other pieces were found. Other symptoms continued, however, with diminishing severity for a month after the operation. Though never before so affected, she now suffered from mixed internal and external hæmorrhoids A rectal examination revealed nothing amiss. The patient is now, six weeks after the operation, steadily improving, and has lost all her symptoms save slight looseness of the bowels. For lack of any better explanation I attribute the complication that ensued in this case to intussusception of the colon from irregular contraction of its walls during or subsequently to etherisation. The case is a good example of the unforeseen accidents that are prone to attend all major operations. It serves to show that no abdominal section can be considered safe however simple the operation.

CASE 7.—This case was similar to Case 3. The patient was twenty-six years old and the results have been excellent.

In none of these instances has the uterus become again displaced. In none of them has there been any trouble with the bladder with the exception of frequent micturition for a few hours after the operation; and even that was present in only two cases. Pregnancy has not followed in any case. I prefer Keith's operation even when there is no ovarian disease because of the mortality which has hitherto attended the performance of immediate suturing of the uterus to the abdominal wall. This mortality I feel sure is far higher than may be inferred from published statistics, for I have myself heard of several fatal cases which have never been made public.

Reading.

[1] THE LANCET, Aug. 10th, 1895.

ON THE DISSECTION TO EXPOSE THE LENTICULAR GANGLION.

BY EDWARD FAWCETT, M.B. EDIN.,
PROFESSOR OF ANATOMY, UNIVERSITY COLLEGE, BRISTOL.

THIS is a ganglion which is often read about but seldom seen—at all events, satisfactorily. The object of this short communication is to point out how not only the ganglion but its minute branches and roots may always be demonstrated with no difficulty whatever. Most works on practical anatomy recommend the student to dissect the orbit from above. So far as the general contents of the orbital cavity are concerned this method is as economical and satisfactory, perhaps, as any, but it is extremely unsatisfactory so far as exposure of the lenticular ganglion is concerned. Professor

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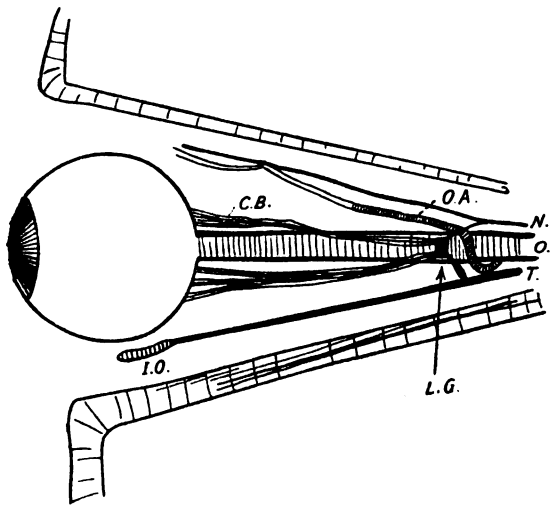
Macalister in his "Text-book of Human Anatomy" recommends the dissection of the orbit from the outer side. This method combined with the other gives the most satisfactory view of the orbital contents that can be obtained by the student.

Let us, therefore, suppose that we have removed the outer bony wall of the orbit and have cut through the periosteum of that wall; we will then be struck with the large size of the external rectus muscle which forms a broad covering for the orbital fat which is seen to project below its lower edge. Our duty is now to lift up the external rectus muscle as far as it is possible to do so; we may then raise the fat of the orbit from the lower periosteal wall of the cavity and in doing so we soon expose the inferior rectus muscle. Having exposed this muscle we proceed to make longitudinal cuts through the orbital fat till we expose a thick nerve trunk—that part of the inferior division of the third cranial nerve which goes to the inferior oblique muscle. Having secured this nerve trace it back to its origin, passing the back of the scalpel along its upper aspect; when near the apex of the orbit our progress is arrested by the emergence of a short and thick nerve trunk in length about one-eighth of an inch. This trunk is the motor root of the lenticular ganglion and by following it upwards and forwards the ganglion is found and recognised by its faint reddish appearance. Up to this point the dissection tallies almost exactly with that given by Macalister and is really based on his description. Now comes the essence of the dissection. The ganglion having been exposed, place the head on its side—that side away from the orbit which is being dissected down-



Lenticular ganglion of left side. O, Optic nerve. O A, Ophthalmic artery. N, Nasal nerve. T, Third nerve (branch to inferior oblique). I O, Inferior oblique muscle. L G, Lenticular ganglion. C B, Ciliary branches.

wards; now pour into the dissection some pure spirit and move it backwards and forwards with the end of the handle of the scalpel. In a very short time an almost magical effect is observed, for not only is the ganglion fully displayed, but every branch going to or coming from it is exposed too, and no further dissection with the knife is needed. The ganglion becomes a reality in the minds of students and not what I am afraid it too often is remembered as—something one sees in plates only. It is seen on the outer side of the optic nerve lying with its long axis placed vertically in the concavity of the ophthalmic artery—that concavity formed by the upward and forward bending of the artery on the outer side of the optic nerve. (*Vide* diagram.) The ciliary branches of the ganglion will be seen to pass forward from the antero-superior and inferior angles of the ganglion in two bundles which ultimately resolve themselves into many branches.

Bristol.

ROYAL BRITISH NURSES' ASSOCIATION.—The last sessional lecture of the season will be given on Thursday, April 23rd, at 8 P.M., at the offices of the Association, 17, Old Cavendish-street, W., by Sir James Crichton Browne, M.D. Edin., F.R.S., the subject being "Facial Expression."

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF DEXTROCARDIA.

BY P. N. GERRARD, M.B., B.CH. DUB.

IN January last I was called to see a female aged twenty-six years, well nourished but somewhat anæmic, who was suffering from orthopnœa and was in great bodily distress. She had always enjoyed fair health up to about two and a half years ago, at which time she had an attack of "rheumatism," but had recovered sufficiently to return to her employment. She was a dressmaker and used to carry large bundles of clothes and work the sewing-machine till late at night. Her heart seemed to have first felt the strain upon it about this date (1894), and her condition had gradually but steadily become worse until in February, 1896, the slightest exertion causing extreme dyspnœa and severe palpitation. Of infantile diseases she had had only scarlet fever and measles, both of them so mildly as not to have needed a medical man, and she had never had pleurisy. Her mother had hæmoptysis and three children of the family died in infancy. Her pulse was regular, somewhat more sudden than usual; the ulnar and digital pulse was well marked; the thorax was normal in shape, the breasts were not well developed, but otherwise she was well nourished. Her heart was in an unusual position, as was sufficiently evident from the rhythmical rising and falling of the right nipple. A fairly well marked *frémissement cataire* could be felt over the abnormal apex beat, which was situated on the right side and four and a half inches external to the ensiform cartilage. No impulse was to be felt in the normal position of the apex beat. The superficial area of cardiac dulness extended from the third right interspace downwards and outwards to the apex beat (in the position before mentioned) mingling with the hepatic dulness, and therefrom apparently extending on into the right axilla. At the apex a double murmur was heard, the systolic being transmitted into the right axilla and being well heard at the inferior angle of the right scapula; the point of maximum intensity of the murmurs was at the apex. Proceeding further to examine the conduction of the murmurs they were found to wane as the sternum was approached, their sound being replaced by a single localised presystolic murmur best heard about the junction of the right sixth costal cartilage with the sternum, which I took to be a tricuspid murmur. Over the aortic area a very distinct double murmur was heard in the normal aortic situation, the systolic being conducted along the great vessels with marvellous distinctness outwards as far as the external clavicular origin of the pectoralis major muscle; this murmur was very well marked indeed at the sterno-clavicular articulation. In the normal position of the pulmonary valve a systolic murmur was heard which was quite independent of the aortic systolic murmur and which was conducted on the left over an area of about two and a half inches in diameter round the normal position of the valve in the second left interspace. Hæmaturia was present when the urine was last examined about three weeks previously. The spleen, if enlarged, must be only slightly so, as I have never been able to palpate it below the ribs. The liver was apparently normal in size and position. The menses had always been scanty and pale. During a short period at the beginning of an acute attack of rheumatism, from which the patient is still suffering in some degree, the bases of both lungs were congested, but this had since cleared up, except on the right side, where there still remained some dulness. About the middle of February this year she had a sudden seizure in which, as described to me by her mother, "she sat up in bed and became so breathless and panting that it was thought she would be smothered, and kept groaning in agony with the pain in her side." I suspected embolism of a branch of the pulmonary artery to be the cause. It was very difficult to examine the fundus oculi on account of the excitable condition of the patient, but I believe pulsation of the retinal vessels to be present in a marked degree. As the patient

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has never had pleurisy or any acute disease, the rheumatism mentioned being of a mild character, I am inclined to believe the case to be of congenital origin.

Tamworth, Staffordshire.

BONNET-PIN IN THE MALE URETHRA.

BY GERARD C. TAYLOR, M.A., B.C. CAMB.,

HOUSE SURGEON, STAFFORD INFIRMARY.

THE accompanying figure accurately shows the length (six inches) of a bonnet-pin I removed from the urethra of a young man last July. Two very similar cases were reported in THE LANCET of 1894.[1] In the present case the patient's account of the accident, though not so ingenious, was at least credible. He stated that a woman with whom he had been spending the evening passed the pin, head first, up his urethra and accidentally allowed it to slip from her grasp. On examination the point of the pin proved to be an inch and a half from the meatus. With a pair of serrated sinus-forceps I succeeded in getting a firm hold on the shaft of the pin close to the point, and extracted it without further difficulty. In both of the cases alluded to above the pointed extremity of the pin, directed towards the external meatus and lying a little distance within it, could not be disengaged from the urethra and was therefore thrust through the tissues as far as the head, after which the operator, having hold of the stem of the pin, was able to reverse its direction in the urethra and to pass it out of the meatus head first. In neither of these cases did the subsequent ill-effects amount to more than a little soreness on micturition lasting only for a day or two.

CASE OF REPEATED CHOLECYSTOTOMY.

BY W. E. TRESSIDER, M.B., B.S. LOND.

THE patient, who was a female, first came under observation in December, 1893, complaining of jaundice, loss of appetite, indigestion, and weakness. She had been ailing at this time for five months, the illness commencing as a bilious attack after which she soon became jaundiced and remained so, the colour gradually increasing in depth until she came under my care. The illness had not been characterised by any severe attacks of pain, but chiefly by a feeling of nausea with indigestion and loss of appetite. After she had been under medical treatment for seven weeks I advised an operation, although no definite swelling could be felt in the region of the liver. The first operation was performed on Feb. 6th, 1894, but nothing definite was found. The gall-bladder was situated very deeply on the under surface of the liver, but nothing could be felt in it, and the abdominal wound was closed up without more than this exploratory procedure being accomplished. The symptoms after this continued much as before until the following June, when the patient had for the first time a violent attack of pain situated chiefly in the back, but also in the pit of the stomach. Her appetite, which before this had improved somewhat, again became very bad and she continued to get worse, having slighter recurrence of the pain, until July 25th, 1894, when, owing to a swelling having become perceptible over the region of the gall-bladder, I advised a second operation which was performed with the result that ninety-two calculi were removed. After this operation she was much better, regaining strength and weight, and for a time did not suffer much from either pain or indigestion, but this improvement was only temporary, for the pain recurred with increased violence, the patient lost strength and weight rapidly, and for a month or six weeks in October and November, 1895, she was in constant pain and almost entirely confined to bed. A third operation was performed on Nov. 30th, 1895, and calculi were again removed—a large one from the dilated common bile duct situated deeply in the abdomen, and eight others. Since this operation the patient has felt well; she has increased three stones in weight, her urine and fæces are now natural in colour, and she can eat ordinary food. This case exemplified a point to which attention has been drawn before—viz., that second and subsequent operations on the abdomen are accompanied by less shock than the first. Although little was done at the first operation the shock was very great, but it was slight at the later operations although the second occupied an hour and a half in its performance and the third more than an hour.

Nottingham.

[1] THE LANCET, Sept. 22nd and 29th, 1894

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON HOSPITAL.

TWO CASES OF EXTRA-UTERINE GESTATION.

(Under the care of Dr. HERMAN.)

THESE cases form a useful contribution to the subject of ectopic gestation to which attention has been directed by the papers read before the Medical Society at a recent meeting.[1] It is not probable that the condition is becoming more common, but that operation is being more frequently performed in consequence of an earlier and better diagnosis with a more accurate knowledge of the gravity of the condition. The terms idiopathic peritonitis and pelvic hæmatocele are less frequently given as a final opinion of the nature of the patient's suffering; the cause of these affections is sought. The statistics of Formad show the general incidence of ectopic gestation, for in a series of 3500 general necropsies he found it in thirty-five instances. The reasons for operating when the hæmorrhage has taken place outside the peritoneum are suppuration in the hæmatocele, repeated hæmorrhage into the sac, or the continuation of fœtal life. The first of these cases will remind our readers that it is not always necessary to operate through the abdominal wall, as might be imagined from a consideration of the treatment adopted in the cases to which allusion is made above—those read before the Medical Society.

CASE 1. *Tubal pregnancy leading to tubal mole and intra-peritoneal hæmatocele; incision by the vagina; removal of tubal mole; recovery without bad symptoms.*—A woman aged twenty-eight years was sent to the London Hospital by Dr. Bate of Bethnal-green and admitted on Feb. 9th, 1896. She began to menstruate at thirteen years of age and had always been regular, the flow being scanty and painless. She had

[1] THE LANCET, March 28th, 1896.

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had four children and no miscarriages. Her last child was born on Nov. 5th, 1894. She nursed the infant until December, 1895. Her first menstruation after the confinement was in October, 1895. Her last menstruation ceased on Jan. 13th, 1896. Soon after the last-mentioned date she took a hot bath and thought that she then caught cold. Ever since she had had bleeding from the vagina and pain in the lower abdomen. The bleeding was continuous every day, but not great in quantity. When admitted the patient was found to be well nourished but slightly anæmic. On abdominal examination a swelling was felt rising out of the pelvis two and a half inches above the pubes. By the vagina the uterus was found so pushed forwards and upwards that it formed the most prominent part of the abdominal swelling. Behind it was a convex, tense swelling bulging down Douglas's pouch. On Feb. 29th the swelling was larger. On abdominal palpation it was felt to reach to within three fingers' breadth of the umbilicus. By the vagina the uterus was found still further displaced forwards and upwards and the swelling behind it was as big as a fœtal head. By the rectum the swelling was felt to be altogether in front of it, not surrounding it laterally. There was no fever. The fixity of the swelling and the displacement of the uterus made it clear that the effusion was under pressure, not free in the peritoneal cavity. The absence of fever and the presence of anæmia and of slight uterine hæmorrhage made it probable that the effusion was blood. As it was increasing it seemed that the cause of the bleeding was still active, and that therefore interference was indicated. On March 3rd an incision big enough to admit four fingers was made in the posterior vaginal cul-de-sac. Fluid blood and clots came away. With the fingers the cavity was thoroughly emptied and examined. It had a firm concave roof. On the right side and behind a mass was found lodged in a cavity bounded by a fringed wall which projected into the main cavity. This was detached and removed. The fringed wall was plainly the open end of the Fallopian tube. The cavity, after being emptied, was loosely packed with iodoform gauze. The solid mass removed measured two inches by one inch and a half. It appeared to consist mainly of clotted blood, but at one part was a reddish-white solid lump about the size of the kernel of a nut, from which processes seemed to go out into the clot. This was afterwards examined microscopically and found to consist mainly of fibrin, among which were unmistakable chorionic villi. On the 6th the gauze was removed. The cavity was afterwards daily washed out with a saturated solution of boric acid. There was no fever. Small clots occasionally came away, but there was no considerable hæmorrhage. On the 24th the uterus was freely movable. The cavity behind it measured only an inch and a half in length. The patient went out well on April 10th.

CASE 2. *Tubal gestation; early death of the fœtus; subsequent hæmorrhage into closed Fallopian tube; removal; recovery.*—The patient, a strong, healthy-looking woman aged twenty-one years, gave the following history. She had been married two years and had had one child, born in May, 1894. She made a good recovery and nursed the baby. She menstruated for the first time after the birth of the child on March 27th, 1895. Excepting during childbed she had never been laid up, and since the delivery she had been well except for a little discharge of "whites." On April 26th, 1895, she was suddenly seized with pain in the left side of the lower abdomen. She fainted, and on recovering consciousness vomited, and there was a little bleeding from the uterus. With rest in bed the pain and bleeding gradually diminished, but four days afterwards it recurred as severely as before and the bleeding also returned. The symptoms gradually got better and she resumed her household duties. On May 12th the pain and bleeding again returned, and on May 18th she came to the London Hospital and was admitted. She had weaned the child shortly before admission. On abdominal examination there was some increased resistance low down on the left side. Examination by the vagina showed that slight hæmorrhage from the uterus was going on. The uterus was displaced slightly forwards and to the right by a swelling behind and to the left of it. The swelling felt elastic; its lower outline was convex; its upper limit did not reach higher than the fundus uteri; it was tender on pressure. Examination by the rectum revealed that the swelling did not surround the bowel, but reached to the pelvic wall on the left side. On June 9th the physical signs were much the same. The swelling was not larger. Since admission the patient had had two attacks of pain, each accompanied by increased bleeding from the uterus. For private family reasons the patient left the hospital. The patient returned to the hospital on June 18th. Since leaving it she had had several attacks of pain, accompanied by fainting and much more bleeding. On examination a rounded swelling was felt in the left lower abdomen. By bimanual examination it was found that the swelling in the left posterior quarter of the pelvis had increased to the size of a fœtal head. Operative treatment was therefore advised. On opening the abdomen the tumour was found to be the left Fallopian tube distended with blood clot. It was removed. The patient made a good recovery. The clot in the tube was carefully examined, but no trace of a fœtus could be found in it. Microscopic examination of sections of the wall of the tube showed unmistakable chorionic villi.

Remarks by Dr. HERMAN.—In Case 1 the increase in size of the swelling, indicating fresh hæmorrhage, pointed out the necessity of interference to remove its cause. There were two ways of doing this—by the abdomen or by the vagina. By abdominal section the general peritoneal cavity would be opened and the patient left with a scar in the abdominal wall, but the parts could be seen and treated with greater precision. This last consideration would make abdominal section better treatment than tapping by the vagina or making a small incision simply to let out the blood. In favour of approaching the disease by the vagina were the great bulging of Douglas's pouch and displacement of the uterus, which showed that the collection of fluid was quite shut off from the peritoneal cavity; hence this need not be opened and there would be no scar. By making a free opening, inserting the hand, and carefully examining the wall of the cavity, not only the blood was liberated, but the cause of the bleeding (the tubal mole) was found and removed. In similar cases I think this the best practice to follow. These two cases are instructive as illustrating a clinical fact—viz., that when the ovum in a tubal pregnancy has died, and the pregnancy as pregnancy has ceased to advance, the patient is not on that account free from danger; it cannot be said that the morbid condition is one which is innocuous and certain to get well if let alone. In both these cases considerable bleeding took place although the embryo must long have been dead.

KASHMIR MISSION HOSPITAL.

TWO CASES OF LAMINECTOMY FOR POTT'S DISEASE; REMARKS.

(Under the care of Mr. ARTHUR NEVE.)

MR. NEVE refers in his remarks to some of the principal reasons for performing the operation of laminectomy in cases of paraplegia due to spinal caries. We agree with him in the opinion that it is an operation which is rarely required, although from his statement it appears he has found it necessary in 10 per cent. of all cases seen at the Kashmir Hospital. As a rule we should operate only in grave cases in which acute compression, the appearance of respiratory or urinary complications, and the rapid development of degenerative processes force us to interfere, or in which the course of a chronic case is steadily toward a fatal termination although no advanced visceral tuberculous lesions are present. The opening of the spinal canal and the necessary manipulation of the cord has caused at times very severe shock, so that the idea of operating in such a manner as to get at the focus of disease without opening the spinal canal has been suggested to more than one surgeon. A procedure very similar to that which Mr. Neve has tried is credited to Dr. Ménard of Berck-sur-Mer. That surgeon makes a vertical incision at the point of greatest deformity through skin and muscles. One or two transverse processes are resected with gouge-forceps, also the posterior extremities of the corresponding ribs (subperiosteally). The periosteal canal of the removed ribs is followed with a curved director, the tuberculous focus in the vertebral bodies entered, and the diseased material cleared away. A double drain is then inserted and the cavity washed out with antiseptic lotion. He has had a certain amount of success with this method.

CASE 1.—A girl aged eighteen years was admitted to hospital with a prominent dorsal curvature and paraplegia of six months' duration. Both legs were much wasted and there was no voluntary movement, but in the left leg

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exaggerated reflexes and ankle-clonus were present. In both legs she experienced morbid sensations as of ice or fire and needle pains, but there was no ordinary sensation. Her general condition was good. On Sept. 18th, 1888, the operation of laminectomy was performed on the eighth and ninth dorsal vertebræ. There was no trouble from bleeding; a saw was used for removing the bone. The membranes of the cord looked healthy and pulsated freely. The wound was closed and healed firmly within a fortnight. At first she complained a good deal of increased pain, and on the third day it was noted that she could move her left leg, but any hope of improvement soon died away; and when she was discharged from hospital a month after the operation the lower limbs were in the same paralytic state.

CASE 2.—A boy aged seven years had been paraplegic for only two months, though the curvature was of two years duration. The paralysis was very complete, being sensory as well as motor. Extension with weights and pulleys was applied to the head and the feet. After six weeks' treatment it was noted that "he seems to localise better when touched, also moves toes and draws up knees, but cannot straighten them." No further improvement took place till after operating. On June 21st, 1895, laminectomy was performed. The spines of the fifth and sixth vertebræ were severed with bone pliers, and then the corresponding laminæ. The dura mater looked healthy and the cord pulsated. At this moment the respiration seemed very embarrassed and it became necessary to turn the patient on to his back. The sensation in doing so was as if the upper and lower parts of the trunk were quite disunited, one of awful flaccidity. In a minute or two the pulse and respiration improved and the operation was resumed in a semi-prone posture. A drop or two of curdy pus was seen oozing from in front of the cord. This was syringed away, a little iodoform dusted in, and the muscular and skin layers carefully apposed with catgut sutures, not leaving any aperture for drainage. The wound was not seen till July 3rd, when it was found healed under the original dressing. Already sensation and power were returning. Ten days later the wound reopened and a little over one ounce of pus was discharged. He was taken away to his own village on Aug. 7th; at that time there was still some discharge from the sinus. In December he came to the hospital again and walked unassisted into the consulting-room. Both sensation and power had returned, but he was still in an emaciated condition.

Remarks by Mr. NEVE.—Operative interference in cases of Pott's disease has been rare in the past and will probably be no more frequent in the future. Except in those instances in which abscesses have to be dealt with, operations can only be indicated when the function of the spinal cord is affected by pressure—in other words, when there is paraplegia. The occurrence of paralysis in Pott's disease is variously estimated at from 8 to 30 per cent. But Mr. Muirhead Little[1] states that in over 75 per cent. of such cases the patients recovered power over their limbs under treatment by rest and extension. As some of those cured were paraplegic for months, it is evident that hasty operation is to be deprecated. There is a residuum of from 2 to 5 per cent. of cases in which the patients are hopeless without operation; but many of them are unsuitable for any severe operative measures owing to extreme debility, general tuberculosis, or other complications. So the scope for laminectomy is but small. Spinal caries is far from common in Kashmir. The hospital serves a population of over a million, but probably less than twenty cases of Pott's disease have been seen in the last ten years. Of these, four cases have been operated on—two on account of paraplegia and two in which abscesses had burst in the dorsal region. It is the former which are now in question. When Macewen[2] published his splendid series of laminectomy cases it seemed as if the usual cause of paralysis in Pott's disease was the presence of a connective tissue tumour (hypertrophic pachymeningitis) pressing upon the cord. A similar case was also published by Mr. Wright,[3] but such has not been the experience of Mr. Arbuthnot Lane,[4] who has usually found direct pressure by an abscess on the cord or occasionally bony narrowing of the canal. Nor in the two cases recorded above was there any noteworthy thickening of the spinal meninges. In the paraplegia of Pott's disease diagnosis does not keep pace with the possibility of treatment. In any given case the surgeon wants to know what is the pressure-producing condition. If it is recent (as in Case 2) and due to bony narrowing or to thickening of, or deposit on, the membranes laminectomy may be necessary as well as beneficial, but it must be remembered that it weakens the spinal column. It has been proposed in Pott's disease to wire the spines of the vertebræ together. This is a comment upon laminectomy. It is noteworthy that in the above cases, as in others which have been recorded, improvement was connected with the evacuation of purulent matter. Such abscesses are usually anterior to the cord. It might be well in operating, after exposing the posterior surface of the laminæ, to pass a trocar forward between the transverse processes and explore both sides of the body for pus, which is present in a large percentage of cases. If found, the surgeon would then leave the posterior portion of the vertebræ uninjured and would direct his efforts to the anterior disease. In two cases of dorsal caries unaccompanied by paralysis I have endeavoured thus to attack the seat of disease. In both there were sinuses leading inside the thorax. The first case occurred in 1882 and the second in 1888. They were almost identical. In both the transverse processes of two vertebræ and portions of ribs were removed and the side of the bodies of the vertebræ gouged. In the first case the patient, when apparently convalescent, died quite suddenly from an unknown cause, possibly the bursting of an abscess inwardly. The other patient made a good recovery. All the above harmonise with the published accounts of other cases. They show that operation is not devoid of risk and often fails to afford relief; but with careful selection of cases and, of course, thorough asepsis the risk is worth running for the sake of benefiting one here and another there whose condition is otherwise hopeless, and with further experience better results may be expected.

[1] THE LANCET, July 23rd, 1892.
[2] Brit. Med. Jour., vol. II. 1888, p. 308.
[3] THE LANCET, July 14th, 1888.
[4] THE LANCET, Oct. 31st, 1891.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Note on the Endemic Fever of the Mediterranean.

AN ordinary meeting of this society was held on April 14th, the President, Dr. DICKINSON, being in the chair.

Surgeon-Captain M. LOUIS HUGHES communicated a note on the Endemic Fever of the Mediterranean. He said that no suitable name had yet been suggested for this specific form of fever, nor was there any heading in the official nomenclature of diseases under which it could be returned. For the purposes of the paper it was termed "Mediterranean fever." It was endemic in various parts of the Mediterranean, and possibly in the Red Sea and elsewhere, while it also occasionally occurred in the form of localised epidemics. Though it appeared to have existed in Malta and Gibraltar since the beginning of the present century it was first accurately described by Dr. Marston in 1861 and had only found a place in English text-books during the last three years. Clinically this fever had a peculiarly irregular temperature curve, consisting of intermittent waves of pyrexia of a distinctly remittent type. These waves of pyrexial intensity were separated by periods of apyrexia or abatement of severity, giving a peculiar relapsing character to the fever. In some instances the daily remissions became so marked that the temperature might become intermittent (but non-paroxysmal) in character. Its duration was long and indefinite, the average pyrexial duration being from sixty to seventy days, the average stay in hospital over ninety days, while cases had been known to suffer from the pyrexial condition for over six months. This pyrexia was accompanied by progressive anæmia, a tendency to constipation, swelling and effusion in various joints, profuse perspirations, and a peculiar irritability of the nervous system characterised by sciatica and other neuritic symptoms. Pathologically the spleen was enlarged and softened, many of the organs were congested, but the intestines were free from ulceration. The microscopical appearances were those of toxic irritation of the tissues. A definite species of micro-organism (discovered by Bruce in 1886) was constantly present in those tissues where from clinical symptoms and post-mortem appearances it might be expected to be present.

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Pure cultures of the "micrococcus militensis" produced by inoculation into the tissues of monkeys a similar form of pyrexia and in all other points fulfilled the postulates laid down by Koch. The disease prevailed during the hot dry months between May and October, with a maximum prevalence in July, August, and September. It was not contagious, nor did there appear to be any close connexion between its prevalence and the milk, water, or food supplies. Its dissemination appeared to be brought about on shore by an aerial infection arising from drains or soil infected by the excrement of previous sufferers from the disease. By this means it entered the human system by way of the throat or air-passages. Its prevalence followed an inverse ratio to the amount and continuance of the rainfall. The mortality did not exceed 2 per cent. of cases, but the duration of sickness was very long. No specific drug at present in use would cut short the disease. Successful treatment consisted in aiding nature by careful nursing and dietary, by confinement to bed during the acute stages, by such symptomatic treatment as might be required, by removal from all sources of reinfection, and last, but by no means least, by a moderate regulation of temperature by the external application of cold, whereby fatal results were averted and severe cases converted into mild ones.

Dr. THIN said that when in Malta last autumn he endeavoured to find out if this disease was connected with malarial fever. He carefully examined the blood of six patients in different stages of Mediterranean fever to see if the parasite of malaria could be found in the blood. He could discover neither parasites nor pigment in the blood or the spleens of those whom he examined. Typhoid symptoms were characterised by their absence, and the intestinal lesions were not of typhoid nature. One characteristic of the disease seemed to be that the patients were quite unaware of the gravity of their condition. Professor Pisani of Malta had told him that whereas formerly the fever was confined to those parts of Malta where English soldiers or sailors were commonly present it was now common in the country districts. In the neighbouring island of Gozo the fever was formerly absent and patients were sent to convalesce there, but now the fever had taken root there as well. The fever was the most serious disease connected with Malta, and it was of the utmost importance to the Government to devise means to check its ravages. It occurred probably in other parts of the world, such as Hong-Kong, where a fever of the same type as that described had recently reappeared. In Sicily the disease was formerly not known, but there was an epidemic in 1872. For some years afterwards a few sporadic cases occurred; then in 1884 an epidemic broke out at Catania and also in country districts where the air and sanitary conditions were beyond suspicion. Cases also occurred on the sides of Etna. It was a fever with an absence of symptoms that were specific or pathognomonic, and in most instances there was excessive sweating. At the apex of the lung a condition was often present which suggested phthisis but was not so. He held that the Government should take steps to have the fever fully investigated.

Dr. NORMAN MOORE said that Dr. George Cleghorn, in a book on the "Diseases of Minorca," described an affection which was clearly Mediterranean fever, and which was existent in Minorca between 1740 and 1751, at the time when the island was occupied by our troops. Dr. Cleghorn was of course prejudiced with the old classification of fevers and he regarded this as a variety of tertian, but his descriptions were very clear and he recorded 100 post-mortem examinations. He mentioned that definite destructive ulceration of the mucous membrane of the large intestine sometimes occurred; that certain varieties of skin rash appeared in the course of the affection; and that it was often complicated with pleurisy, and doubtless under this term he included croupous pneumonia also.

Dr. PATRICK MANSON said that he had had but little experience of this affection. He had seen several cases in London and one or two in China. In Hong-Kong he had seen a patient suffering from what he now thought must have been Mediterranean fever. In Amoy he once witnessed an epidemic of a fever in which there were two pyrexial waves separated by an apyrexial interval. As our knowledge became more accurate a great variety of fevers would no doubt be found to exist. From what was known of the affection under discussion it certainly was not malarial and not typhoid. Every credit was due to Surgeon-Captains Bruce and Hughes for the work they had done on the subject.

MEDICAL SOCIETY OF LONDON.

Osteitis Deformans.—Tumour of Liver associated with Jaundice.—Lymphatic Obstruction of Lower Extremity.—Congenital Angeioma of Neck.—Lateral Spinal Meningocele.—Spontaneous Dislocation of Patella.—Hairy Mole of Face—Sarcoma of Rectus Abdominis.—Cervical Rib.—Carcinoma of Larynx.

An ordinary meeting of this Society, for the exhibition of clinical cases, was held on April 13th, the President, Sir JAMES CRICHTON BROWNE, being in the chair.

Dr. DE HAVILLAND HALL exhibited a man aged forty-eight, who was the subject of Osteitis Deformans. The left leg had been noticed to be getting larger for seven years and the head for two years. The enlargement of the head was more on the right side and the maximum circumference was 25¼ inches. The lower jaw was slightly thickened but the face was not otherwise involved. The left tibia and femur were especially thickened, the right to a less degree. There was also angular curvature in the lower dorsal vertebræ. He had suffered from much pain which he referred to the bones and it was noteworthy that this had been quite relieved by the administration of quinine with iodide of potassium.—Dr. de Havilland Hall then showed a case of Tumour of the Liver associated with Jaundice. The patient was a man aged thirty-one, whose illness commenced with vomiting, pain in the abdomen, diarrhœa with clay coloured stools, bile in the urine and irritable skin. The liver dulness extended below the umbilicus and the organ was painless on palpation. He remained in the hospital nearly three months and on his discharge was still jaundiced. Dr. Hall regarded the case as one of hydatid cyst and looked upon the jaundice as catarrhal in character, spreading up from the duodenum into the common duct.—Dr. de Havilland Hall likewise showed a case of Lymphatic Obstruction of the Left Lower Extremity. The patient was a female aged twenty-five who had suffered from a swelling of the foot for four years. There had been no pain. The swelling extended up the leg to the thigh. The patient had never lived out of England. On admission there was a bluish discolouration of the leg, which disappeared on the adoption of the recumbent position. The leg was kept at rest, was bandaged, and iodide of iron with iodide of potassium administered. The leg was enormously swollen, did not pit on pressure, and the condition appeared to be allied to elephantiasis.—Mr. CLUTTON asked if there had been vesiculation. All the cases he had seen had presented a warty condition about the malleoli, and there were dilated lymphatic vessels which discharged a clear fluid. The cause of the lymphatic obstruction was difficult to find. If they occurred in young people the limb generally became elongated.—Mr. WATERHOUSE said that he had had had a precisely similar case under his own observation. The patient was a Jewish girl aged eighteen. The left leg was involved and no cause could be found, even after careful pelvic examination under an anæsthetic. On puncture of the limb ordinary lymph escaped. Martin's bandage was applied and this had produced a steady and continuous diminution of the circumference of the limb, which was one inch longer than its fellow.—Mr. G. R. TURNER asked if chyluria were present.—Dr. DE HAVILLAND HALL, in reply, said that the urine was normal and there had been no escape of lymph from the leg.

Dr. E. CAUTLEY showed a case of Congenital Distensile Tumour of the Neck. The patient was an infant aged five and a half months, who presented a swelling on the left side of the neck which became visible when the child cried. It lay behind the sterno-mastoid, but passed under that muscle. It was non-pulsatile and dull on percussion. He regarded it as a large venous angeioma.—Mr. BATTLE asked if there were any dulness in the upper part of the chest and whether the swelling had been tested with transmitted light.—Dr. CAUTLEY, in reply, said that the swelling was not translucent and that there was no chest dulness.

Mr. BATTLE exhibited a case of Lateral Spinal Meningocele. The patient was an ill-developed infant aged two and a half months who presented a congenital fluid swelling of the size of a goose's egg to the left of the upper part of the sacrum; the swelling presented alterations of tenseness when the child cried and it could be partly reduced on pressure, but the skin covering it was quite normal. A distinct deficiency could be felt between the posterior superior spine and the spine of the sacrum, and the poster. r

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superior spine was further away from the middle line than normal, being evidently displaced outwards.—Mr. Battle next showed the result of operation in a case of Spontaneous Dislocation of the Patella. The patient, a girl, was admitted to hospital in December last complaining of inability to walk far and a tendency to fall at times. The patella was found to have become dislocated on to the outer condyle of the femur, and on flexion to a right angle it slipped completely out of the intercondyloid groove. The quadriceps extensor was wasted, and this wasting was more marked on the inner side of the thigh. The external condyle was apparently ill-developed. Improvement followed osteotomy after Macewen's plan, but there was still a tendency to displacement outwards when the limb was fully flexed. This might probably be overcome by the use of special apparatus.

Mr. CLINTON DENT showed a case of Hairy Mole of the Face. The patient was a boy aged twelve, and the mole had been treated by repeated shaving of the cutis to get beneath the pigmentary layer. This shaving had produced a nævoid condition, and probably it would have been better to have excised the mole and applied skin grafts. It was remarkable that under the repeated shaving the hairs had become nearly white.—Mr. Dent also showed a woman, twenty-three years of age, with a Sarcoma of the Rectus Abdominis Muscle. The tumour appeared to be situated within the sheath of the rectus and was said to have at first diminished under the use of iodide of potassium. But it had increased markedly during the last fortnight, and other nodules could now be felt in its neighbourhood.

Mr. G. R. TURNER showed a case of Tumour of the Neck. The patient was a girl aged sixteen, who had only noticed the swelling of the neck for the last nine months; it had increased but slightly in size since November last. The swelling gave no trouble, except for numbness down the left arm. There was occasional grating on moving the scapula over the tumour. The mother had a bony swelling on the right side of her neck. They were both considered to be instances of cervical rib.—Mr. DENT doubted this diagnosis. He thought that there was a deformity of the ribs themselves, and a consequent displacement of the scapula.

Dr. GILBART SMITH showed as a card specimen a Larynx Affected with Epithelioma. It was removed from a man aged fifty-eight, who had suffered from his throat for six months. On examination it was found that the epiglottis was swollen and curled back; there was swelling of the right aryteno-epiglottic fold, and the space between the vocal cords was blocked by two or three excrescences springing from the base of the epiglottis. It would be thought that with such a condition the patient would have urgent dyspnœa, but as a matter of fact he did not suffer from dyspnœa till the day before his death. He died from heart failure a few hours after tracheotomy was performed. On examination the epithelioma appeared to have commenced in the neighbourhood of the epiglottis and then to have spread towards the right arytenoid cartilage.—Dr. DE HAVILLAND HALL said that if an obstruction were only gradually increased it could be borne without dyspnœa until the space for air entry was extremely small. He had recently seen a case which illustrated this fact.

CLINICAL SOCIETY OF LONDON.

Two Cases of Acute Abscess of the Liver.—Albuminous or Serous Expectoration after Paracentesis for Serous Effusion.—Sarcomatous Cranial Cyst.—Sequel to Case of Syphilitic Cranial Necrosis.

AN ordinary meeting of this society was held on April 10th, the President, Dr. BUZZARD, being in the chair.

Mr. R. J. GODLEE read the notes of two cases of Acute Abscess of the Liver. The first was one of pyle-phlebitis in a man aged forty-one years, who had an acute illness in June, 1895, which left him with pain in the region of the liver, for which he was seen in September. He had a hectic temperature and one rigor. There was obvious swelling of the liver. A drainage-tube was inserted. There was slight improvement for a day or two, which was not maintained. Post mortem there was old inflammation about the cæcum, clotting of the right branch of the portal vein, and the corresponding part of the liver was riddled with abscesses. The left portal vein was patent, and the left lobe of the liver was free from suppuration; the patient had also purulent meningitis. Remarks were made on the pathology and treatment of this condition. The second case was that of a previously healthy man aged fifty-eight. The disease began insidiously a month before he came under notice; there was very rapid enlargement of the liver accompanied by rigors. An abscess was found upon the under surface of the liver, containing about one pint and a half of stinking pus. The patient was very feeble before the operation and died of shock.—Mr. ARBUTHNOT LANE said that he remembered seeing a patient who was at first thought to be suffering from biliary colic, but the temperature rose to 103° F., and the gall-bladder became very distended and tender. On palpation he recognised that gall-stones were present, so he removed them in the usual way. The gall-bladder was adherent to all the surrounding structures, including the large intestine; he, therefore, made no attempt at exploration in its neighbourhood, but the gall-bladder was stitched to the skin and a tube left in. There was no jaundice. Two days later she had an attack of her old pain; the temperature was then normal, but it speedily rose as high as 107°, and the patient died seven hours later. At the post-mortem examination a large abscess was found behind the portal vein, and it was believed that this abscess had burst either into the main vein or into one of its branches.—Mr. SPURRELL asked why, in fixing the liver to the surface, Mr. Godlee had passed his sutures only half an inch into the organ.—Mr. GODLEE, in reply, said that the sutures were passed superficially because he believed that the pus was near the surface.

Dr. SAMUEL WEST read a paper on Albuminous or Serous Expectoration after Paracentesis for Serous Effusion. He said that it sometimes happened that during the paracentesis the patient began to cough and complain of some shortness of breath and soon after to expectorate a quantity of clear, frothy fluid. The cough was almost constant, though not very violent or paroxysmal, and with it there was some shortness of breath and, occasionally, also even considerable dyspnœa. Wheezing and crepitation were heard over the lung, usually over the affected side only, but occasionally on both sides. After the symptoms had lasted for an hour or two, or perhaps a little longer, they usually subsided and the case ran its ordinary course, but every now and then the symptoms were extremely severe and the patient died of suffocation. Albuminous expectoration was really very rare—one of the rarest events in pleuritic effusion. He related the case of a man aged about forty, who had a right-sided effusion for about three or four weeks. He performed paracentesis himself, using the syphon and not the aspirator. The fluid flowed readily, and after about forty ounces had been withdrawn the patient began to cough. The cough increased in frequency and caused much distress. This was soon followed by a little dyspnœa. Expectoration commenced in about ten minutes, and in an hour the patient brought up about eight ounces. The attack lasted for three hours, during which a pint of frothy fluid in all was coughed up. Over the right side (the side of effusion) there was a good deal of wheezing and crepitation, and a little also on the left. The patient's condition was in no wise such as to cause alarm, the symptoms rapidly subsided, and the patient made a good recovery. The cases of albuminous expectoration differed a good deal *inter se*. The attacks usually came on during paracentesis or immediately after it, sometimes as long as two hours. They lasted for a short time, usually not more than an hour or two, but occasionally longer. The quantity of fluid varied from a few ounces to even more than three pints. In character it was frothy, like that of acute bronchitis. It contained much mucin and little albumin. The physical signs were those of congestion of the lungs. There appeared to be no necessary relation between the duration of the pleurisy prior to paracentesis and the liability to serous expectoration, but, as a rule, the cases had lasted some little time. It was not to be connected with the use of the aspirator, for some of the cases, as in the present, occurred when the fluid was removed by the syphon only. The result was rarely fatal, and among the fatal cases some complication besides the effusion was generally found. The condition seemed less common than it used to be twenty or thirty years ago, probably because of the earlier performance of paracentesis. There were three explanations given of the phenomenon: 1. Perforation of the lung during paracentesis and the discharge of the pleural effusion through the lung; but the difference of the chemical characters of the two fluids showed that this explanation could not be correct. 2. The absorption of effusion by the lung. 3. Œdema of the lung; and this was the only

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satisfactory theory. In the non-fatal cases this œdema must be due to some transitory condition and was probably in most cases to be connected with the sudden distension of the lung after it had been collapsed for some time. In the fatal cases some organic lesion was generally found in addition which would account for the result. In some of them the lesion was such as would cause obstruction either of the vessels of the lung or of the bronchial tubes and possibly also of the lymphatics; in others there was disease of the opposite lung—e.g., general pleural adhesion or morbus cordis. The subject had been brought before the society with the object of eliciting the experience of others, especially as to its frequency, which appeared to be very much less than it was commonly stated to be, for the present instance was the only one which had come under Dr. West's observation out of a very large number of cases of pleural effusion.—Dr. DE HAVILLAND HALL said that when collecting materials for a paper on pleurisy some years ago a search into the literature showed that the only cases then recorded were foreign. The only case he had since met with was reported from the Canterbury Hospital in December last. These cases were not only exceedingly rare, but also of considerable gravity. He agreed that the condition was probably due to œdema of the lung, and for treatment he would try dry-cupping followed by sinapisms to the chest, while internally he would recommend nitrite of amyl or nitro-glycerine.—Dr. HALE WHITE referred to the case of a patient who was recently admitted into Guy's Hospital suffering from pleurisy with effusion. For four or five days after aspiration she expectorated albuminous fluid in considerable quantities. After the first aspiration the temperature began to rise and a second collection of fluid was forming which might necessitate a second aspiration.—Dr. F. L. BENHAM said that he could not understand why, if this phenomenon were due to pulmonary œdema, it was not met with in œdema from ordinary causes. He thought it more probable that there was thrombosis of the pulmonary vessels.—Dr. WEST, in reply, said that pulmonary thrombosis had been commonly observed in the recorded instances of this disease, and he agreed that this was a very probable explanation. It was rare for the expectoration to go on for more than forty-eight hours. In the minor cases no active treatment was required, while in the acuter forms there was not time to carry out treatment.

Dr. NEWTON PITT and Mr. ARBUTHNOT LANE gave the details of a case of Cranial Cyst of Sarcomatous Origin. The patient in 1891 first complained of pain on the top of his head where he found a soft area. He paid little attention to this condition till September, 1893, when it bulged outwards, forming a tumour as large as an egg. This swelling gradually subsided. On four occasions it became enlarged and painful, subsiding by the discharge of a considerable quantity of serum through an orifice which formed in the scalp. He was first seen in November, 1892, when the swelling measured about two and a half by two inches. It fluctuated and also pulsated distinctly. A few days after its contents discharged themselves, about an ounce being collected and examined, when it was found to be simply serous. A depression three-quarters of an inch deep replaced the swelling and was bounded by a thin, irregular bony margin, which in parts yielded slightly to pressure. In December, 1892, the scalp over this area was freely divided, when a space was exposed which extended some little way beneath the overlapping edge of bone. Covering the whole of the floor, being most abundant at its limits and destroying the overlapping bone, was a quantity of some material which was apparently sarcomatous in structure. This structure was verified by subsequent examination. As the growth was so soft and extensive it was not felt advisable to remove such a large area of bone and dura mater as would be required for its entire elimination, so the wound was closed. Since the operation, except for a temporary leakage of serum and for a subsequent attack of erysipelas, the patient has enjoyed excellent health and has had no return of the headache from which he suffered previously to the operation.—Mr. MAKINS said that he recollected a case which resembled that under discussion. A patient presented himself at hospital with a large tumour of the upper jaw of less than a year's growth and attended by severe hæmorrhage. There was a distinct history of syphilis, but the tumour did not present the usual characters of a gumma. The upper jaw was removed and the base of the skull scraped. The wound healed by primary union, and the patient left the hospital in a fortnight. About three years afterwards the patient came back with a recurrence, there being a large, open ulcer, with thick edges, which involved nearly the whole of his cheek. He was told that nothing further could be done for him, and he returned home. After a time the tumour underwent shrinkage, and in the course of five or six months it had entirely cicatrised. As to the question of its being a gumma, several competent microscopists were strongly of opinion that the appearances were those of a sarcoma. Other cases of this kind had been placed on record.—Dr. NEWTON PITT, in reply, remarked on the very small amount of growth that was present in this case compared with the amount of fluid.

Mr. H. W. PAGE related the sequel to a case of Syphilitic Cranial Necrosis recorded in the twenty-eighth volume of the Transactions of the society. The patient in July, 1894, had had compression of the brain and frequent convulsions, satisfactorily dealt with by trephining over the right Rolandic area and the removal of a large quantity of broken-down gummatous material from between the dura mater and the bone. A large piece of necrosed eroded bone was taken away at the same time. The lesions were obviously syphilitic. The patient returned to his work and was free from fits until early in November, 1895, when they suddenly returned and rapidly regained their former frequency, numbering from four to ten every hour. The fits seemed to begin in the left hand or the left angle of the mouth, but so quickly became general that it was impossible to be certain on this point. The site of the former operation was exposed, but no fresh disease was discoverable either there or in the immediate neighbourhood, and it was obligatory to desist from further exploration, as there was nothing in the symptoms to show where disease lay. It was strongly suspected that there was a cerebral gumma beyond surgical interference. The fits continued to increase in frequency and severity and in two days the man died exhausted. At the necropsy a large broken-down gumma, which it would have been impossible to remove, was found in the right frontal lobe.—Mr. CLEMENT LUCAS related the case of a woman who was supposed to have Cancer of the Breast. There was a ragged ulcer of one mamma exposing a costal cartilage. There was dulness over the lung on the same side, with the usual signs of pulmonary consolidation. Syphilis being suspected, she was given large doses of iodide of potassium without producing any appreciable result. Some weeks later she became subject to epileptic fits, in one of which she died. Post mortem the lung was found to be fibrous throughout, and a tumour was discovered growing from the dura mater and projecting into the frontal lobe. Other signs of syphilis were present.—Dr. CHAPMAN inquired if in Mr. Page's case the patient had been treated with iodide of potassium in the interval between the first and second attacks.—The PRESIDENT asked if an ophthalmoscopic examination was made on the patient's second admission. The lesion of the frontal lobe did not account for the motor disturbances, which were present up to the time of the fatal result. The tumour in the Rolandic area might really have been present when the patient was first seen, for such lesions had more than once been observed to exist without giving rise to any indication of their presence. Although fits might be relieved by an operation performed for epilepsy, yet they might return later perhaps because of the formation of cicatricial tissue at the site of the operation, and this cicatrix might act like a neoplasm and press upon the brain surface. Cases such as these were extremely difficult of explanation.—Mr. PAGE, in reply, said that the patient was put upon iodide of potassium when he left the hospital, but he had not followed systematic treatment. When first in the hospital large doses of iodide produced but little appreciable effect. It was possible that the fits might have been set up by the presence of the cicatricial tissue, but against this was the fact that the subjacent membranes were practically healthy. He referred to the case of a patient who suffered from fits due to some lesion in the Rolandic area, and in him the first indication of a gross lesion was the appearance of the growth through the scalp. It was syphilitic and was dealt with as in the case now related. The patient died from pyæmia and during the last illness the surface mischief gradually extended. He likewise mentioned another case at present in hospital of a boy who came in with a scalp wound which had been suppurating profusely for three weeks. On exploration a minute opening was found in the bone from which pus escaped. On trephining a large abscess was found in the frontal lobe, which was drained, and the child

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was now nearly well. There had been no cerebral symptoms before the operation, but the boy's temperament had altered and he had become bright and cheerful. There had been no fever or paralysis.

OBSTETRICAL SOCIETY OF LONDON.

Supposed Miscarriage at the Sixth Week of Gestation.—Deciduoma Malignum.—Exhibition of Specimens.

AN ordinary meeting of this society was held on April 1st, Dr. CHAMPNEYS, President, being in the chair.

Mr. MALCOLM read notes of a case in which a Miscarriage at the Sixth Week of Gestation was supposed to have taken place on Sept. 28th, 1895. On Dec. 20th the patient became very ill. She was admitted to the Samaritan Free Hospital and a perforation of the uterus was discovered. Death occurred on the 24th. Post mortem new growths were found in the uterus, the right broad ligament, the mediastinal glands, and the lungs.—Dr. HEBB reported that the growths were sarcomatous, and showed sections.

Mr. ALBAN DORAN communicated (for Mr. RUTHERFORD MORISON) a case of Deciduoma Malignum occurring in England.

Dr. HERBERT SPENCER read notes of a case of Deciduoma Malignum. He gave a full clinical history and post-mortem record of a case of this kind occurring in 1889, the first case, he believed, observed in this country. The disease occurred in a young Danish woman twenty-seven years of age, a secundipara, whose previous labour took place at the age of twenty years. The first symptom of the disease—passage of masses of the growth—occurred twenty-eight days after a normal labour, which was followed by a normal puerperium. Subsequently there was a fœtid discharge of masses of growth and of blood, and the disease ran a septic course, terminating fatally within ten and a half weeks of delivery. At the necropsy an ulcerated and gangrenous growth was found at the placental site, the ulceration and gangrene having nearly perforated the fundus. Secondary growth was also found in the cervix and in the lungs, but nowhere else in the body. The growth in all three situations was similar and was characteristic of deciduoma malignum, being apparently a large celled sarcoma with the typical "syncytium." A full account of the microscopic appearances was given. The necessity of early diagnosis and treatment by vaginal hysterectomy was pointed out.

Dr. EDEN read a paper entitled "Deciduoma Malignum: a Criticism." He referred to the number of cases of malignant uterine growth occurring subsequently to gestation which have been recently recorded, mostly by German observers. The most important cases were those of Sanger, Gottschalk, Marchand, and Whitridge Williams. Sanger introduced the term "Deciduoma malignum." He thought that in his case the tumour arose in the decidua and was composed largely of so-called "decidual cells." Dr. Eden believed that cells precisely like those found by Sanger occurred in the uterus under various conditions, and did not prove the origin of the growth in the decidua. Gottschalk believed that in his case the growth arose from a "sarcomatous transformation" of the stroma of retained chorionic villi. Whitridge Williams's case possessed the general characters of a sarcoma; tumours were present in the uterus, vagina, and vulva, and it was not clear which was the primary growth. He relied for his diagnosis upon the presence in the tumours of plasmodial masses which he believed to be syncytial in origin. Marchand records two cases, in both of which he found similar syncytial masses; he also claimed to have found cells derived from the fœtal ectoderm. In one case represented as a tubal gestation in a girl aged seventeen years there was no anatomical evidence of pregnancy discovered. The tubal mass may therefore have been a primary malignant growth. Dr. Eden believed that plasmodia not unlike those figured by Williams and Marchand as syncytial masses were frequently found in sarcomatous growths in other parts of the body, and doubted whether there was sufficient evidence to justify the view that they arose from placental relics. The case recorded by Mayer was referred to in which there seemed to be proof of the origin of a malignant growth in retained myxomatous villi (hydatiform mole).

The following specimens were exhibited:—

Dr. WILLIAM DUNCAN: Hæmato-salpinx with Torsion of Tube.

Dr. SPENCER: (1) Modified Ferguson's Speculum; (2) a skiagram of a Sireniform Monster; and (3) lantern slides illustrating his paper on Deciduoma Malignum.

Dr. GALABIN: (1) Myxo-sarcoma from the Urethra in a Child; (2) Sarcoma of the Cervix Uteri; and (3) Microscopic Sections from Material removed from the Uterus after Miscarriage (? Malignant).

Dr. CULLINGWORTH: Ruptured Tube and a Three Weeks' Embryo from the Sac of an old Pelvic Hæmatocele.

EPIDEMIOLOGICAL SOCIETY.

Puerperal Mortality in England and Wales from 1847 to 1895.

A MEETING of this society was held on March 20th, Mr. SHIRLEY F. MURPHY, President, being in the chair.

Dr. W. WILLIAMS, medical officer of health of Glamorgan, read a paper on Puerperal Mortality in England and Wales from 1847 to 1895. The subject, he said, was one of national importance, for though the experience of lying-in hospitals had shown puerperal mortality to be eminently preventable the number of women dying in childbed had not diminished and was about 4000 annually. These deaths were referable: (1) to puerperal fever, and (2) to accidents of childbirth, such as exhaustion, hæmorrhage, and convulsions. Calculated on the number of registered births the mean annual death-rate was 4·9 per 1000, or 2·0 from puerperal fever and 2·9 from accidents. The puerperal fever death-rate attained the maxima of 3·6 in 1874 and 3·3 in 1893, the latter being a remarkably dry year in which the mortality from typhoid fever, diphtheria, and diarrhœa was very high. The highest death-rate from accidents during the period under review was 4·5 in 1847 and the lowest was 1·9 between 1886 and 1889. The apparent increase in puerperal fever about 1874–75, when the Public Health Acts came into force, might be the result of a more uniform nomenclature. In the successive periods ending in 1854, 1864, 1874, 1884, and 1894 the death-rates from puerperal fever were returned as 1·72, 1·56, 1·78, 2·28, and 2·53, and those from accidents as 3·01, 3·07, 3·03, 2·24, and 2·41, the latter showing a marked reduction during the last twenty years, but the former steadily rising. Deaths from puerperal fever were twice as frequent in early life, and those from accidents fewest between the ages of twenty-five and thirty-five, rising rapidly afterwards. Primiparæ were specially liable to puerperal fever. From the returns since 1884 it appeared that the mortality from puerperal fever, which was 2·0 per 1000 for the whole country, ranged from 2·4 in Lancashire and 2·2 in Wales, Cheshire, and Northumberland, to 1·0 in Surrey. The conditions of the population varied greatly within each county, but generally the mortality was higher in those west of a line drawn from the mouth of the Tees to that of the Severn. That from accidents of childbirth ranged from 4·1 in North and 3·7 in South Wales to 1·9 in Rutland, the mean being 2·9, the highest rates being in Wales and the border counties and the lowest in Essex, Hants, Leicester, and Rutland. Taking the Welsh counties severally, the death-rate from puerperal fever was above the average for England and Wales in seven counties and below it in four. The highest and the lowest total mortalities alike were met with in purely agricultural counties, though it seemed that the mountainous districts had the higher death-rates. The population of the county of Glamorgan had increased tenfold since the beginning of the century and had doubled within the last thirty years, comprising at present more than half that of the entire principality, or at the last census 693,072 persons, of whom not more than 25,000 or 30 000 lived under strictly rural conditions in the peninsula of Gower and the Vale of Glamorgan. From an analysis of the density of the population and the social conditions of each registration district the conclusion might be drawn that puerperal fever was generally, though by no means always, excessive in the most insanitary localities; that the mortality in the larger Welsh towns did not differ much from that of towns in other parts of the kingdom; and that the prevalence of puerperal fever in the thickly peopled mining valleys was to a very great extent due to the general employment of ignorant midwives. The death-rate from accidents of childbirth, which for the whole Principality was not much above that for the rest of the kingdom, was very unequally distributed, being excessively high in these mining valleys, where, however, there ought to be no serious difficulty in obtaining

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medical assistance. In an epidemic of puerperal fever, of which a detailed account was given, the part played by the midwife was evident; the cases were chiefly among easy natural labours and primiparæ, and there was no connexion between this disease and scarlet fever which prevailed at the same time, the few parturient women who contracted scarlet fever being in no instance attacked by puerperal fever. Expectant mothers ought to be instructed in the duties and responsibilities of the puerperal state, and every woman should be taught the elements of nursing, with special reference to parturition and infectious diseases, for which, as a branch of technical education, classes should be formed by the county councils, who might also undertake the training of midwives whose practice should be, so far as possible, watched by the medical officer of health. Notification must be made universal, and on the occurrence of a case of puerperal fever the medical officer and his inspectors should forthwith see to the remedying of any sanitary defects and the disinfection of the premises, bedding, &c., suspending the midwife for a time.

Dr. WILLOUGHBY, pointing to the maps, maintained that no relation existed between the physical features of a district and the puerperal mortality. He did not believe that any specific fever, except erysipelas, could give rise to puerperal fever, and he attributed its frequent occurrence after easy natural labour to inefficient evacuation of the uterus. For many years he had always effected this completely by introducing his hand, and had avoided the exhaustion of tedious labour by using the forceps in the majority of his cases—precautions to which he ascribed the immunity of his patients from puerperal fever and hæmorrhage.

Dr. BOXALL held the same opinion as the last speaker with regard to erysipelas and other acute specific fevers. He could not explain why puerperal fever, although stationary in the provinces, seemed on the increase in London, where deaths from the accidents of childbirth were diminishing. The liability of primiparæ to laceration rendered them more susceptible of infection. He believed that it was useless to instruct ordinary midwives in antiseptic methods.

HUNTERIAN SOCIETY.

Perityphlitis.

A MEETING of this society was held on April 8th.

Mr. PERCY WARNER read a paper on a case of Perityphlitis. The patient, aged thirty-five years, was suddenly taken ill on July 24th, 1895, with pain in the renal region running in the direction of the ureter, marked tenderness in front and behind, vomiting, and rise of temperature. There was also a rigid condition of the muscles on the right side of the abdomen and frequent micturition. No well-defined tumour could be made out until convalescence was established. The patient had a relapse on Sept. 9th, with great pain and much swelling above the crest of the ilium. Mr. Charters Symonds operated and a quantity of foul pus was discharged. The patient made a good recovery. Mr. Warner remarked on the frequency of micturition, which at first suggested a renal origin of attack, but showed how the variability in length and position of appendix would account for the varying site of pain after suppuration has taken place. The position of the pain depends on the position of the abscess, which in the case related was situated at a point on the crest of the ilium at the junction of the posterior and middle thirds, where the abscess had burrowed out of the iliac fossa into cellular tissue of the gluteal region. The tenderness behind was remarkable. He pointed out that the treatment of this disease might be divided under the three forms of the malady: (1) Simple perityphlitis; (2) perityphlitic abscess, probably due to perforation; and (3) perityphlitis followed by general peritonitis due to acute perforation. The great difficulty consisted in deciding when to operate, and he remarked that no two symptoms can determine this, and that he relied not only on local signs, but also greatly on the general condition of the patient. He also referred to the important question of surgical treatment in the early stage and quoted the opinion of American surgeons, who advocated the removal of the appendix in all cases of perityphlitis. Lastly, he pointed out that in cases of relapsing typhlitis there was a fair consensus of opinion that the operation should be done in the quiescent period.

Mr. CHARTERS SYMONDS, after making supplementary remarks as to the operation, gave an account of his experience in such cases and referred to the fact that symptoms of perityphlitis were simulated sometimes by malignant disease, suppurating kidney, and active mycosis, and are occasionally apt to resemble typhoid fever. He considered it doubtful whether in acute cases an operation can be performed too early, and showed a perforated appendix removed from such a case with successful result.

The PRESIDENT, Dr. F. J. SMITH, Dr. H. SEQUEIRA, Mr. HOPE GRANT, and Dr. ARTHUR DAVIES took part in the discussion, and Mr. WARNER replied.

BRITISH GYNÆCOLOGICAL SOCIETY.

Adjourned Discussion on Ventro-fixation and Suspension of the Uterus and Allied Operations.—Exhibition of Specimen.

A MEETING of this society was held on April 9th, Dr. CLEMENT GODSON, President, being in the chair.

Dr. BANTOCK said he had never performed any of these operations. He had been able to afford complete support in all uncomplicated cases by means of a properly constructed diaphragm pessary with or without a plastic operation. When he opened the abdomen it was never on account of displacement, but on account of the condition of the appendages.

Mr. MAYO ROBSON read a short paper (communicated by Mr. Reginald Harrison) by Dr. O'Conor of Buenos Ayres, giving his experience of Ventro-fixation of the Uterus, which he had performed eight times with satisfactory results.

Dr. ELDER (Nottingham) had performed Alexander's operation in several cases some years ago, but gave it up for three reasons: (1) the uncertainty of finding the round ligaments; (2) the results were not permanent; and (3) it was not devoid of risk. In uncomplicated cases he had found curetting and plastic operation sufficient, and, like Dr. Bantock when he opened the abdomen in cases of adhesions, it was not because of the displacements, but because of the condition causing it. He had seen many fashions in gynæcology, and he thought that ventro-fixation was one of them which would not last.

Dr. ALEXANDER (Liverpool) thought his operation had not been quite fairly represented by some of the speakers at the last meeting and he wished to correct two impressions: (1) that it was a double abdominal section; and (2) that the results were not permanent. 1. He recapitulated the steps of the operation, showing that the abdominal cavity was not opened, and maintained that there was absolutely no risk in it, but some of the modifications of it which had been introduced were both unnecessary and dangerous. 2. Results: The cases of failure were due to want of attention to certain details. In cases of prolapse a plastic operation was often necessary, but he could not agree with Dr. Bantock's pathology of the condition. The first step in prolapse was the falling back of the uterus, and his operation cured this, not by drawing up the uterus, but by anteverting it. When there was retroversion he always inserted a Hodge pessary to keep traction off the round ligaments till they were firmly united in the wound. It was easy to tell when union had occurred, because pressure on the external abdominal ring caused traction on the cicatrix. When the uterus was also retroflexed he introduced a stem pessary for three weeks, keeping the patient in bed. In some of his earlier cases, where these precautions were not adopted, the condition recurred owing to tension on the yet ununited ligaments. He then gave in detail the after-histories of a number of his cases and said he felt justified in maintaining that the operation was efficient. He had in all performed several hundred operations. He admitted that there was a slight tendency to hernia in some cases, but had always found that this tendency, when it existed, could be readily controlled by a truss.

Dr. WINSON RAMSAY (Bournemouth) showed a Uterus from a patient aged fifty-five. In February, 1894, he performed ventro-fixation for prolapse. A year later she returned with the cervix protruding through the vulva. Thinking that the stitches had given way he performed hysterectomy, but then found that the cervix was elongated and that the fundus was still firmly attached to the abdominal wall. She made a good recovery.

Dr. WILLIAM DUNCAN, speaking at the President's invitation, said that Dr. Ramsay's specimen was interesting as

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illustrating supra-vaginal elongation of the cervix; but he presumed the condition existed at the time of the first operation. His experience of Alexander's operation was very different from that of Dr. Alexander; he performed it eleven times some years ago. Unlike Dr. Elder, he found the operation itself quite simple, but all the cases relapsed within four months. He did not use a stem pessary because he regarded it as a dangerous instrument.

Dr. LEITH NAPIER remarked that the first patient he operated on was now pregnant for the third time. He asked Dr. Alexander whether he found his operation practicable when there were adhesions; it seemed to him that in such a case the round ligaments might be ruptured, as happened twice to Edebohls of New York. He did not think more than three sutures were necessary in ventro-fixation; if the adhesions were too firm trouble arose during pregnancy.

Dr. HEYWOOD SMITH used only one suture in his first case, which was quite successful. The discussion illustrated the progress of public opinion, for he performed the first case of deliberate ventro-fixation twenty-two years ago, and THE LANCET in commenting upon it hoped that as it was the first it would be the last.

Dr. ALEXANDER, in reply to Dr. NAPIER, said that he operated at once when there were no adhesions; but when these were present he treated them by rest in bed with douches and tampons, by which they were readily overcome. He did not consider there was any danger in the stem pessary; as he used it he kept it in only while the patient was in bed.

The PRESIDENT, in thanking Mr. Mayo Robson for coming up to London a second time at considerable personal inconvenience, said that the debate had shown that the operation of ventro-fixation was not one to be put aside, but to be used with proper limitations.

Mr. MAYO ROBSON, in reply, thanked the Fellows for their attention and for their interest in the debate. If these operations were not safe they should not be done; but the discussion had demonstrated their safety. When they could cure a patient without operation they should do so, but many cases would only yield to operation.

Dr. WINSON RAMSAY (Bournemouth) showed a Pedunculated Myoma of the Uterus which occupied the pelvis and led to intestinal obstruction.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Infantile Scurvy.—Chemical Composition of the Carbohydrate and Albumoid Substances.—Exhibition of Cases and Specimens.

A MEETING of this society was held on April 10th, Dr. A. SYMONS ECCLES, President, being in the chair.

Dr. H. MENZIES read notes on a case of Infantile Scurvy. The patient was a male infant aged eleven months, the younger child of healthy, well to-do parents. He was well grown and until the present attack had always been healthy. After a few days' malaise on Feb. 18th of the present year his left eye suddenly swelled and became discoloured and all the classical signs of the disease rapidly developed—viz., loss of strength, pallor, limb swelling, exoptosis of the left eye, spongy gums, bruise-like ecchymoses, and minute purpuric spots. A rapid disappearance of all the symptoms followed the administration of an anti-scorbutic dietary of fresh milk, raw meat juice, potato pulp, and orange juice. The case was interesting in two ways: (1) the absence of all positive signs of rickets; and (2) the danger of a long-continued use of sterilised milk, upon which the child had been brought up. After referring to the writings of Dr. Cheadle and Dr. Barlow on the subject, Dr. Menzies pointed out the curious fact that while authorities in England and America agree in recognising the scorbutic nature of the affection, many German and some Danish writers still regard as unproved his etiological factor, and maintain that rickets *plus* a hæmorrhagic tendency is the real malady—a view which seems to be opposed to all the evidence of its morbid anatomy and certainly contradicted by the result of dietetic treatment, for the rapid improvement which follows the administration of anti-scorbutics is one of the most remarkable facts in medicine.—Mr. ALBAN DORAN doubted whether sterilised milk was wholesome and nutritious, and suggested that some of our efforts at the exclusion of germ life might be misdirected.—Mr. KEETLEY considered that the advantages of giving sterilised food to infants quite outweighed its dangers, which could be averted by the addition of a due proportion of anti-scorbutics. He affirmed the distinction between infantile scurvy and rickets, which latter might be produced by more than one micro-organism, including that of syphilis.—Dr. H. SUTHERLAND believed that from a scorbutic standpoint the boiling of milk as usually practised was probably harmless, but the use of milk exposed to a very high temperature for a long time was not to be regarded as safe.—Dr. COUTTS believed that the milder forms of infantile scurvy were common and frequently unrecognised. He advocated the addition of anti-scorbutics to sterilised milk.—After remarks by Dr. THUDICHUM, Dr. BURRELL, Dr. KEEN, Mr. MORTIMER, and the PRESIDENT, Dr. MENZIES replied.

Dr. THUDICHUM read a paper on the Chemical Composition of the Carbohydrate and Albumoid Substances with special reference to Diabetes and its treatment.

Dr. DICKMAN showed a case of Localised Scleroderma.

Mr. ALBAN DORAN showed three specimens of True and False Capsules of Ovarian Cysts. 1. The patient was single, aged twenty-five. A small cyst filled the lower part of the abdomen and intestine lay in front; the fundus of the uterus could be felt in the right groin. No part of the cyst came down into the pelvis. On tapping a pint and six ounces of fluid escaped. On inspecting the tapping hole two distinct layers could be seen as though there were a true capsule. On pushing the hand down behind the supposed capsule the entire cyst was displaced with a normal pedicle. There were no adhesions and the opposite ovary was healthy. The "capsule" was simply the ovary itself distended by the cyst within its substance. The true cyst wall was connected with the ovarian capsule by very loose connective tissue. Had the union been close and firm that would have been the usual condition in ovarian cystoma and no two separate layers would have been seen on inspecting the trocar wound. On the other hand, had the capsule of ovarian tissue been adherent to pelvic structures the cyst might have been deliberately enucleated from the ovary itself; the appearance after enucleation would then have been puzzling. 2. Hypertrophied Tube on the Surface of an Inflamed Ovarian Cyst. The meso-salpinx adhered firmly to the cyst, so that at first the cyst seemed as though it had furrowed into its layers. This was a "false capsule cyst." 3. A Dissection showing the relations of a Cyst developed between the Folds of the Meso-Salpinx. The greatly elongated Fallopian tube runs on the surface of the wall of a similar but very much larger cyst, the greater part of which has been cut away. These are typical encapsuled cysts. Mr. Doran remarked on the non-identity of pathological and surgical cysts and on the grave results which might ensue on their confusion, for if the surgeon mistook these adhesions for a capsule and attempted enucleation, intestine, vessels, or the uterus might be damaged.

MIDLAND MEDICAL SOCIETY.

Exhibition of Cases and Specimens.—Pneumothorax.

A MEETING of this society was held on March 18th, Dr. UNDERHILL, the President, being in the chair.

Dr. J. HAZELWOOD CLAYTON showed a youth aged nineteen years who presented Enlargement, without evidence of secretion, of the Right Mammary Gland. The question discussed was whether the case ought to be regarded as one of inflammatory enlargement or as one of true hypertrophy induced by intermittent pressure from a carpenter's brace.

Mr. F. MARSH showed a little girl aged five years who last autumn had Scarlet Fever, followed by Post-scarlatinal Diphtheria (membranous laryngitis), necessitating tracheotomy. During convalescence she contracted measles. Attempts were made on several occasions to dispense with the tracheotomy tube, but without success, as asphyxia immediately became imminent. She was first seen by Mr. Marsh on Nov. 30th, and a laryngoscopic examination was made under chloroform. Considerable cicatricial stenosis somewhat cone-shaped was found in the upper part of the larynx, and a small probe only could be passed through into the trachea. On Dec. 11th the cicatrix was divided with Heryng's intra-laryngeal knife and a next to the largest size O'Dwyer's intubation tube introduced, the smaller sizes being expelled, probably owing to the shape of the opening. The tracheotomy tube was now removed and

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the wound rapidly healed. On the 30th the intubation tube was removed, but as asphyxia threatened the largest size O'Dwyer's tube was inserted. It was decided to leave this in for a fortnight and then, if it could not be dispensed with, that a thyrotomy should be performed and the cicatricial bands excised. Unfortunately, on Jan. 8th symptoms of typhoid fever were noticed and a typical attack ensued. As the child was fairly comfortable and respiration was not embarrassed the tube was allowed to remain in the larynx until March 13th. Its removal on this occasion was successful, both respiration and phonation being more easily performed. Up to the date of publication (March 30th) steady improvement has taken place; there is only slight dyspnœa when the child runs fast, and the breathing is occasionally noisy during sleep. The voice, too, is improving; it is usually a hoarse whisper, but at times becomes louder and clearer.—Mr. F. MARSH also showed a youth aged twenty years who from childhood had had a purulent discharge from the right ear (a sequel of measles) and at intervals an abscess in the mastoid region. When admitted into the Ear and Throat Hospital pus was freely discharging from a sinus opening about half an inch above the external auditory meatus. He had never had any headache or illness, the only symptoms experienced being the purulent discharge and some slight pain with each abscess formation. The mastoid was explored on Feb. 22nd and beneath the orifice of the sinus was an opening in the bone about half an inch in diameter leading into a large cavity filled with fœtid putty-like débris. When this was removed the cavity was found to be quite two inches in diameter and would have held a Tangerine orange. The walls were of bone except posteriorly, where the cerebellum could be felt pulsating over an area about the size of a four-shilling piece. The upper limit was quite an inch above the superior wall of the meatus. The cavity was lightly packed with gauze and was now slowly granulating. The features of interest were the unusually large dimensions of the cavity and the total absence of sinus, meningeal or cerebral complications, although the meninges were in contact with the fœtid contents.

Mr. GEORGE HEATON showed a Sixpence which had suddenly been Expelled from a man's Right Bronchus five and a half years after it had been inhaled. The patient had suffered from repeated attacks of suffocative cough ever since swallowing the coin. A low tracheotomy was performed in 1891 and attempts made to remove the coin. He suddenly coughed it up in January last and has since lost all his symptoms. The coin was in three pieces and thickly coated with black scales of sulphide of silver.

Mr. HEATON also showed a large Uterine Fibro-myoma removed by Hysterectomy. The tumour, which weighed between ten and eleven pounds, reached as high as midway between the umbilicus and ensiform cartilage. It had lately grown rapidly and reduced the patient to a state of profound anæmia. The pedicle was treated extra-peritoneally with the clamp. The patient experienced little or no shock from the operation and was at present convalescent.

Mr. GAMGEE showed a specimen of Perforated Vermiform Appendix removed from a girl aged fifteen years. The symptoms began on March 1st, 1896, with a sudden attack of abdominal pain, but no vomiting. The pain continued for a week, when she presented well-marked signs of localised inflammation in the right iliac fossa. At the operation on March 8th four or five ounces of foul pus were evacuated and the appendix was removed. Vomiting, collapse, and death occurred nine hours afterwards. The post-mortem examination revealed general suppurative peritonitis. Attention was called to the absence of symptoms of general peritonitis, for the patient's condition appeared good. There was no vomiting till an hour or two before death, the abdomen moving freely. There was no general abdominal pain or tenderness.

Dr. SHORT showed a youth aged seventeen years (but who looked fourteen years) with a large Pulsating Tumour between the clavicle and the right edge of the sternum. There was loss of resonance on percussion, with a distinct thrill; presystolic and systolic mitral and aortic diastolic murmurs were present. Dr. Short thought that a saccular dilatation of the aorta existed between the valves and the arch, probably due to some congenital defect because the boy was of stunted growth; dyspnœa and slight cyanosis on exertion had existed since birth; and the general absence of symptoms was inconsistent with any recent origin.

Dr. SHORT also showed the Heart and Lungs from a baby four weeks old. There were beady vegetations on the curtains of the tricuspid valve which were thickened, two of them being joined together. The pulmonary valve was not affected. The left side of the heart was normal. From the appearance of the valve it was inferred that the endocarditis had commenced during fœtal life and had affected an imperfectly developed valve. The condition was a rare one. Death occurred somewhat suddenly at the end of the fourth week and was preceded by five attacks of acute dyspnœa unaccompanied by cyanosis. Portions of the lungs were imperfectly expanded.

Dr. FOXWELL read a paper on four cases of Pneumothorax occurring in healthy males who had suffered no previous illness or external violence. He believed the cause in each was the same—viz., the rupture of an emphysematous air sac. Recovery occupied from twenty to four weeks. The longer period was partly brought about by a relapse owing to unwise exertion and partly to the age (sixty years) of the patient. The patient who got well in four weeks was only nineteen years of age. In his case, too, two pints of gas were drawn off. Dr. Foxwell pointed out that, in his opinion, the chief cause of the re-expansion of the lung was the cohesive force of the two pleuræ, a force which was demonstrated by Dr. S. West in his Bradshaw Lecture to be nearly double the elasticity of the expanded lung. Regarding treatment, the importance of respiratory quietude and the advantage of removing the gas under the same circumstances as one would a liquid effusion were insisted upon.

MANCHESTER MEDICAL SOCIETY.

Treatment of Recurring Appendicitis. — Intra-laryngeal Photography. — Sensory Distribution of Spinal Nerve Roots.

A MEETING of this society was held on April 1st, the President, Dr. HENRY ASHBY, being in the chair.

Mr. SOUTHAM mentioned ten cases of Recurring Appendicitis treated by operation. In five cases the appendix was removed during the quiescent stage with satisfactory results. In one case, where the appendix was so surrounded by dense adhesions that it was unrecognisable, relief followed the breaking down of adhesions. Attention was directed to the fact that it was not uncommon for suppuration to occur sooner or later in recurrent appendicitis, and it was therefore advised that in order to prevent this complication the appendix should be removed after two well-marked attacks, especially if any induration or local swelling persisted after the subsidence of the attacks. In support of this opinion details were given of four cases of recurring appendicitis where suppuration had taken place; in three of these an encysted intra-peritoneal abscess was opened and drained with good results; in the fourth case, where there was a history of mild attacks recurring for several years, perforation of the appendix suddenly took place, followed by diffuse suppurative peritonitis, which proved fatal.

Dr. YONGE discussed the difficulties of Intra-laryngeal Photography. There was first the difficulty of obtaining a good actinic light of sufficient power to illuminate satisfactorily a cavity within a cavity such as the larynx happened to be. Direct sunlight was unavailable, magnesium light uncontrollable and otherwise inconvenient, and therefore an electric arc lamp was chosen for his experiments. Other difficulties were that of directing all the available light into the mouth, of illuminating the laryngeal mirror when it was so placed in the pharynx as to receive the complete laryngeal image, and the difficulty of holding the mirror in the patient's mouth so that it should appear illuminated to the lens of the camera, although to the operator's eye it might be in shadow owing to the fact that the angle at which his eye caught the illuminated image was different from the angle at which the lens received it. Other difficulties were gauging the exact length of exposure required and, lastly, keeping the mirror absolutely steady. The method adopted by Dr. Yonge—based on Mr. Lennox Browne's—was as follows. Dr. Yonge, who performed the experiments on his own larynx, seated himself before a camera into the cap of which a small looking-glass had been inserted. A large laryngeal mirror was introduced with the left hand and the tongue drawn forward with the right. The light of a 1000-candle power electric arc lamp—supplied by the Edison Swan Company—was then concentrated by passing the.

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rays through a 6-inch condenser and directed on the mouth. The carbons of the arc lamp were mounted on a projector and the whole apparatus formed a species of "search-light." As soon as the mirror was seen to be sufficiently illuminated by the reflection in the small looking-glass placed on the cap a signal was given, the cap removed, and an exposure of one second allowed. Photographic laryngoscopy was of value (1) as showing the exact method of voice production; (2) as giving a truthful account of endo-laryngeal conditions; and (3) as a means of estimating the progress of a laryngeal case. Dr. Yonge gave a short lantern demonstration of photographs obtained by the foregoing method.

Mr. THORBURN then read a paper on the Sensory Distribution of Spinal Nerve Roots.

LIVERPOOL MEDICAL INSTITUTION.

Cell Granulations.—Exhibition of Specimens.—Leprosy in Iceland.

THE last meeting of the session was held on April 9th, Dr. BARR being in the chair.

Dr. BUCHANAN read a note upon Cell Granulations. He especially drew attention to the fact that in some of the white blood corpuscles two kinds of granules, basophil and oxyphil, were present. This, he said, had not been observed before. The paper was illustrated by some beautiful lantern slides.

Mr. LARKIN exhibited a Brain with a Temporo-sphenoidal Abscess following Middle-ear Disease; also a Pedunculated Tumour which he had removed from the neighbourhood of the nipple in a female subject. Mr. Hutchinson had reported three similar cases which proved to be adenomata. Mr. Larkin had not yet examined this tumour microscopically.

Dr. MOYLES showed for Dr. ALEXANDER: (1) Hernia through a Hole in the Mesentery, and (2) Syphilitic Disease of the Skull, &c.

Dr. ABRAM exhibited a Fibroid Heart and Thrombosed Femoral Artery. The latter had led to dry gangrene of the leg. Microscopical sections of the coronary arteries and the femoral revealed extensive disease of the interior and middle coats of both vessels.

Dr. GROSSMANN then read a paper upon Leprosy in Iceland. He narrated the history of the disease as given in the Icelandic chronicles, and pointed out that in the sixteenth century leprosy was frequently met with. He stated that leprosy was much more common in Iceland than was generally supposed, probably owing to the non-recognition of the anæsthetic variety. He did not believe in the hereditary transmission of the disease, at least to any extent, but considered it to be transmitted by contagion, a mode of propagation favoured by the almost indescribably bad hygienic conditions under which the majority of the Icelanders live. Dr. Grossmann illustrated his remarks by a series of excellent photographs of the anæsthetic and tuberculated varieties of leprosy.—Dr. HARRIS said that Dr. Haussen believed firmly in the contagious nature of the disease, and did not consider that bad hygiene and feeding had much influence.—Dr. ABRAM thought that hygienic conditions such as Dr. Grossmann had described, must afford a very good incubating machine for the bacillus lepræ. An analogous state of affairs is seen in beri-beri, where sailors keep the forecastle at such a temperature that some ships are never without cases on board, yet it never spreads among the saloon passengers.—Dr. LESLIE ROBERTS and Dr. BARR also took part in the discussion.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—Suppurative Cholangioitis.—Pathological Changes in the Cerebral Cortex of the Insane.

A MEETING of this society was held on March 26th, the President, Dr. PORTER, being in the chair.

Mr. SNELL introduced a patient aged thirty-three years, the subject of Acquired Nystagmus, due to the manner of work followed at his occupation. The man had been compelled to relinquish his employment on two or three previous occasions for lengthened periods owing to the distress occasioned by the subjective symptoms of the nystagmus. Mr. Snell referred to nystagmus in other occupations, remarking that if looked for the affection would be found to be associated with other employment and not entirely that of coal-mining. Since he had recorded some years ago the case of a compositor with acquired nystagmus he had met with other cases in the same class of work and had observed a fairly large number of instances in other occupations.—Mr. Snell also showed a girl aged eighteen years with Double Papillitis (passing into Atrophy), the result of plumbism due to her work as a file-cutter.

Dr. SINCLAIR WHITE showed a very large Gall-stone which he had removed by operation.

Dr. ARTHUR HALL showed specimens of (1) a Cerebellar Tumour the size of a hen's egg, sarcomatous, with secondary distension of the lateral and third ventricles to a very large extent. The affection had lasted eighteen months, and the gradual enlargement of the head was watched. Lumbar puncture was performed by Mr. Pye-Smith, but without benefit; in fact, it aggravated the pain and the boy died the following day. Two drachms of fluid were removed. 2. Hæmorrhage into the Pons extending over the base of the brain and into the left lateral ventricle. 3. Softening of the Right Optic Thalamus.

Mr. MARRIOTT showed: (1) An Intra-pericardial Rupture of the Aorta which showed marked atheromatous changes, and which was the seat of a small aneurysm at the point of rupture; and (2) a large Gall-stone from a patient under Mr. Lockwood's care which had been passed by the bowel without any symptoms.

Dr. ERNEST KNIGHT (Rotherham) read notes of a case of Suppurative Cholangioitis. The patient, a man aged forty-seven, fell ill at the end of October with symptoms of hepatic colic. The illness began with rigors and profuse sweating; slight jaundice was noticed two days after the onset of symptoms. It passed off in a week. The rigors persisted, however, and glycosuria developed. There were considerable tenderness and fulness in the epigastric region. The glycosuria intermitted for a time, but reappeared one month before death, the rigors and sweats continuing daily and nightly up to the time he died comatose, which was in January, 1896. There was no return of jaundice; there were varying tenderness and fulness in the epigastric region. No operative measures were deemed advisable. Post mortem the liver was found to be much enlarged, the cystic duct entirely and the common duct partly blocked by several soft gall-stones, consisting largely of colouring matter, each about the size of a horse bean. The gall-bladder was empty except for a little thick bile. Suppuration extended up the ducts through both right and left lobes and formed numerous small abscesses; the lobulus quadratus was converted entirely into an abscess cavity. The kidneys were small with atrophy of the cortex.

Dr. RAY (Wadsley) read a paper on Some Pathological Changes in the Cerebral Cortex of the Insane. Some introductory remarks were made on the fresh method of preparing brain sections, on the minute anatomy of the cerebral cortex, and on the neuroglia, its lymphatics and vascular system. The relation of the blood-supply to pathological changes was then dwelt on. The early changes in the cortex in insanity were described. The three stages of fuscous degeneration were illustrated by microscopical drawings and slides. Spider cells in the superficial layer of the cortex were demonstrated, and the nature and probable function of Deiters' cells were discussed. The paper concluded with some remarks on the nerve cell in idiocy.—The PRESIDENT, Dr. ARTHUR HALL, Mr. CUFF, Dr. BURGESS, Dr. ADDISON, Dr. SINCLAIR WHITE, Dr. RUTHERFORD, and Dr. MARTIN made remarks.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

Defective Metabolism in its Relation to Gout.—Acute Dysentery.

A MEETING of this section was held on March 27th, Dr. T. W. GRIMSHAW, President, being in the chair.

Dr. M. A. BOYD read a paper on Defective Metabolism in its Relation to Gout, in which he pointed out the interdependence of the great physiological systems on each other, and the probability of defective metabolism in any one of these systems being followed by derangements of the others. The defective metabolism that led to the formation of uric acid in excess was not confined to the digestive system alone,

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but might originate also in either the circulatory, the nervous, or the lymphatic systems. Harbaczwski considers that the circulatory system contributes the chief share of this excess and has come to the conclusion that uric acid was the metabolic product of nuclein derived from leucocytes, grounding his conclusion on the increase of this acid in the blood and urine in leukæmia and pernicious anæmia. If this observer's conclusions be correct Dr. Boyd considered that the formation of uric acid must be intimately associated with both blood destruction and formation, and if uric acid is due to a leucolysis it must materially interfere with the contributory aid of the leucocytes in blood formation, and so account for the anæmia present in many of the forms of atonic gout.—Dr. WALTER SMITH agreed with Dr. Boyd in considering gout as a deeply-seated perversion of the nutrition of the body. Gout is coincident in many cases, but not in all, with the deposition of sodium biurate in certain tissues, especially connective tissue. The cause of the apparent or real accumulation of uric acid in gout is not known. The amount of uric acid varies within wide limits both in health and disease, and the causes of its variations are not known. The assumption that there is an increase of uric acid in a gouty person rests upon six experiments, five of which were made many years ago by a faulty process. There is no evidence to prove that uric acid is a poison analogous to an alkaloid. Dr. Smith agreed with Sir William Roberts in believing that the alleged acid dyscrasia in gout is no more than an assumption.

Dr. FINNY described an outbreak of Acute Dysentery which occurred in September, 1889, among the members of a family consisting of seven persons. Five were attacked, and two died—a female aged seventy years and an infant aged eleven months. The ages of the others were thirty-seven, forty-nine, and twelve years respectively. The first case began on September 12th, lasted fifteen days, and ended fatally. The second case occurred two days after the first, lasted fourteen days and terminated in recovery. The third patient fell ill on Sept. 19th and died in four days. The fourth patient fell ill also on Sept. 19th, and after nine days recovered; the fifth fell ill on Sept. 21st and recovered after seven days. No other inmate of the house (and there were several) was ill before, during, or after the outbreak, and no cause could be suspected except that for two days before the outbreak milk was used which had been supplied by a friend whose child was reported to have died on September 14th of intestinal disease. The family had just returned in perfect health from spending the summer at the seaside. It is probable that the latter cases contracted the disease by contagion. The treatment consisted of bread or arrowroot in boiled milk, chalk and opium, and for the pains laudanum enemata. Ipecacuanha in twenty-grain doses was given to two cases, but seemed to have no controlling effect, and the same may be said of every kind of astringent used. Recovery coincided with the passage of a formed fæcal motion. While discussing the treatment of dysentery Dr. Finny said that Mr. William Arthur Dickson, F.R.C.S.I., treated 183 consecutive cases without ipecacuanha and without a death in the Government Hospital of British Guiana during the year 1893.—Dr. LITTLE said that his experience in India was to the effect that the astringent treatment was not useful in India, but quite the reverse, and that the ipecacuanha treatment of virulent acute dysentery produced results unattainable by any other means. Vomiting after twenty-grain doses was very rare, unless in the first dose or unless opium was present as in pulv. ipecac. co. When pure and given in a little arrowroot ipecacuanha very seldom caused sickness. After the patient had an evacuation twenty minims of liquor opii sedativus in about two drachms of warm milk was injected with a small glass syringe into the rectum. If the patient had not a motion he was first given a warm water enema and subsequently the opium. In chronic dysentery he gave one-grain dose each of ipecacuanha and extract of hyoscyamus in pill—from three to twelve being given in the day—and the patient put on a milk diet. At about the same time as Dr. Finny's cases occurred there were several cases in the Adelaide Hospital which presented all the symptoms of tropical dysentery, and the diagnosis was confirmed by post-mortem examination.

SECTION OF OBSTETRICS.

Tubal Pregnancy.—Suppuration of Ovary.—Exhibition of Specimens.

A MEETING of this section was held on March 6th, Dr. LOMBE ATTHILL, president, being in the chair.

Dr. ALFRED SMITH read notes of a case of Ruptured Tubal Pregnancy, with Hæmatocele of the opposite side, successfully operated on by him in St. Vincent's Hospital. The chief points of interest were the question of diagnosis and the pathological condition found during operation. There was no history of pregnancy; the menstruation was quite regular up to the very day when the patient was first seized with the abdominal pain and heavy menstrual flow. The pain was referred to the lower part of the abdomen, but was not so severe as to cause the patient to collapse; she was, in fact, able to walk to the hospital without assistance, although, on vaginal examination, nearly all the typical signs of ruptured tubal pregnancy were present. The condition on the right side was an example of "tubal abortion." The cyst on the left side was full of blood and had all the appearances of a tubal pregnancy, but the microscopic examination by Professor M'Weeney proved it to be an hæmatosalpinx.—Professor M'WEENEY said the dilatation on the left side resembled a case of tubal pregnancy. There were, however, a few points of difference: the walls in this case were thinner than they would be in a case of pregnancy, neither were they coated to the same extent with blood clot. If the contents consisted of clear serous fluid he (Professor M'Weeney) would have but little hesitation in describing the case as one of hydrocele. He found pus cells in the walls, from which he inferred that the tumour was inflammatory in its origin.—The PRESIDENT said that under any circumstances he would operate in a case of tubal pregnancy, and he mentioned the case of a woman who, after the lapse of twenty years, was expelling fœtal bones from her vagina.

The HONORARY SECRETARY read (for Dr. PUREFOY) a paper on a case of Suppuration in an Ovary the result of direct violence. The patient was twenty-one years of age, in good condition and of healthy aspect, and sought advice in February, 1895. The history of her illness was that in October, 1891, a child jumped on her as she lay in bed, causing her much pain in the left ovarian region and in the left leg. Immediately afterwards she became unwell for some days, and during the succeeding four years, till she came under Dr. Purefoy's care, menstruation continued profuse, irregular, and attended with so much pain in the lower abdomen and left leg that much impairment of her general health ensued. The uterus was enlarged and much retroverted, and the left ovary was enlarged, very sensitive to pressure, and somewhat prolapsed. The right ovary appeared to be normal and healthy. Removal of the left ovary was followed by an easy convalescence, and menstruation now recurs regularly without pain and is normal in amount, though for some months there was occasional severe pain in the left side and left leg.—The PRESIDENT regretted that they had not before them the report of a pathologist on Dr. Purefoy's case, as suppuration of the ovary was a very rare occurrence indeed.

Dr. JELLETT showed the following specimens for Dr. W. J. SMYLY:—(1) Four Myomatous Uteri removed by panhysterectomy; (2) a large Papillomatous Cyst removed from the right mesocolon; (3) Tubes Removed for Double Pyosalpinx and for Tuberculous Disease; (4) Hæmatosalpinx probably Originating in a Tubal Pregnancy, although no trace of an ovum had been discovered; and (5) Tubal Pregnancy Complicated with Gangrene of the Intestine six inches of which were removed, the canal being restored by Senn's bone plates. All these patients have either recovered or are progressing favourably

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THE EPSOM WATER-SUPPLY.—The Epsom urban council is asking for powers to borrow £11,500 for works of water-supply—viz., the extension of the scheme which was set on foot two years ago, when a loan of £2500 was sanctioned to provide a new engine and boilers at the works. The present reservoir holds some 120,000 gallons, and it is proposed to erect a second on the Downs near the Derby Arms Inn. The site will cost £500, while an alternative site at Tattenham Corner would cost about twice that sum. The consulting engineer, Mr. George Hodson, said that a site in Langley Bottom, about a mile west of the Grand Stand, would be the best for the purpose if another reservoir were needed, but he was of opinion that the present water-works in East-street were free from pollution, and might properly be extended to the advantage of the ratepayers and on a more economical principle.

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Reviews and Notices of Books.

Practical Studies in Fermentation. By EMIL CHR. HANSEN, Ph.D. Translated by ALEX. K. MILLER, Ph.D. London: E. and F. N. Spon. 1896.

TWELVE years ago Dr. Hansen of the Carlsberg Laboratory, Copenhagen, made an announcement of the greatest importance to the brewing industries. It has since led to important advances in other branches of industry, and it is hardly possible to estimate what will be the limits of further applications. We refer, of course, to Dr. Hansen's great discovery of a new analytical method and the certain demonstration that some of the commonest and most serious diseases of beer, such as yeast turbidity and objectionable changes in flavour, were caused, not by bacteria, but by certain species of yeast. This led to the elaboration of a method by which Dr. Hansen obtained pure cultures of systematically selected yeasts by a dilution method, with the result that the following important practical advantages in the brewing of beer were gained: 1. A definite result and rational working are secured where formerly everything depended more or less upon chance. 2. Maladies in the beer causing great losses are guarded against. 3. A yeast is obtained of higher commercial value than the ordinary impure yeast. 4 It places the industry upon a higher basis. The method did not, however, cease in its application to brewing. It has since been applied to other commercial processes. Pure cultures have been employed for the definite and wholesome souring of cream, for the manufacture of wine, cider, &c., and for the improvement of tobacco, which by inoculation prior to fermentation with bacteria occurring in Havanna and other superior kinds of tobacco may be made to acquire a superior aroma and a milder flavour. Dr. Hansen's book, admirably translated by Dr. Alex. Miller, is not, however, confined to the mere technique of industrial fermentative processes. It is, in addition, an important and interesting contribution to the life-history of micro-organisms. English readers have long heard of the remarkable researches and discoveries of Dr. Hansen, but have hitherto been debarred from reading in their own language the fascinating and historical sketch contained in the volume before us. A word of praise is therefore due to the translator for placing Dr. Hansen's "Untersuchungen aus der Praxis der Gärungsindustrie" before the English industrial and scientific public. Home manufacturers are notoriously conservative in connexion with the introduction of improved processes, but this is in a great measure due to ignorance and the absence of a clear conception of the advantages promised. We fear this ignorance is often wilful. Dr. Hansen's pure culture method, securing at all times a uniform product, has been adopted in almost all breweries on the Continent, but it does not seem to have found favour with the English brewers at present.

It is true of all branches of manufacture that with the advance of science mere traditional methods must be given up or the manufacturer will stand no chance in the race. It is the stolid indifference to the teachings of science which places the English manufacturer so far behind his Continental competitors. The discovery of Dr. Hansen is of immense promise and commences a new era in the engineering of organisms for commercial purposes, and home manufacturers and producers would do well to study it. We should like to see bacteriology made a compulsory subject in the curriculum of certain branches of the engineering profession. We might then hope for a satisfactory solution of some of our knottiest sanitary problems.

History of the Cholera Controversy, with Directions for the Treatment of the Disease. By Sir GEORGE JOHNSON, M.D. Lond., F.R.C.P., F.R.S. London: J. & A. Churchill. 1896. Price 3*s*.

IT is a significant fact that the history of the progress of medicine might be built up from a series of controversies. No important statement or observation has ever been allowed to pass unchallenged, and those who have had the temerity to attempt innovations have had to be supported by the courage of their opinions against the clamour of negation or of militant doubt which, in medicine at least, seems always to be aroused when the old landmarks are moved. It is a sign of the vitality of thought that such opposition has never yet daunted those who felt they had a message to deliver, and without a doubt the opposition has in very many cases led to further experiments and further observations which have been of considerable value in strengthening the views originally advanced. Controversies are never pleasant, but they may be useful, and when sufficient time has elapsed for the fierce heat of contest to have cooled to a large extent they afford much instruction and also much encouragement. Investigation almost invariably shows that any fact which is "now admitted nearly on all sides" has had to run the gauntlet and that its author, instead of being at once lauded to the skies, has had to endure the disappointment of a sceptical or inimical reception of his discovery. Hence sympathy is evoked and comfort is derived. The book before us contains the history of a controversy around the question of the treatment of cholera. Sir George Johnson tells why he was dissatisfied with the results of treatment with brandy and opium so far back as 1849, and how in 1854 he had good opportunity of testing the effect of castor oil in cholera and choleraic diarrhœa and of the storm of opposition excited by the publication of his cases. This opposition must have been the more discouraging inasmuch as it was partly carried on within the walls of King's College Hospital, where the new treatment had already given excellent results. Sir George Johnson gives a vivid account of the reception of his views, and all who read will agree with the critic who found reason to respect the author for the courage and zeal with which he enunciated doctrines which he knew to be unpopular. Instead of being crushed by the opposition he was roused to further efforts and he eagerly called to his aid new physiological and pathological data which supported his views, and he was rewarded in 1866 by making a convert of Sir Thomas Watson, the President of the Royal College of Physicians of London. Sir George Johnson quotes largely from the various reviews which were written at the time and he triumphantly points to the recommendation of castor oil in the instructions drawn up in 1892 by the Royal College of Physicians of London at the request of the Local Government Board. The position held by Sir George Johnson is clearly stated here and emphasised by italics: "*Opiates are useful to soothe irritation after the evacuation of the bowel: they are useless and even dangerous when the blood is poisoned or the bowel filled with morbid secretions.*" It is difficult to put down this little book without referring once more to the date (1854) of the author's successful trial of the eliminative treatment and congratulating him upon the results of his labours and upon the clear and temperate tone with which they are described.

LIBRARY TABLE.

Aids to the Analysis of Food and Drugs. By T. H. PEARMAIN and C. G. MOOR, M.A., F.C.S. London: Baillière, Tindall, and Cox. 1895.—New analytical methods have to be devised from time to time to keep pace with the exceeding subtlety of modern adulteration. The Society of Public Analysts are doing excellent work in this direction, and

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their publication, the *Analyst*, is a valuable record of recent processes connected with the detection of the adulteration of food and drugs. The work before us appears to be, so far as we have examined it, an admirable little digest of the analytical work required at the hands of the public analyst. The processes described have been pronounced reliable by well-known analytical practitioners. Though a small volume it covers the ground involved in the analysis of food and drugs, and it will be referred to with advantage by those who are familiar with laboratory work.

Professor Roentgen's "X" Rays and their Application in the New Photography. By AUGUST DITTMAR. London: Whittaker and Co.—The publication of *brochures* on the subject of the new photography supplies a distinct want now that everybody desires to know all about it. The one before us is a popular exposition by Mr. August Dittmar. It is a fair and correct review of the history of the subject, but gives very few practical details likely to be of service to the aspiring "new photographer."

Food Adulteration and its Detection. By JOHN A. BOWER. London: Society for Promoting Christian Knowledge. 1895.—In this little work are described some simple methods for the detection of food adulteration adapted to the capacity and resources of him who while running may read. So far it is of distinct educational value. But the author is now and again apt to lead the reader astray when he conveys the idea in some cases that the detection of adulteration is a simple matter. The microscope, for example, is recommended as a means of detecting foreign fats in butter, while the reader is recommended to ascertain the melting point by observing the point at which the fat clears, without taking the very necessary precaution of decanting the fat from the curd and salt and of filtering it. We doubt whether the fat would ever get clear under these circumstances. In the chapter on tea and coffee he counsels his readers to beware of coffee essences. We have found some very excellent preparations in the market, as a reference to THE LANCET of July 7th, 1894, will show. Speaking of aerated waters, he says "they should contain carbonic acid gas, but may contain merely compressed air"! The book will eagerly be read by the amateur analyst, and it will be his fault if he fails to understand the simply and intelligibly written chapters.

Kelly's London Medical Directory, 1896. London: Kelly and Co., Limited. 1896. Price 6*s*. 6*d*.—Hardly any publishers are more widely known and appreciated than Messrs. Kelly and Co., to whom Londoners are indebted for the bulky and indispensable Post-office Directory. Their Medical Directory is a convenient and well-executed volume of a little over 500 pages, giving the names, addresses, qualifications, appointments, writings, &c., of the medical and dental practitioners, male and female, in London and its vicinity. The area thus included extends from Hounslow on the west to Barking on the east, and from Croydon on the south to Barnet on the north. The streets list is sub-divided according to the postal districts, a refinement which is scarcely necessary. Much information is given relative to medical schools, hospitals, medical and learned societies, and the medical staffs of various departments of the public service.

Medical Notes and Statistics of the British Expedition to Egypt in 1801. By W. T. BLACK, F.R.C.S. Edin. Edinburgh: Oliver and Boyd. Pp. 12.—Mr. W. T. Black has published in a pamphlet form the substance of a lecture delivered by him some years ago before the Medico-Chirurgical Society of Edinburgh, and although the slender *brochure* bristles somewhat formidably with statistics, it contains much interesting matter, general as well as medical. The subject of Mr. Black's paper is the British Expedition to Egypt in 1801, when, in the words of Lockhart, "the victories of Abercrombie destroyed a fatal prejudice which had of recent days gained ground that the military of Great Britain were unfit to cope with those of revolutionary France. Sir Ralph Abercrombie fell, mortally wounded, in the moment of victory before Alexandria; but his successor, General Hutchinson (afterwards Earl of Donoughmore), assisted by Sir David Baird in command of the troops from India, proved himself thoroughly competent to replace the leader who, according to the same authority, "had the glory of first leading English soldiers to victory over the self-styled invincibles of Bonaparte."

JOURNALS AND REVIEWS.

The *Journal of State Medicine*, March, 1896. Vol. IV., No. 2. Price 2*s*.—This number contains papers of considerable interest, and amongst them may be mentioned one by Professor Delepine on the desirability of legislature in connexion with tuberculosis of living domestic animals. The author insists more particularly on the insufficient appreciation in practice of the powers of the bacillus tuberculosis to maintain a saprophytic existence and of the great prevalence of the disease among domestic animals. Dr. Sydney Marsden's paper on Municipal Abattoirs and Meat Inspection, which he read at the Hull Congress of the British Institute of Public Health, is reproduced, as also is the discussion to which it gave rise. An abstract of Mr. F. W. Richardson's paper on the Bacteriology of Water is also given, and in it Mr. Richardson discusses in an interesting manner what value is to be attached to the bacillus coli communis as an index of sewage pollution. We are also glad to see that the first report of the Public Health Committee of the General Medical Council on the Examinations in Sanitary Science is reproduced.

The *Sanitary Record*. Vol. XVII., No. 327. Price 3*d*.—This number contains an article on the Diagnosis of Enteric Fever by Dr. E. F. Willoughby, in which he gives a concise account of the varieties of the disease which may be met with in practice; but it seems to us that Dr. Willoughby hardly attaches sufficient importance to the spleen as an aid in the diagnosis of the disease. The answers to the last examination papers for inspectors of nuisances are furnished in the number before us; they should prove useful to those intending to enter for examination. A paper on the Multifarious Duties of the Medical Officer of Health for Sunderland should serve to warn candidates for public health appointments as to what is expected of them by some sanitary authorities, and the remuneration they are likely to obtain for their services.

The *Veterinary Journal and Annals of Comparative Pathology* for March contains an article on Immunity and Heredity, by Mr. M. H. Hayes, F.R.C.V.S., which is interesting from the fact that it shows from what point of view the veterinarian considers this subject. A translation of an article on a Case of Multiple Extra-uterine Gestation, with Osseous Embolism of the Pulmonary Artery, by Victor Drouin (Alfort), and articles on Subcutaneous Emphysema and Surra are also of interest. In the editorial department a somewhat stringent criticism of the report of the Board of Agriculture by Major Tennant, Principal of the Animals' Department, is given, from which it will be seen that the veterinary profession is by no means satisfied with the present arrangement at the Board, and there certainly seems reason to find fault with an arrangement which places in the hands of men who have had little or no veterinary training work which can only be carried out satisfactorily by experts. A rather personal controversy on the question of the educational examination for the veterinary profession is printed, from which it would appear that the Council of the Royal College of Veterinary Surgeons is making strenuous and necessary attempts to raise the standard of the

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general education of candidates for its diploma. An interesting case of Tetanus in the Horse cured with Antitoxin is given. In the April number of the same journal there appears a further article on Immunity, read before the Edinburgh Veterinary Medical Society, in which the old question, so long debated by Buchner and others, concerning the possibility of the bacillus subtilis being converted into the bacillus anthracis is again raised, but this time in the form of the following statement: "In all probability the bacillus subtilis may be converted into the bacillus anthracis, and our principal (Williams) is of a strong belief that this can take place in a manure heap." The evidence of such conversion, it is to be feared, is not of a very clean-cut kind. The portion of Mr. Walter Long's Agricultural Bill which excludes the landing of Canadian and foreign store cattle does not receive much favour in the eyes of Scotch cattle-feeders, and for this several good reasons are given. Accounts of the proceedings of the various medical associations and abstracts and extracts from foreign journals, some of them of considerable general as well as veterinary interest, complete an interesting number.

The *Phonographic Quarterly Review*. April, 1896. London: Sir Isaac Pitman and Sons—The present issue is of more than ordinary interest to the medical man skilled in deciphering the "mystic" outlines of phonography, inasmuch as no less than four articles are contributed by members of our profession. Dr. J. A. Gray, late physician to H.H. the Amir of Afghanistan, whose graphic pen recorded his impressions of the Court at Cabul in our columns a short while ago, leads off with a well-written article on "Afghanistan, its Ruler and his Work." In it he ably endeavours to prove that the Amir is not so black as he is often painted, and shows that in spite of his apparent cruelty the ruler of Afghanistan is more humane than many Englishman are apt to think. "Jottings in a South African Village," by Mr. Herbert Caiger, F.R.C.S. Eng., is topical just now, but independently of this fact the paper will be perused with interest. In "The Great Emotion" (fear) Dr. Gowers has a subject which in his hands should be, as it is, ably treated. The article on the "Ways of a Wanderer," by Dr. G. E. Morrison, is continued, the thread of the author's autobiographical reminiscences being broken to admit of an editorial account of his walk across Australia. Of the other articles, not one of which deserves to be passed over, we have only space to mention Thomas Allen Reed's review of "Spencer's Lucid Shorthand." It is not generally known that the father of Mr. Herbert Spencer invented a system of shorthand which the well-known philosopher learned and used when a boy of thirteen. The system belongs to the class of "joined vowels," but otherwise does not show any great merit.

MAGAZINES.

Science Progress.—The April number of this publication is devoted very much to the evolution of ideas. The first paper is by Captain Creak, R.N., F.R.S., on the General Bearings of Magnetic Observations, in which we are again reminded of the valuable contributions to science afforded by the expedition of the *Challenger*. Dr. Starling writes (Part II.) on Some Applications of the Theory of Osmotic Pressures to Physiological Problems, and Professor Bourne contributes the first part of an article on the Present Position of Cell Theory. Histologists will read with interest the paper by Mr. A. G. Tansley, B.A., who gives the first part of a dissertation on the Stellar Theory: a History and a Criticism. "Solid Solutions" is the terse and apparently paradoxical heading of a paper by Dr. James Walker, who, we believe, succeeded Professor Percy Frankland in the chair of Chemistry in University College, Dundee. If solutions are defined as homogeneous mixtures of substances in variable proportions the above heading is justifiable, since there are many mixed solids which fulfil the requirements of this definition.

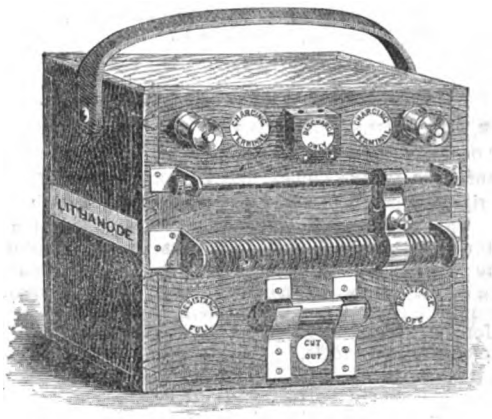
The Photogram.—This photographic monthly maintains its high artistic standard. It is printed on excellent paper and the reproduction of pictures is very well done. Considerable space is devoted to the "new photography," and the present number contains an excellent reproduction of a seven months' fœtus, which was the first complete human skeleton photographed by the new method. The original was by Professor Puluj of Prague.

New Inventions.

LITHANODE MEDICAL BATTERIES.

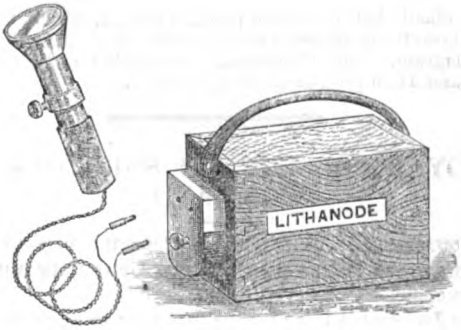
WE have recently had occasion to employ the Lithanode secondary batteries for working the induction coil for the new photography. For this purpose we have been using a two-cell 30-ampère hour battery identical with the battery shown in the illustration (Fig. 1), which is really constructed

FIG. 1.



for the purposes of an electro-cautery battery with a variable resistance capable of carrying current up to 20 ampères and fitted with a safety automatic cut-out. With an induction coil giving a three-inch spark discharge in air this battery worked admirably, and it could be readily replenished with current from the continuous supply main, using a lamp as resistance. For medical purposes it is extremely convenient and may be used for actuating large cauteries. Fig. 2 is described as the smallest and lightest

FIG. 2.



practicable secondary battery ever constructed, being 4⅜ in. long, 2 in. wide, and 3⅜ in. deep, and weighing only 1½ lb. Despite these small dimensions and light weight this battery is capable of working the search light shown in Fig. 3, which gives a projected light of as much as 20-candle power for a period of fully half an hour with one charge. We find

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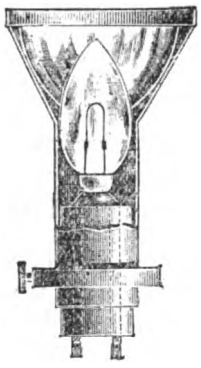
that the discharge of these batteries is admirably uniform and steady. As the name of these batteries implies, the anode plates are of a peculiar construction which offers distinct advantages. There is practically no limit to the

FIG. 3.



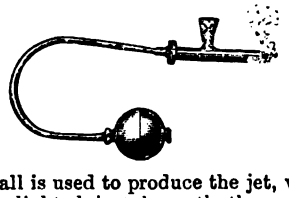
size of the lithanode batteries, which are eminently suitable for electric lighting, cautery work, and for driving motors. They save infinite trouble and inconvenience, and the makers recharge them for a moderate sum. They are made by the Lithanode Electric Storage Co., Ltd., 3, Harvey's-buildings (opposite Coutts' Bank), Strand, W.C.

ANTISEPTIC LIGATURES IN TUBES.

MR. JOHN MILNE, of Ladywell, S.E., sends us a specimen tube of his most recent method of packing ligatures. The ligatures are twelve inches long and are carefully attached to a rigid frame enclosed in a glass tube filled with carbolic oil. The advantages claimed by Mr. Milne for these ligatures in straight lengths are that there is absolutely no waste; that each length comes out in a straight thread, there being no corkscrew curl as from a reel; that no handling to take out the curl is required, it being simply drawn out with the forceps; and that it cannot possibly get out of order like those on revolving reels.

THE ZEPHYRON.

THE "Zephyron" is an invention by which the slow combustion of various vegetable cigarettes, such as stramonium, lobelia, and many others, is effected by the exhaustive action of a jet of air. The instrument is made of vulcanite, and a



small elastic ball is used to produce the jet, which acts when the cigarette is lighted just beneath the part marked × in the diagram. The "Zephyron" is supplied by Messrs. Maw, Son, and Thompson of Aldersgate-street.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY meeting of the Council was held on the 9th inst., the President, Mr. CHRISTOPHER HEATH, being in the chair.

The Jacksonian Prize for the past year was awarded to the author of the dissertation bearing the device of a photograph of a microscopic specimen, and the quotation:

> "What are these, so withered and so wild in their attire,
> That look not like the inhabitants o' the earth,
> And yet are on 't? —*Macbeth, Act I., Sc. 3.*

The President opened the sealed envelope and announced that Mr. A. A. Kanthack, F.R.C.S. Eng., was the Jacksonian prizeman. The subject for the Jacksonian prize for 1897 will be "The Pathology, Diagnosis, and Treatment of the various Neoplasms met with in the Stomach, Small Intestine, Cæcum, and Colon."

The Walker Prize of £60 was awarded to Mr. Harold Jalland Stiles, M.B., C.M., F.R.C.S. Edin. The committee appointed by the Council in pursuance of the declaration of trust for the administration of the Walker Prize Fund reported that they had duly taken into consideration the work done in the United Kingdom and elsewhere, either partially or wholly within the five years ending on Dec. 31st, 1895, in connexion with the advancement of the knowledge of pathology and therapeutics of cancer, but it became evident that in any report to be presented to the Council much important work could not be considered, either because (1) it had not been done within the prescribed time limit; (2) it had no direct bearing on the treatment of cancer; or (3) it dealt with matters still under discussion and did not admit of its value being as yet estimated by direct observation or experiment. Of what remained after elimination had been made on the above grounds the work done by Mr. Stiles appeared to be the most worthy of the prize, on the ground that he has investigated most minutely the morbid anatomy of cancer, its mode of spread, its relation to the organ in which it originates, and its relation to the lymphatic system of the part. His work on the pathological anatomy of the female breast and its accessory portions appears to be specially valuable from the fact that he has been able to demonstrate, by his nitric acid method, that the mammary acini have a much wider distribution than has hitherto been described. The importance of this in the determination of the extent of operative procedure is of course very great.

It was resolved that the Rush Medical College, Chicago, should be added to the list of foreign institutions recognised by the Examining Board for the complete course of study required by the regulations.

The report of the Laboratories' Committee showed that since the 6th December 3290 specimens of diphtheria material have been examined and reported upon for the Metropolitan Asylums Board, and that the director has during the same period supplied 2389 doses of antitoxic serum for the treatment of diphtheria in the hospitals of the board. In addition to the number of doses sent out, about 2500 doses, each containing 1000 Behring's normal immunisation-units, have been set aside, principally to meet extra calls should they arise. Two papers have already been published in connexion with the grant from the Goldsmiths' Company. Dr. Sidney Martin, in a preliminary communication published August 24th, 1895, gives the results of the action of the diphtheria antitoxin in neutralising the effects of the ferment toxine and albumoses formed during an attack of diphtheria. Dr. Cartwright Wood, in a recent communication to the Royal Society,[1] gave the result of his experiments on the rapid production of active diphtheria antitoxin. This part of the investigation is extremely important from the large quantities of antitoxin now employed. At first, by the ordinary method, and after a considerable time antitoxic serum of the strength of about 50 immunisation-units per cubic centimetre of serum was obtained. As the result of Dr. Wood's investigation serum has been obtained in nine weeks 1 cubic centimetre of which contains 250 immunisation-units, and in one month Dr. Wood was able to obtain serum of a strength such that 1 cubic centimetre contains 125 immunisation-units. As 4 cubic centimetres will contain 1000 units, the practice of subcutaneous injection, especially in the case of children, is rendered much easier.

The President reported that he had appointed Mr. Reginald Harrison and Mr. John Langton as delegates of the College to attend the celebration of the twenty-fifth anniversary of the German Surgical Society at Berlin.

The Council resolved that £510 should be invested out of the College funds and should be kept apart as the Arris Bequest.

In answer to a letter received from the Midwives Registration Association the Council resolved that they were not prepared to appoint a representative on a deputation to the Government.

A letter was read from Miss M. Edith Durham offering to the College a portrait by herself in low relief (bronze) of her father, the late Mr. Arthur E. Durham. The gift was accepted with the best thanks of the Council.

The next meeting of the Council will take place on May 14th.

[1] THE LANCET, April 11th, 1896: A Preliminary Note on a Method for rapidly producing Diphtheria Antitoxins.

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THE LANCET.

LONDON: SATURDAY, APRIL 18, 1896.

SHOULD the next International Medical Congress prove to be a failure it will not be for want of examples to imitate or errors to avoid. The three last in the series of which it will be the twelfth—that at Rome, that at Berlin, and that in London—were, taken in reverse order, so many object-lessons by which its organisers may be expected to profit—Rome as a warning, Berlin as a *succès d'estime*, London as a model.

Perhaps the place at which it is to be held may be the means of saving it from what proved so disastrous to its Roman predecessor — the excessive number of the *congressisti*. Moscow cannot attract so many participants in its proceedings as did Rome. So hampered were the organising committee of the last Congress by the sheer weight of numbers that confusion invaded every detail of its programme and the result was, in the language of one of its most conspicuous promoters, "un fiasco solenne"—a monumental failure. Apart from the fascinating interest of the City of the Cæsars the Italians themselves were not blameless for the overcrowding that made the Congress so unfavourably memorable. They were, by their own subsequent admission, possessed by the record-breaking spirit and longed to excel their Northern and Western brethren in the magnitude of their medical parliament. The consequences, fraught as they were with disappointment and even bitter feeling, are too fresh in the memory to need recapitulation. Sufficient to say, that its most authoritative members, representing the leading European nationalities, were at one in thinking with the Italian promoter already cited that "beyond all dispute the Roman Congress registered the apogee of international congresses," and that "from this period onward we may anticipate a steady decline in their magnitude."

As with the number of participants, so with that of the papers sent in for discussion—the tendency of future congresses must be in the direction of curtailment, of concentration, and of economy in time and attention. A well-considered agenda paper, restricting the number of communications and rejecting all but those of supreme and present importance, must be the guiding principle of the next programme; while the sifting process that must precede it need not necessarily exclude from publication in a summarised form the thousand and one papers or monographs that are sure to be sent in. The whole system of International Congresses, indeed, is on its trial, and it will rest with the organising committee at Moscow whether the Congress now in preparation is, or is not, to mark a new departure in such professional gatherings in which the convenience and comfort of the participants are to be duly consulted with a vigilant and effective regard to the interests of science and the furtherance of enlightened practice.

We could suggest no better course for the organising committee than a re-perusal and consideration of Professor MICHAEL FOSTER'S paper at the last Congress on the Organisation of Science. Recommendations not more sagacious than practical were advanced in that masterly address which are as applicable to medical congresses as to medical literature—recommendations of which the root-idea is the inter-communication of workers in the same branch of inquiry, the comparison of results already achieved, and the avoidance of repetition of experiments already performed and of the re-traversing of ground already trodden. Preliminary correspondence with the heads of the leading medical schools throughout the world would put the committee in a position to know what each was working at and thought desirable, and from this knowledge to construct a programme which should minimise the number of themes to be taken up and reduce it still further by the exclusion of all that was of inferior scientific or clinical importance. Some such course, in fact, will have to be adopted if anything like cosmos is to replace the chaos which was all too present at the Eleventh Congress held at Rome.

The organising committee has already exhibited a very commendable readiness to listen to any reasonable protest, and this spirit together with the sensible determination to keep special subjects within proper limits and to avoid the excessive sub-division into sections which characterised former congresses promise well for the success of the meeting at Moscow. We have already commented favourably[1] on this action, and in the same article we took occasion to refer to the difficulties that were likely to arise in regard to the "official" languages in which the discussions were to be carried on. It will be remembered that the languages originally selected by the committee were French, Russian, and German. We pointed out that the exclusion of English would have "the effect of deterring large numbers, not only of Englishmen, but also of Canadians, Americans, Australians, and others" from attending the Congress or from sending papers to be read at it. Our protest was received in the friendly spirit in which it was made, and on April 4th we were glad to be able to publish the substance of a letter written by Professor ERISMAN, the General Secretary of the next International Congress, to our St. Petersburg correspondent to inform him that the question of languages is to be reconsidered by the executive committee, and that in all probability the English language will be admitted to equal rights with German, Russian, and French, and that "this will be done because it has become clear that the exclusion of the English language would not be well received by our English colleagues, and the committee do not consider themselves justified in insisting on their first decision if the general opinion of our English colleagues is clearly against it. You may rest assured that the committee, in discussing this question and coming to their first decision, were guided solely by considerations of what would be of advantage to the Congress and were far from having in view the national aspect of the matter." As we have said above, the whole system of International Congresses is on its trial, but we see no reason, if the organising committee and the Russian authorities generally continue to act in the same

[1] THE LANCET, March 14th, 1896, p. 719.

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wise spirit of consideration and courtesy, why the Twelfth Congress should not be as successful as any of its predecessors.

DR. BATCHELOR'S address as president of the Fourth Inter-colonial Medical Congress of Australasia, which was published in THE LANCET of April 4th, 1896, possesses in some respects more general interest than usually attaches to such utterances. The subject was the Present and Prospective Conditions of Medical Education and the address may fairly be presumed to be a typical representation of professional opinion in our Australasian colonies on this important question. Many of Dr. BATCHELOR'S remarks are, no doubt, of quite general application and in no way coloured by local considerations, but it is always interesting to see the trend of opinion in our colonies, whether that opinion follows, or is in advance of, the views prevailing at home. Dr. BATCHELOR is of opinion that the amount of general culture required of the student before entering upon his medical curriculum is altogether insufficient and that the recent great advances both in primary and secondary education in England and the colonies would justify a much higher matriculation test than that commonly required. In this matter the University of London has set a notable example which has had, and will still have, far-reaching consequences. After matriculation Dr. BATCHELOR thinks that there "should ensue two years of special scientific subjects preparatory to the strict professional education, which should continue for at least four years further." This would, of course, involve a six years' curriculum, a reform for which we are not yet prepared, but which no one can pronounce either absurd or incapable of realisation in the perhaps distant future. As regards the subjects which should engage the student's attention at the stage preceding the strictly professional curriculum Dr. BATCHELOR says rather happily that "the medical man of the immediate future should, above all things, aim at being scientific in his habits of thought and methods of practice. He should have acquired the eye of science, the ear of science, the hand of science, the judgment of science; he should know that he really sees what he is looking at, hears what he is listening for, and touches with discrimination what he handles." This is undoubtedly the correct ideal, but opinions will differ as to how it may be most surely and adequately attained. The general feeling at present is strongly in favour of the view that this preliminary training is best afforded by the physical and biological sciences. We are not sure that this view, just as it probably is in the main, is not at present somewhat overpressed. Medical men have to do much more than observe, and the capacities that might constitute an admirable botanist or zoologist might make a poor physician. It is probable that the value of literature, of general culture, of a knowledge of "the best that has been thought and done in the world," of psychology, &c., will be more and more recognised as time goes on.

Dr. BATCHELOR is very strongly of opinion that it would be of no advantage to return to the old method of apprenticeship. This method, he thinks, once had its advantages. In former days "most work was empirical and it was surely of some advantage to be associated with an empiric of great experience and possibly considerable success. So much depended upon observation of more or less transitory significance that, in the absence of scientific or theoretical principles the methods of actual practice were doubtless as good as might be got. However, I am inclined to think that if anyone still advocates the old apprenticeship plan as suitable to modern requirements, such a man has allowed the tide to run past him; he has failed to note the signs of the times and does not observe that exact science has advanced, is advancing, and will continue to advance in every department of our work and that the need for increased opportunities for scientific training becomes for our junior students more and more impressive." This is a just and most important distinction. The old system of apprenticeship, while possessing some undeniable advantages, was apt to turn out clever empirics rather than thoroughly equipped scientific practitioners. Dr. BATCHELOR speaks approvingly of the medical curriculum of the University of Sydney, according to which, it would appear, the first two years of the student's course are devoted to chemistry, physics, anatomy, physiology, and biology, in the third year materia medica and therapeutics are introduced, and it is not until the fourth year that the purely professional subjects are begun. However excellent this may appear on paper we must point out a practical difficulty which seems to us to be a real one. A student cannot postpone the commencement of his hospital training to his fourth year, and all clinical teachers will agree that there is great inconvenience in carrying on clinical teaching with students who have had no systematic instruction in medicine and surgery. Dr. BATCHELOR pleads very earnestly for a closer and more sympathetic relationship between universities and colleges on the one hand and teaching hospitals on the other. On this point there will be a general acquiescence in the views which he puts forth.

We publish in other columns an extended although necessarily not an exhaustive account of the proceedings of the Congress, and we take the opportunity of congratulating our brethren "down below" generally, and the practitioners of New Zealand in particular, on the great success which has attended what was evidently a very useful and very pleasant gathering of the members of our profession in Australasia.

Floreant.

THE appeal of the Apothecaries' Hall of Ireland from the adverse judgment of the General Medical Council and its refusal to appoint examiners in surgery has an interest beyond that of the question immediately at issue. It is understood that the case between the society and the General Medical Council will be fixed for May, when the society will be represented by very able counsel and all that can be said in its favour will be advanced. Whatever the issue we cannot but regret that any such appeal should be necessary. The Medical Acts contemplate reference to the Privy Council in various emergencies. The Midwives Bill now before Parliament proposes to give a midwife whose name has been struck off the Register by the Midwives Board the right of appeal to the Privy Council. Could anything be more disproportionate or absurd? A practitioner removed

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from the Medical Register has no such appeal. An appeal should be, if not easy, practicable and not far off; but an appeal from a midwife, say, in a provincial town, to the Privy Council is so impossible in aspect as to be tantamount to none. It is neither respectful to the midwife nor to the Privy Council. In plain terms it is ridiculous. It is creditable to the General Medical Council that this is the first time in its history that there has been an appeal from its judgment to that of the Privy Council. The General Medical Council is charged with the responsibility of representing the wisdom and justice of the whole profession in its relation to the public. There are two extremes of opinion which tend to bring about appeals to the Privy Council—that which regards the General Medical Council as existing only in the interest of the State and that which regards it as existing mainly to protect the interests of the profession. Both extremes are wrong. The General Medical Council is a domestic court to secure the efficiency and reputation of the medical profession partly through its corporations and other qualifying bodies and partly directly. Its powers are considerable, the more so as they are undefined. All who have the interest of the profession at heart will agree that the best thing for the profession is to have all questions arising under the Medical Acts settled in the General Medical Council. To have acted well nigh forty years without such an appeal being made to the Privy Council and also without any manifest disposition of the Privy Council to interfere with the action and freedom of the General Medical Council is some presumption that the latter body is capable of settling most questions. Those who think otherwise and who consider that some modification of its constitution is needed may well stay to consider the minimum of change required lest they compromise fatally the domesticity of the government of the profession.

Annotations.

"Ne quid nimis."

A CENTRAL BOARD FOR HOSPITALS.

THERE was a good meeting in the theatre of the Royal United Service Institution, Whitehall, on the 13th inst., to hear the scheme of the Charity Organisation Society, though many presumable supporters of the scheme were unable to be present. The scheme would give a place on the Board of 169 to about thirteen classes of representatives. The list of institutions or interests to be represented is a formidable one:—General hospitals, special hospitals, medical schools, provident dispensaries, other medical charities, medical corporations, the London County Council, the British Medical Association, the Hospital Sunday Fund, the Hospital Saturday Fund, the Charity Organisation Society, the City Parochial Foundation, and general practitioners. It requires a considerable stretch of imagination to suppose that charitable institutions maintained by voluntary subscriptions will consent to be controlled by bodies that do not subscribe to their maintenance and to which they owe no allegiance. Why should they invite the intrusion of the London County Council? or upon what theory is the British Medical Association to interfere? The best chance of success will lie in seeking, at least in the first instance, the coöperation of representatives of every existing charity that commands the respect of the public and of the Hospital Sunday and Saturday Funds. Mr. Sydney Holland is not far wrong in arguing that only some body that is supported by the power of the purse will have much controlling influence. The claim of the Charity Organisation Society to be represented may be disputed, but the hospitals would do well to recognise it. It may seem more critical than sympathetic sometimes, but its benevolence cannot be doubted, and hospitals would be stronger in public estimation for listening a little more to some of its criticisms. We repeat that a more modest beginning of a board should be attempted. Once established and worked, as Mr. Brudenell Carter suggests, "by advice, conciliation, and reasoning," it may do much good; it can easily be enlarged by the addition of the representative of any class or interest that gives substantial proof of its sympathy. This subject will be discussed by the Hospitals Association at the board room, Charing-cross Hospital, on Thursday, April 23rd, at 8 P.M. Lord Monkswell, a member of the Select Committee of the House of Lords on Hospitals, will preside, and important resolutions will be moved in favour of a reconstitution of the Distribution Committee of the Hospital Sunday Fund and of a central board of supervision.

THE NEW PHOTOGRAPHY: A STEP FORWARD.

WE have this week received information of a development in the new photographic process which promises to be of great importance in regard to its application to medicine. The improvement consists essentially in very materially reducing the exposure, so that in the case of hands and feet, &c. a few seconds suffice to give satisfactory detail. We have seen some good negatives so obtained with an exposure of less than twenty seconds. The process is occupying the attention of our laboratory department, but in the meantime it may be stated that the results are obtained by placing the negative (film side) upon powdered fluor-spar. It is evident in this case that the active rays are transmitted through the glass. The process gives promise of enabling us to obtain photographic images of objects within the human body with a comparatively short exposure, say five to ten minutes. The procedure would appear to be simple, and we hope many investigators will be induced to try it as it is in the direction of reduced exposure that progress is most needed to make Professor Roentgen's discovery of real value in medicine.

Mr. Nikola Tesla has made public the results of some of his experiments. He has worked, as might be expected, chiefly with the disruptive discharge coil commonly known by his name. He has obtained photographic impressions at distances of forty feet from the tube, and his first communication gives a large photograph of a person's back, showing the humerus and scapula. In the second letter he complains that the picture had suffered much in reproduction and that it ought to have shown clear indications of the ribs. He prefers a vacuum tube having one pole only; he insists that the higher the potential the greater the effect, and speaks of a luminous atmosphere as surrounding the vacuum tube while it is in action. From this and other points we are led to believe that he makes use of enormous potentials. In this country the Tesla coil has been regarded as less useful than the Ruhmkorff for "x" ray purposes, the powerful effect of the former upon the vacuum tubes being considered a disadvantage. Certain experimenters in London have obtained results from the use of a Tesla coil with the lamp attached to a single pole. Tesla's first paper, in the *American Electrical Review* of March 11th, is valuable because it describes the phenomena occurring in the vacuum tube, and enables an operator to see when the tube is

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working at its best effect. He expresses the opinion that there is an actual passage of molecules from the interior of the tube to the outside, and thinks the sensitive plate is actually "bombarded" by these molecules; he also gives his reasons for this belief.

A JUDGE ON VACCINATION.

SIR WILLIAM GRANTHAM is chairman of the Barcombe parish council—Barcombe is a small village in Sussex—and at the close of the meeting of that body the other evening he took occasion to make a few remarks on vaccination, referring especially to the removal of the last assize from Gloucester to Cheltenham. A man who had been working in the assize court had, he said, been suffering from the disease of small-pox, and the Sheriff and Under-Sheriff consulted him as to the advisability of closing the public galleries. Holding this to be a serious step, he said he thought that it would be much better to remove the assize altogether, and as fortunately the city had no voice in the matter he, through the Lord Chancellor, obtained the necessary order of the Privy Council to take the assize to any place he might name, and he chose Cheltenham as the nearest place. To show that it was not from any personal fear, added Sir William Grantham, he went to Gloucester to try certain cases which had to be taken by a city jury, and also attended service in the cathedral. He referred to the protests of the anti-vaccinationists, and remarked that there were people in Gloucester who said boldly and publicly that they would rather see their children dead in their coffins than see them vaccinated. He was sorry to say they had been rewarded in the way they wanted; their children had died, but their conduct had created a spirit of lawlessness that perhaps they did not anticipate. Sir William Grantham went on to explain very lucidly the use of vaccine as a prophylactic, quoting extensive figures, and it is hardly necessary to state that the local and the executive anti-vaccinationist has come down like a wolf on the fold with an array of figures in opposition. Locally the speech has attracted much attention and some criticism, but his colleagues on the council passed a vote of thanks to Sir William Grantham for his useful speech.

IL CONTE MATTEI.

OUR Rome correspondent writes: Of the myriads of railway passengers who annually thread the many tunnels between Bologna and Florence how few are aware that not far from the station of Vergato stands the "Castello dei Miracoli," the picturesque abode of the most prosperous irregular practitioner of the nineteenth century. There it was that Count Mattei, scion of a rich and noble Genoese family, lived and laboured; there he received pilgrims for whom he was the embodiment of Bacon's "nobilis in villula lucubrans"—the patrician grappling with Nature in his château. There he sat as the central spider of a web whose ramifications extended all the world over and enmeshed patients of high and low degree, especially the former. Statesmen and diplomatists, men to whose judgment and finesse the most momentous as well as the most delicate missions were confided, had no hesitation in entrusting their health, mental and bodily, to a man who, according to his latest panegyrist, "studiò da se la medicina dopo avere scoperto il suo grande segreto" (studied medicine by himself after—note the order—after having discovered his great secret). And they were quite ready to show cause for the faith that was in them and one and all to assure their hearers that, having found orthodox medicine useless or worse, they had got rid of their ailment (whatever it was) and regained their powers of work and enjoyment of life by Count Mattei's "granellini di zucchero saturi di elettricità bianca, bleu, rossa, o verde" (sugar granules charged with white, blue, red, or green electricity), which were equally good for tubercle or chilblains, anæmia or plethora, cancer or wry-neck, acute melancholia or inhibitory paresis. The infallible logic of *post hoc, ergo propter hoc* was, in the case of these masters of statecraft, weapon sufficient to discomfit all sceptics as to the reality of their cure. Science and research demurred in vain to a remedy which was alleged to be equally efficacious in maladies not only contrary but antagonistic, while all the time, under the shelter of social prestige and aristocratic testimony, Count Mattei was not merely adding daily to his "miraculous cures" but steadily amassing a fortune which, in the language of the panegyrist aforesaid, "lo fece più volte millionario" (made him several times over a millionaire). Vainly did foreign custom-houses interpose their barrier to the import of his "granellini." Vainly was the law invoked against the sale of patent medicines the composition of which was undeclared even to the licensing authority. "Agents" were found not only to introduce the granules into every Christian country, but to effect their sale in quarters the most conspicuous and exposed, and the army of such functionaries, subsidised by Count Mattei at considerable cost, still left the gains from the "business" enormous. Dying the other day at Bologna he has bequeathed two million lire (£80,000) to charities, while the bulk of his fortune descends to his adopted son and heir, Mario Venturoli Mattei, to whom he has also left his "segreto miracoloso."

THE MANUFACTURE OF ARSENICAL SHEEP DIPS.

A FEW months ago some sensational revelations concerning the disastrous effects of the making of poisonous sheep dips on the operatives of certain East-end factories were published in an East-end paper. Assuming that these allegations had some foundation in fact we commented on the subject and emphasised the necessity of the Government taking instant measures to protect persons engaged in such an apparently dangerous employment. On the face of it it is reasonable to suppose that the preparation of a mixture containing nearly 20 per cent. of such a highly poisonous substance as white arsenic would be attended with some risk to health. We have, however, recently been convinced that it is quite possible to reduce the conditions of danger practically to *nil* by taking certain precautions in every stage of the manufacture. Our attention was directed to this fact by Messrs. William Cooper and Nephews, whose factory at Berkhamsted we recently inspected. We were much struck by the extremely healthy appearance of all those employed in and about the works. Most factory hands look pale and pasty, but all the men and boys we saw—and we visited all the shops—were ruddy, clean-skinned, and clear eyed. Sulphide of arsenic, which is to some extent formed during the course of manufacture, is very insoluble, and there is only one man in the place who has anything to do with the raw arsenious acid. He had been employed for thirty-three years, so that even working with the drug in a more easily assimilable form than the sulphide seemed to have had little or no effect upon him. This speaks volumes when we consider the fact also as some indication of the extent of the manufacture that the sale of this dip in 1895 was in excess of 1894 by over a million packets, representing an increased output of over 800 tons in one year. The only chance of risk appears to us to be involved not in the processes of actual manufacture in these particular works, but in the measuring out of the product into the cardboard packets. But in this department, also, every precaution that can be taken is adopted. The risk, however, attending this department will shortly be removed since we saw a highly ingenious piece of machinery being erected for the automatic measurement and for the packing of the powder. We record with

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pleasure the care which is taken at these large and typical works to provide against injury to the workmen. We hope that the committee now sitting and inquiring into dangerous trades will compel similar precautionary measures to be adopted in all other factories where risks of the same kind exist. The application of arsenic for sheep dipping purposes would appear to require some care, but in the proportion that the arsenical compound is dissolved in water for the preparation of the dip it is quite safe. This is evident from the fact that 125 million sheep were dipped in a solution of the powder referred to without a single accident.

THE ARRIS AND GALE LECTURES.

IT appears that the lecturers paid by the Royal College of Surgeons of England out of the Arris and Gale bequests have hitherto only received the Gale portion of the remuneration. The Arris portion had by mistake become engulphed in the general coffers of the College. This is to be put right, and the sum of £510 is to be invested out of the College funds and set apart to fulfil the purposes of the bequest.

THE GENERAL HOSPITAL, ADELAIDE, SOUTH AUSTRALIA: A WARNING.

WE regret to learn from a telegram received on the 15th inst. by the President of the Medical Defence Union, that a very serious difficulty has arisen at Adelaide. The terms of the telegram are as follows: "Adelaide, April 15th, 1896. Government propose import paid men to replace Adelaide Hospital honorary staff, who have resigned in body under protest against Government action. Profession support them. Inform medical papers. Further particulars later." From the foregoing it is at least evident that no medical practitioner should accept any appointment to the Adelaide Hospital that may be offered him by the South Australian Government in the absence of the further information which has been promised. Immediately on receipt of this we will publish a statement of the causes which have led to this regrettable state of things.

EXTRAORDINARY TREATMENT OF AN EDINBURGH MEDICAL MAN.

A FEW weeks ago a paragraph appeared in the newspapers stating that, as the result of a post-mortem examination of a girl's body, an Edinburgh practitioner, Mr. G. M. Stocks, L.R.C.P., L.R.C.S. Edin., had been arrested on a charge of murder for performing an illegal operation from which death resulted. It appears that he was treated like a common felon, being taken from the court-house to the prison handcuffed to pickpockets. After a time he was released on bail, and now he has been released altogether, the authorities having decided that there is no case against him. We hope next week to give the declaration made by Mr. Stocks to the Sheriff, from which it will be seen that a most extraordinary blunder has been made and that a hideous wrong has been done to an innocent member of the profession. The fact that the authorities have had to abandon all further proceedings is sufficient evidence of that fact. Unfortunately, there is no redress from Crown servants protected by privilege, and investigations conducted by the public prosecutor are made in private; but the profession is fully entitled to ask on what class of evidence was the warrant for the apprehension issued, or was it, as stated in the public press, the result of a post-mortem examination or the result of police inquiries? This point is, of course, one about which there ought to be no difficulty in ascertaining the truth. To the profession as a whole the case is of great importance and gravity, for it means that a medical man in the performance of his usual professional work may be suddenly arrested on the gravest of charges, and yet his arrest be due either to an opinion so erroneous or so distorted (in spite of a post-mortem examination) or to other evidence so flimsy that the charge collapses as soon as the competent authorities look into it. This cannot be regarded as a satisfactory possibility, and when it has been ascertained upon whose shoulders the blame rests it is to be hoped that steps may be taken to prevent the possibility of similar mistakes in the same quarter.

THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY, LIMITED.

THE annual meeting of the London and Counties Medical Protection Society, Limited, will be held on Friday, May 1st, 1896, at the Restaurant Frascati, Oxford-street, London, at 5 P.M. The annual dinner of the Society will take place after the meeting at 7 P.M., under the presidency of Mr. Hutchinson, F.R.S. Medical men, not members of the Society, but interested in its work, are cordially invited to attend the dinner. Tickets, price 7*s.* 6*d.* each, exclusive of wine, may be had on application to the secretary, Dr. Hugh Woods, 11, Archway-road, Highgate, London, N.

THE RECENT CASE OF POISONING BY ANTITOXIC SERUM.

IT is perhaps one of the greatest tributes that the success of the antitoxic serum treatment could have paid to it that such widespread anxiety should be evinced at the recent case of alleged poisoning through its use that has occurred in Berlin. As yet it is not advisable to express any definite opinion on this case, but it may be well, whilst reserving judgment, to point out that the reports hitherto received and promptly transmitted to the public press are of a very vague and unsatisfactory character. First, it was stated that the child died several hours after the injection had been made; then news was sent that death took place within a few minutes of the injection. Now with the exception of the most virulent poisons death in such a short period is seldom brought about. In this instance it may be assumed that similar serum had been supplied for use on other patients, and had there been a poison virulent enough to cause the death of the patient in such a short time reports of other deaths must ere this have been received. It is satisfactory to learn that a careful analysis of the serum, which was sealed up immediately after this unfortunate occurrence, will be made, for there can be little doubt that this case will be made a centre around which will be grouped all the ill effects that follow the use of serum, whether *post hoc* or *propter hoc*, in any case of diphtheria.

THE RIGHTS OF THE SUBSCRIBER.

WE learn from a letter by Dr. Lediard, published recently in the *Carlisle Patriot*, that there is a proposal on foot to make some radical alterations in the voting powers of the subscribers to the Cumberland Infirmary. As matters now stand it is laid down by the statutes of this institution that: "Every subscriber of 2 guineas annually and every benefactor of 20 guineas shall have one vote at election of officers; every subscriber of 5 guineas annually and every benefactor of 50 guineas shall have two votes; every subscriber of 10 guineas or upwards annually and every benefactor of 100 guineas or upwards shall have three votes." It is now proposed that this elective power should be taken away from each individual subscriber and be put into the hands of a committee to be appointed triennially for the purpose. We must say that on the whole we sympathise with the proposed change and believe that in the end the institution in question would benefit by it. One objection

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put forth against it is the possibility of a falling off in the number of subscriptions, the idea being that by having direct votes the subscribers feel they are "getting something for their money." We do not think the desire for votes will be likely to make much difference, besides which they will still have the privilege of electing their representatives on the committee. Looking at it from the honorary officers' point of view, we can only think the change would be a healthy one. Canvassing the county to obtain an honorary post on a hospital staff cannot but be a most objectionable proceeding to all concerned, and only naturally in such cases personal considerations are often apt to outweigh all others in the voting. By all means let each subscriber have a voice in the election of the committee, but the committee should do the electing. This would be a far less cumbersome method of proceeding than the one in vogue and one which should result in putting the right man in the right place.

MACCLESFIELD INFIRMARY.

MYSTERIOUS disappearances of important documents are a staple theme for elaboration by writers of fiction, and they occasionally occur in real life, with the result of producing much trouble and anxiety as well as sometimes a gratifying field of operations for the legal profession. The authorities of Macclesfield Infirmary are at present much perplexed by their inability to lay hands on the trust deed of the institution—an undesirable predicament for a public body to be in, although not likely to be attended by any awkward consequences. The honorary secretary has not seen the document since December, 1858, when it was completed and handed over to the residuary owner of the trust fund in the event of the trust relating to the infirmary failing from any cause. The gentleman into whose keeping it then passed had the custody of the documents and securities of Mr. Tunnicliffe, the founder of the infirmary, and he transferred the endowment fund to the Corporation of Macclesfield in compliance with the trust deed. The infirmary was opened in October, 1872, the proceedings were recorded in the *Macclesfield Courier and Herald* at the time, and the conductors of that prosperous journal have now the satisfaction of knowing that its columns contain the only available transcript of the missing document. It was supposed to be deposited in the safe of the Macclesfield Corporation, and the search for it appears to be conducted with such lack of zeal that when a meeting of the Documents Committee was summoned to investigate the matter only one gentleman was in attendance.

IMPROVEMENTS IN BRITISH BALNEOLOGICAL PRACTICE.

A SATISFACTORY feature in the recent history of British medicine has been the re-organisation of some of our most important spas and watering-places, and the serious attempt made to put this important department of practice on a scientific basis. Mr. Douglas Kerr's recent paper at the Balneological and Climatological Society draws attention afresh to this subject. Bath has in recent years quite renewed its ancient glory, while Harrogate, Buxton, and Droitwich—to mention a few out of many—are now among the best-equipped sanatoria in the world. Certain advantages, indeed, our continental rivals will continue to possess over us. No British resort can compete in point of climate with Carlsbad or Homburg or Vichy. In the matter of amusements also, especially in the provision of really high-class music, the continental spas are still superior to our own, though great progress has undoubtedly been made in this particular at the home resorts. It is well to remember that the patients who chiefly frequent these resorts are seldom complete invalids, that exercise in the fresh air is usually a cardinal principle of treatment, and that hence amusements of the right kind and of good quality are indispensable. The foreign resorts seem to excel in ingenious methods of applying the different waters. The Mont Dore methods are well known and are now imitated at several of the home resorts. The most recent innovation of this kind is the Nauheim treatment of chronic cardiac disease. The speakers at the recent discussion at the Balneological and Climatological Society seemed much divided regarding the methods of the new treatment. Mr. Holbeche of Malvern could not fully understand the *rationale* of the treatment. Dr. Snow thought the facts at present before the profession were insufficient to warrant any positive conclusion. Dr. Sunderland thought that the Nauheim treatment had been generally accepted on as slender evidence as the Koch cure for tuberculosis had been accepted a few years ago. Mr. Shirley Jones of Droitwich had tried the treatment with somewhat ambiguous results. It is evident that the Nauheim therapy is at present largely engaging the attention of the profession, and further information and evidence on the subject will be awaited with much interest. The facts hitherto educed, however striking and suggestive, have not been sufficient to carry general conviction.

THE RELATION OF DISEASES OF FOWLS TO DIPHTHERIA.

M. GALLEZ *fils*, who has been investigating the relation of diphtheria to the diseases of birds, has reported to the Belgian Academy of Medicine that there are two perfectly distinct diseases to which such birds as domestic fowls are subject. First, a contagious catarrh called also *morve* or "fowl glanders," characterised by a glairy secretion from the mucous membrane of the mouth, nostrils, and eyes, and also by rapid emaciation and paralysis of the legs. It is very contagious and very fatal, and may give rise to diphtheria in the human subject. Its primary cause is a bacillus similar to Löffler's, but far less virulent. If its virulence is artificially increased and a large dose injected into a dog or a guinea-pig, say ten cubic centimetres per kilogramme of the animal's weight, death rapidly ensues with symptoms precisely similar to those induced by Löffler's bacillus. When injected into fowls the so-called *morve* is reproduced. This disease differs from the second one, which is known as "fowl diphtheria," both in its symptoms and in its etiology, but has nothing corresponding to human diphtheria except its name. Experiments with antidiphtheritic serum showed that some curative effect was produced in fowls suffering from "contagious catarrh," though M. Gallez is unable to affirm that it acts as a certain specific. He explains the frequent immunity of persons handling fowls suffering from "contagious catarrh" to the comparatively slight virulence of the bacillus concerned as compared with that of the true Löffler's bacillus.

PEMPHIGUS.

DERMATOLOGISTS have generally regarded as typical cases of pemphigus that condition described by Duhring as dermatitis herpetiformis and also include under the same term urticaria papulo-bullosa, erythema multiforme, pustulous dermatitis, and hydroa. In the *Monatshefte für Praktische Dermatologie*, Band xxii., No. 6, is a short paper by Professor Petrini di Galatz of Bucharest. He comments on the various forms of skin disease which have been described under the term "pemphigus" and enumerates several in addition to those named above. He describes three varieties of pemphigus: (1) pemphigus vulgaris chronicus with periodic exacerbations and generally fatal termination; (2) pemphigus foliaceus; and (3) pemphigus vegetans vulgaris. The two latter forms may commence as a pemphigus vulgaris chronicus

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(type 1), and then pass into either of the two other types. The last variety leads to a severe cachexia; it is the rarest of the three and the most dangerous. Closely resembling these three types of the disease is another condition which Professor Galatz draws attention to—namely, a group of "bullous dermatoses" which has been described as "pemphigus benignus," and which occurs in young subjects and is very apt to recur once or twice, but always ends in recovery. Bazin has described this same condition under the term of "hydroa bullosa," and it has sometimes been termed simply "hydroa," but it is not the same disease to which English dermatologists apply the term. But Professor Galatz thinks it very unadvisable to include under the term "pemphigus" bullous eruptions which in the course of two or three weeks quite disappear when the true pemphigus is such a serious and often fatal disease. According to his opinion pemphigus is the most serious of all dermatoses and yields the highest mortality, whilst "hydroa" (in the sense described above) is one of the least dangerous. The condition known as "pemphigus circinatus" he does not include as a true pemphigus, but includes it under the heading of Duhring's dermatitis, together with herpes iris, erythema iris, and erythema bullosum.

THE WATER-SUPPLY OF EGYPT.

IN his recent report Lord Cromer draws attention to a discovery which, he thinks, may revolutionise the whole question of the provincial water-supply in Egypt. In the opinion of our Consul-General in Egypt, "the importance of this discovery cannot be overrated. As the construction of filter-beds forms one of the heaviest items of expenditure in connexion with the water-supply of a town, and as it has been this particular initial outlay which has rendered the profits of these undertakings doubtful, it is evident that if a supply of pure water can be obtained by the comparatively cheap method described above it should not be difficult to attract capital into similar enterprises with a reasonable prospect of a return for the money sunk. As the geological formation of the Delta may be presumed not to vary greatly it is reasonable to suppose that the question of a good water-supply for the towns lying in this part of Egypt has been brought within the limits of practical solution." Borings recently undertaken at Tantah, in the centre of the Delta, prove that beneath the external alluvial deposit and the sand underlying it a second and apparently impermeable bed of clay exists at a depth of about 69 ft. from the surface. The thickness of this deep-seated bed is 6¾ ft., and as soon as the boring-tube pierced it water rose to within a yard of the ground level. The tube was then made to descend a further distance of 37 ft. through sand, the total depth attained being thus 106 ft. The supply of water is described as inexhaustible and apparently of the purest quality. Samples have been submitted for bacteriological examination to the Government expert, and if his report is favourable a firm of contractors is to be authorised to sink a well for the supply of the town. It has long been known that water could be obtained pretty nearly anywhere in Lower Egypt, provided the borings were carried deep enough, but apparently the idea of making use of it in the manner indicated by Lord Cromer never before occurred to anyone in authority. Some years ago the Royal Engineers took experimental soundings, so to speak, at Zagazig; and at Mena House, near the Giseh Pyramids, what has been called an artesian well exists furnishing an ample supply of extremely pure water. Specimens of the latter have been frequently analysed and pronounced to be practically identical with Nile water, and no doubt a similar result will attend the investigation now pending. That any water save Nile water should exist towards the sea end of the Nile valley appears to us extremely improbable. No doubt the water permeates the bed of the river at countless points in its downward course and then makes its way to the Delta beneath the impermeable clay stratum. If this explanation be correct there may be said to be two or more Niles constantly flowing seawards and superimposed one above the other. In this connexion we would draw the attention of the Egyptian authorities to the advisability of providing drainage for the removal, after fouling, of the water it is their intention to furnish. An unlimited supply of water in a town where there are no sewers is by no means an unmixed blessing. In an appendix to Lord Cromer's report Mr. Garstin insists on the necessity of drainage for agricultural purposes. The head of the irrigation department calls it "one of the most crying wants of Egypt at present," but to our minds the total absence of all drainage in the towns, from Cairo downwards, is a still more crying evil. In one case the increase of revenue is concerned, in the other the lives of thousands are at stake.

THE REPORT OF THE SANITARY COMMISSIONER WITH THE GOVERNMENT OF INDIA.

WE do not propose to deal with this voluminous and very able report on the present occasion, but we may nevertheless allude very briefly to the section devoted to the European Army of India during 1894. The year, we are told, having been a very wet one over the greater part of India, especially of Northern India, sickness increased, and influenza, cholera, and malarial fevers were more prevalent than in 1893. The strength of the European troops in the country was 71,082 in 1894; the admission-, constantly sick-, and death-rates were all higher than in the preceding year; the death-rate was 16·07 per 1000, whereas in 1893 it was only 12·61. The chief causes of mortality were enteric fever, cholera, hepatic abscess, and injuries. Enteric fever caused 36 per cent. of the total deaths and cholera 13 per cent. Among the diseases which caused increased admission rates were influenza, cholera, enteric fever, ague, respiratory disease, dysentery, and venereal diseases — the latter caused no less than 34 per cent. of the total sickness and ague 26 per cent. In all the three presidencies venereal diseases and ague head the list of admissions into hospital. As regards mortality, however, enteric fever heads the list in all three presidencies, and in Bengal and Bombay the ratio was higher than the average of the decennium. We hope shortly to deal more fully with the report of the Sanitary Commissioner with the Government of India, but the foregoing figures will suffice to show the grave importance of the increasing prevalence of certain diseases among our troops serving in India.

CENTRAL CHANGES IN PERIPHERAL NEURITIS.

IN a recent number of the *Archives of Neurologie* Dr. Soukhanoff has an article on this subject, with special reference to a case of which he furnishes particulars. Until a short time ago peripheral neuritis was supposed to be a disease in which the lesion was confined to the peripheral nerves, but Kahler and Pick, Korsakow, Eichhorst, Campbell, and others have shown that changes also take place in the spinal cord, especially in the columns of Goll, although changes in the ganglion cells have also been described. Dr. Soukhanoff's case was that of a patient twenty-one years of age with a family history in which there were traces of a neurotic taint. He was of an amiable but somewhat weak character, often showed considerable energy, but never for very long at a time, was easily tired, and very impressionable. He developed a tendency to indulgence in alcohol, not a craving, but in his case sufficiently strong to lead to considerable over-indulgence. In 1892 he had an attack of delirium tremens and another in 1894. In

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the latter he threw himself out of a second storey window. A few months before his admission to hospital he was noticed to walk feebly and he was much troubled with stomach derangement. He gradually became worse, and on his admission there were slight weakness of the right side of the face, nystagmus, feebleness of both arms but more of the right than of the left, the hands being weaker than the other parts of the limbs, and there was also weakness in both legs, but affecting the smaller muscles most. The knee-jerks were not obtained and there was tenderness on pressure. The memory was bad and there was considerable psychical change. Tubercle bacilli were present in his sputum and he gradually became more and more feeble, the immediate cause of death being the pulmonary condition. At the necropsy empyema and advanced phthisical processes were found in the lungs and parenchymatous neuritis in the peripheral nerves. But changes were also found in the cord, the columns of Goll in particular being degenerated throughout almost the whole extent of the cord.

THE CHEMISTRY OF THE POISONS OF DIPHTHERIA.

WE have noted in our report of the proceedings of the last meeting of the Council of the Royal College of Surgeons of England that Dr. Sidney Martin has laid before the College a preliminary report of the work done by him in connexion with this subject under the grant from the Goldsmiths' Company. It appears to us that Dr. Sidney Martin's work is very suggestive, and a further report in confirmation will be awaited with interest. He has ascertained that the antitoxin, when injected by itself, in no way interferes with the nutrition of the animal, the temperature remaining normal and the weight increasing steadily. When injected along with the ferment toxine it prevents any marked rise of temperature, allows the weight to rise, and if given in sufficient quantities prevents degenerative changes of the nerves and cardiac muscle, although, if the quantity of antitoxin be not sufficient, some slight degeneration of nerves is noticeable. When injected along with the albumose, which by itself causes marked fever with first a rise and then a fall of temperature, the febrile reaction is greatly modified. The temperature varies much less than when the albumose is given alone and rapidly returns to the normal. As regards alteration in weight—an important indication of the state of nutrition—the albumose alone appears somewhat to interfere with natural increase, though it seldom determines any diminution, but when it is mixed with antitoxin the weight of the animal steadily and rapidly increases. Albumose alone produces degeneration of both nerves and muscles, and its exhibition is frequently followed by paralysis; but when antitoxin is given along with it these conditions do not make their appearance. Dr. Martin is continuing his investigations. Two important points brought out by his recent experiments are: (1) that antitoxin, if properly prepared, is harmless when tested on animals; and (2) that in the case of patients suffering from severe diphtheria it is necessary to give much larger doses than in ordinary cases (4000 immunisation-units) in order to neutralise the action of ferment-toxines and albumoses.

A PAPER of great importance to sanitary authorities was read by Dr. John F. J. Sykes, medical officer of health of St. Pancras, before a meeting of the Sanitary Institute on Wednesday last. The almost hopeless tangle (caused by cross-references) in which the Factory and Workshop Acts are at present makes a *précis* of the Acts set out in logical order of the utmost value, and this Dr. Sykes attempted to do. We hope to print a summary of the paper in a future issue of THE LANCET.

THE Hunterian Society proposes, on Wednesday, April 22nd, at 8 30 P.M., at the London Institution, Finsbury-circus, to hold a discussion on Joint Affections in Nervous Diseases. Mr. Targett will read a short paper on the subject illustrated by lantern slides. Dr. Beevor, Dr. Buzzard, Dr. W. M. Ord, and Dr. Aldren Turner have promised to take part in the discussion. Visitors will be cordially welcomed, and any wishing to speak are requested to communicate with the senior honorary secretary, Dr. F. J. Smith, 4, Christopher-street, E.C.

WE have received from the Home Department a programme of the Second International Pharmaceutical Exhibition which has reached that department from Austria through the Foreign Office. The exhibition will be held in Prague from Aug. 15th to Sept. 15th, 1896, and the executive committee invites exhibitors. All communications should be made to the President of the Executive Committee, Dr. K. Fragner, Prague, who will give information in answer to inquiries.

A CONFERENCE on the subject of Irish Workhouse Reform is to be held at St. Martin's Town Hall, Charing-cross, on Wednesday, April 29th, at 3 P.M., at which Dr. Moorhead, honorary secretary of the Poor-law Medical Officers' Association, will speak, supported by other speakers conversant with the working of these institutions.

MR. REGINALD B. D. ACLAND'S annual address to the members of the Hospital Saturday Fund is issued in pamphlet form and published at the offices of the Fund, 59, Farringdon-road, E.C., at the modest price of 1*d*. It is worth a perusal by all who take an interest in the work of our hospitals.

LORD RUSSELL OF KILLOWEN presided on Tuesday night last at the Freemason's Tavern over the annual dinner in connexion with King's College Hospital. During the evening subscriptions and donations amounting to £3340 were announced towards the debt of £6000 under which the hospital lies.

COUNT DEYM, the Austro-Hungarian Ambassador, has promised to preside at the fifty-first anniversary dinner of the German Hospital, which will take place at the Whitehall Rooms on June 26th next.

SOUTH-WEST LONDON MEDICAL SOCIETY.—A meeting of this society was held at the Town Hall, Wandsworth, on the 8th inst. A paper was read by Dr. P. Cauldwell Smith, medical officer of health of Wandsworth, on the Vaccination Laws and their Amendment. A discussion, followed in which Dr. Morgan Dockrell, Mr. T. A. I. Howell, Dr. Gilbert Richardson, and Mr. W. G. Dickinson took part.

ÆSCULAPIUS LODGE.—The last meeting of this lodge for the Masonic year was held at the Café Royal, Regent-street, W., on Wednesday, the 8th inst. G. Crawford Thomson, M.D. Durh., the Master, presided. Thomas Dutton, M.D. Durh., M.R.C.P. Edin., was elected Master for the ensuing year; G. Danford Thomas, M.D. Brux., treasurer; and C. M. Simpson, M.R.C.S. Eng., and George Herschell, M.D. Lond., auditors. G. Rowell, F.R.C.S. Eng., was elected a joining member, and J. Campbell Maclean, M.B., C.M. Edin., and Thelwell Pike, M.D. St. And., were proposed as such. W. Stacey Colman, M.D., M.R.C.P. Lond., and C. Henson Broadhurst, L.R.C.P. Lond., were admitted to the second degree. The sum of 10 guineas was voted to charity. Other business being disposed of the lodge was closed. The members afterwards dined together, when the usual Royal and Masonic toasts were duly honoured.

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THOMAS WAKLEY,

THE FOUNDER OF "THE LANCET."

A BIOGRAPHY.[1]

CHAPTER XVI.

Bransby Cooper v. *Wakley.—Sir James Scarlett's Address.—The Witnesses for the Plaintiff.—Wakley's Reply.—The Verdict.—The Results of the Trial.—The Solid Opposition to Wakley and his Solid Following.—The Attitude of the Public and the Profession.—Wakley's Expenses in the Trial Defrayed by Public Subscription.*

ON the morning of Saturday, Dec. 13th, 1828, before an immense and very excited audience, Sir James Scarlett rose to address the jury in behalf of the plaintiff, Mr. Bransby Cooper. His opening words betrayed his irritation at the position in which Lord Tenterden's decision of the previous day had placed him. He complained acrimoniously that his client, a gentleman seeking redress for one of the most injurious attacks upon fame and fortune that had ever been brought to the cognisance of a court of justice had been placed during an entire day upon his defence as though he were the defendant and the indictment a criminal charge. "I have no doubt," he said, turning to the jury, "that you are now sitting in judgment, not upon what reparation shall be made to an injured man for one of the basest calumnies any man could complain of, but whether Mr. Cooper is not a party unworthy of his situation, who has contributed to shorten a man's life." He then briefly sketched Mr. Bransby Cooper's honourable and successful career. This started with pupilage at the Norwich Hospital—a not irrelevant fact, for the ancient city was famous in those days for its skilled lithotomists, vesical calculus being a common malady with the dwellers on the chalky soil of Norfolk. From Norfolk he came to Guy's Hospital, and on completion of his time there accepted a commission in the Royal Artillery and saw service on the Continent and in Canada for three years with credit to himself. In 1816, at the termination of the dispute with America, he left the army and after a short sojourn in Edinburgh returned to Guy's Hospital as apprentice to his uncle, Sir Astley Cooper. His apprenticeship expired in 1823, when he was made demonstrator of anatomy. In 1825 he was elected assistant surgeon to the hospital. From that time forward until the publication of the libel not a word had been said against him, and counsel ridiculed the idea that Sir Astley Cooper would ever have employed a man as his assistant or his deputy in the most important surgical practice in the world without being fully assured, nephew or no nephew, that he was a highly competent operator. He attributed Wakley's accusations of nepotism to an unbalanced sense of the importance of THE LANCET, which had arrogated to itself a position of censor of professional manners and morals. Sir James Scarlett then explained the operation of lithotomy, very lucidly considering that he was only able to employ lay terms, and dwelt on the difficulties that might arise in its course. Coming to the particular operation the performance of which formed the subject of the libel, he traversed most of the statements and all the insinuations contained in THE LANCET report. So far from the patient being a healthy countryman he was, said Sir James Scarlett, a stout man with a hectic complexion and disordered kidneys upon whom the operation was not performed until the agony that he suffered precluded any other course. The delay and the employment of the various instruments were due not to any error on Mr. Bransby Cooper's part but to the peculiar difficulties of the case and the awkward position of the calculus. The appearances in the cadaver were, he maintained, all of them in agreement with this view, save one rent in certain soft, easily lacerated tissues. This rent, it had been insinuated by THE LANCET reporter, had been made by Mr. Bransby Cooper's ill-directed attempts to reach the bladder with various instruments. It was, as a matter of fact to be proved by the oaths of persons who had examined the parts before the agent of THE LANCET had handled them, made by that agent himself after death. He denounced Mr. Lambert as a hireling, instigated by malice to write untruths, ignorant, and absolutely wanting in all decent feeling, as shown by the dramatic form into which he had cast his false report, and he wound up a vigorous piece of advocacy by asking the jury to mark their sense of indignation at the treatment that the plaintiff had received by awarding him exemplary damages. He then called Mr. Callaway, who had assisted Mr. Bransby Cooper in the performance of the operation.

Mr. Callaway testified to two things of importance—the first was that Mr. Bransby Cooper's original incision was rightly directed; the second was that the situation and shape of the stone were such as to make the extraction necessarily tedious and difficult. He confirmed THE LANCET report in many details, such as that numerous different instruments were used, that a second incision into the bladder had to be made, and that the operator during the operation did say that he could not explain the cause of the delay; and he admitted in cross-examination that in his opinion Mr. Bransby Cooper had no knowledge of the situation of the stone. Mr. Callaway was the only medical witness called by Sir James Scarlett who actually saw the operation upon which the alleged libel was founded. The other medical witnesses were called to testify to the general difficulty of the operation and to the high character of Mr. Bransby Cooper, whilst they added for the benefit of the court their expert opinion of what had happened founded upon Mr. Callaway's evidence.

Mr. C. Aston Key, senior surgeon to Guy's Hospital and Mr. Bransby Cooper's brother-in-law, came first; then Mr. Laundy, a general practitioner, who stated that he was present once at the same operation when it was performed by that celebrated surgeon and anatomist the elder Cline, on which occasion the proceedings lasted an hour and forty minutes. Mr. Brodie, afterwards Sir Benjamin Brodie, of St. George's Hospital, President of the Royal College of Surgeons of England and of the Royal Society; Mr. Benjamin Travers, surgeon to St. Thomas's Hospital, Mr. Joseph Henry Green, surgeon to the same institution, and Mr. Dalrymple, surgeon to the Norwich Hospital, considered that Mr. Callaway's evidence showed that the skill of the operator could not be impeached.

Dr. Hodgkin, lecturer on morbid anatomy at Guy's Hospital, gave important evidence. He thought that in the unfortunate patient there had been present an anatomical conformation of the parts as revealed by post-mortem examination that would have rendered the operation a difficult one. He swore that Mr. Lambert came to him and asked permission to see the parts, and was allowed to do so in his (Dr. Hodgkin's) absence. That on his return Mr. Lambert showed him a certain rent, the rent which it was insinuated in the report had been caused by Mr. Bransby Cooper's bungling. He at once taxed Mr. Lambert with having made the rent, it being his firm conviction that it had been made after death.

Last came Sir Astley Cooper. He confirmed the statements as to his nephew's honourable and successful career, and said that no one save the man actually operating could judge fairly of the difficulties of an operation. He gave as an

[1] Chapters I., II., III., IV., V., VI., VII., VIII., IX., X., XI., XII., XIII., XIV., and XV. were published in THE LANCET, Jan. 4th, 11th, 18th, and 25th, Feb. 1st, 8th, 15th, 22nd, and 29th, March 7th, 14th, 21st, and 28th, April 4th and 11th respectively.

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explanation of the cause of the delay in the operation the fact that the bladder was empty and narrated a case in point where contraction of an empty bladder over a calculus had caused a skilful surgeon "now present in the court" to take an hour to effect the extraction.

This completed the plaintiff's case and Wakley rose immediately to reply. He said it was most remarkable that out of 200 persons present at the operation the plaintiff had thought proper to call only one—a solitary one—to give evidence to his skill on the occasion out of which the libel arose, whilst a host of persons who knew nothing at all of that operation were called to speak to his professional ability. This he characterised as an attempt to practise an imposition on the jury and on the public, but he hoped that the jury would not be persuaded by the general opinion of men not present at the operation that the specific facts spoken to by THE LANCET report did not occur. He pointed out that Sir James Scarlett had devoted a considerable part of his speech to miscalling Mr. Lambert THE LANCET reporter. Of course Mr. Lambert was a hireling, said Wakley. He was paid for his contributions to THE LANCET just as Sir James Scarlett was paid for the advocacy of Mr. Bransby Cooper. Wakley then cautioned the jury against the evidence of "a gang of hospital surgeons" only one of whom had seen with his own eyes the things to testify to the accuracy of which or otherwise they had been called. They stuck to Mr. Bransby Cooper because they knew that his case might some day be theirs. They had come there to bear down the weight of honest testimony by their names and influence. The question, he contended, was not the abstract one whether lithotomy was or was not a difficult operation, but the particular one, whether Mr. Bransby Cooper had performed a certain operation with due skill. He begged the jury to ask themselves whether they would be willing to employ the plaintiff as a surgeon if it were necessary for them to undergo this operation. And if they would not, he maintained that they must give a verdict which would prevent the plaintiff from returning to Guy's Hospital. He wound up an eloquent rather than a closely-reasoned speech by an impassioned appeal to the jury to consider the case of the poor in giving their verdict—the poor who were at the mercy of the hospital surgeon. For himself, he said, he cared nothing. He was willing to go to prison, and willing to give up THE LANCET if that were found to be the course that justice dictated, but unless the jury considered that Mr. Bransby Cooper had performed this operation properly the plaintiff must be denied a verdict.

At the conclusion of his speech, which elicited loud applause in court, Wakley was so overcome with excitement, fatigue, and heat that he had to be supported into an adjoining room.

Lord Tenterden then proceeded to sum up the case. He recapitulated the evidence for the jury and spoke severely of the manner in which the report had been drawn up for THE LANCET. If the jury thought that the defendant had proved the unskilfulness of the plaintiff they were bound to give him their verdict, but they must remember that unimpeachable evidence had been given by Mr. Bransby Cooper's witnesses to the facts that numerous instruments were sometimes required in the performance of a lithotomy, and that the operation had failed many times when undertaken by most skilful surgeons. He did not agree with the plaintiff's counsel that the damages awarded, if any, should register feelings of indignation; on the contrary, a verdict should mark cool and deliberate consideration of facts.

The jury were absent for two hours, and on their return to court delivered a verdict for the plaintiff, damages £100.

The results of the trial were not at first apparent. The verdict constituted a victory for both sides or neither. Wakley had to pay £100 in damages and nearly three times that amount in costs for having published a malicious libel. But Mr. Bransby Cooper's was a much worse plight. The sum awarded to him bore no sort of proportion, however distant, to the evil that had been said of him. Damages £100 for such an accusation! The verdict told its own tale. Most certainly the jury believed Wakley's main statement—that the plaintiff had been guilty of malpraxis. On no other ground whatever could they have let him off so cheaply, having regard to the things that he had printed. He had accused Mr. Bransby Cooper by inference of manslaughter, making no secret of his belief that the death of the patient was the direct outcome of the ignorance of the surgeon. Mr. Bransby Cooper was a man of thirty-five years of age, enjoying a good private practice and a honourable public position. The things that had been said of him were calculated to utterly ruin him. If proved true, his not inconsiderable scientific prestige together with his large and increasing income were both lost to him. Grave as the consequences would have been to Mr. Bransby Cooper if Wakley had obtained a verdict, heavy in due proportion should have been the damages when a verdict was given the other way. Yet of the £2000 demanded—a by no means exorbitant demand when the nature of the libel is considered—only £100 were awarded. The jury paltered. They wished to do their duty. They felt that Mr. Bransby Cooper did not shine as an operator and that the defendant had made out his justification; but they did not consider the libel a decent account of what had happened. So they marked a general disapproval of both sides by awarding to the plaintiff a barren victory.

The enormous interest taken in this case by the public as well as the profession made of it a landmark between the times when all sorts of abuses were rife and the times when the profession as a whole set itself, under Wakley's energetic direction, to work out its own salvation. As has already been said, when Wakley announced his intention of supplementing his reports of the lectures of hospital surgeons by accounts of the operative proceedings at different institutions he crossed the rubicon and declared war on the heads of the profession. They looked upon his action as one of intolerable aggression to be resisted in all conceivable ways. Skirmishes had since occurred in which the victory had lain now with one side and now with the other. Here and there Wakley's reporters had been turned out of the hospitals, while on several occasions Wakley had been able to print details of hospital management or treatment the reverse of creditable to those responsible for them, and to distribute nicknames, ridiculous yet adherent. But these were but skirmishes, while the case of Bransby Cooper *v.* Wakley was a pitched battle. Everything that it was possible to say fairly against Wakley's methods in issuing THE LANCET could be said in reference to this case. The evidences of personal ill-feeling against a certain group of distinguished men was not wanting in it, and its publication was bound to hold the profession up to the contempt of laymen. A solid feeling of anger among the hospital officials, medical and lay, was created by Wakley's line of defence, and the damages exacted from him were not sufficiently high to cause any compensating satisfaction. At no time in his career had the Editor of THE LANCET such bitter and organised opposition to meet as immediately after this sensational trial. His reporters were expelled from the learned societies, he himself was excluded from the walls of three or four of the largest metropolitan hospitals, and, lastly, the other medical papers of the day, such as they were, were supported by all Wakley's foes, the facilities denied to THE LANCET being given to its rivals. The partiality of this proceeding touched Wakley nearly; the rest concerned him not a whit, for the

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offers to assist him with information were numerous almost to the point of constituting a nuisance. But the difference made between THE LANCET, the pioneer of reform, and its imitators galled him. He had the pride of a parent in his paper, and he did not like to see the bantlings of others favoured at the expense of his sturdy offspring, however natural the preference might be in those who showed it. Wakley had been called, and was still called, a thief for reporting hospital lectures, and a malicious slanderer or a panderer to morbid tastes for publishing hospital reports. In spite of all that had been said he had persevered in his ill-doing, believing it to be exceeding well-doing. But when the leaders of the profession saw that a measure of publicity was to be their fate, while not abating their animosity to THE LANCET they permitted the editors of other journals to do what they found in Wakley to be hideous crimes. This injustice he felt, and the feeling found vent in savage criticism of his contemporaries. They in their turn wrote in unspeakable terms of him, and the recriminatory passages, certain of which will have to be quoted in connexion with Wakley's actions against Dr. Macleod, the editor of the *Medical and Physical Journal*, and Dr. James Johnson, the editor of the *Medico-Chirurgical Review*, form amazing reading for these politer days.

But if Wakley had by this time created a solid opposition he had behind him a solid following. The case, which had given common cause for terror and affront to hospital officials, had justified the policy of THE LANCET and came as a verification of the most burning of its Editor's words to the profession at large and also to the public. Never had Wakley said anything in his declamations against the evils of nepotism and the ineptitude of hospital officials that approached in severity the words that *should* have been used concerning the operative procedures at St. Thomas's Hospital supposing Mr. Bransby Cooper had bungled as Wakley alleged. And that he had so bungled Wakley continued to declare, asserting that THE LANCET had been cast in damages simply because of the bad impression created by the form of Mr. Lambert's report. The profession at large and the public believed Wakley, and the solid opposition of the authorities converted him in their eyes into an ill-used man. A numerously attended public meeting was held at the Freemason's Tavern on the Tuesday following the verdict, at which the following resolutions were proposed:—

1. That the best interests of the medical profession and of the public are identified with the cause of medical reform, and that Mr. Wakley, as Editor of THE LANCET, having given the first impulse to that cause, and having subsequently advocated it with undeviating firmness and fidelity, is entitled to the cordial thanks and support of this meeting.

2. That the purposes for which the hospitals and infirmaries of the metropolis were founded, and that the views of the humane contributors to their funds are materially promoted by the weekly publication of reports detailing the medical and surgical treatment of the unfortunate patients, and that Mr. Wakley, having originated the practice of publishing hospital reports, has conferred important benefits on medical science and on the cause of humanity.

3. That the independent and imperial principles on which THE LANCET were first established have been preserved by Mr. Wakley at all risks; and that a subscription be opened for the purpose of defraying the expenses of the late action.

4. That in accordance with the feelings that this meeting has expressed Mr. Wakley be invited to attend a public dinner, and that a committee be nominated to arrange the same.

The first and third of these resolutions were carried by a very large majority—five dissentients only among 300 persons; the second and fourth were agreed to unanimously. In accordance with the third resolution a public subscription was opened, Wakley asking for £407 7*s*. 9*d*., being £295 10*s*., Mr. Bransby Cooper's costs, £100 his damages, and £12 17*s*. 9*d*., the Sheriff's poundage.[1] The sum was immediately subscribed, and the books were closed when the required total was reached, while two or three belated subscriptions which the donors did not wish to have returned to them were forwarded to the widow of Mr. Bransby Cooper's late patient.

There is one very pleasant thing to relate as an appendix to this sad and even terrible passage in Wakley's life. In after years he met Mr. Bransby Cooper and a formal reconciliation took place between them.

(To be continued.)

MIDWIVES BILLS.

IT is said that the second reading of the Midwives Bill is fixed for May 6th. It needs little political knowledge to say that in the present aspect of politics the chance of legislation on this subject is the very smallest, unless some disposition to agree with each other be shown among the advocates of such legislation. For we have no longer to deal with one Bill, but with several; they are becoming numerous and difficult to count. There is the Bill already before Parliament, ostensibly the old Bill, with the provisions of which we are all pretty familiar, but with alterations that do not seem to us improvements. There are the various changes recommended by the General Medical Council when this Bill was referred to it last year by the Government. Next comes the Bill of the Parliamentary Committee of the British Medical Association. Then the Lancashire and Cheshire Branch of the British Medical Association have properly applied their critical faculty to the Bill of the Parliamentary Committee and produced a complete Bill of their own. Possibly the Parliamentary Committee and the Lancashire and Cheshire Branch may come to terms with each other and produce a single Bill that will satisfy both the Committee and the Branch. Then there is the outline of "A Bill for the Prevention of Puerperal Fever" by Dr. W. Fraser, which will be found in THE LANCET of Feb. 29th. There is yet another document emanating from 143 gentlemen, including Dr. Rentoul, who are opposed to the registration of midwives in the way hitherto proposed in Parliament, but who realise the gravity of puerperal mortality and who "are anxious to improve the education of midwifery nurses and, if need be, to support a practical scheme of local registration. They do not object to the registration of midwives provided they act as midwifery nurses *only*, under the immediate supervision of medical practitioners, and are registered as midwifery nurses *only*. Nor do they object to such proposed legislation as would protect any of the present privileges of existing midwives." Here there are no less than six more or less distinct proposals for the purpose recognised by all parties of protecting lying-in women of the poorer classes from the mischief and the mortality that attach to the practice of ignorant and untrained midwives.

The Bill now before Parliament is ostensibly what has been hitherto known as the Midwives Bill, with clauses for the registration of existing midwives and of women who have had a certain amount of training and passed an examination under rules framed by a Midwives Board created by the Bill and approved by the General Medical Council. We say this is ostensibly the old Bill. But it differs and does not differ for the better. We miss in it the explicit limitation of the midwife to natural labour. And it is noticeable that nearly all the suggestions of the General Medical Council for its amendment are not adopted. This is a very remarkable circumstance, which throws a great responsibility on its promoters. The General Medical Council suggested the substitution of the title of midwifery nurse for that of midwife. This is not adopted.

[1] It will be seen that the correct addition of these sums amounts to £408 7*s*. 9*d*., but by an oversight one pound too little was asked for.

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The definition of the term midwife as one who undertakes to attend "cases of natural labour" is not adopted, and the clause dealing with the privileges of midwives is greatly altered from the similar clause in the previous Bills of the sort and is remarkable for not specifying, as the former Bill did, that in the certificate to be given under the Act the woman shall be restricted to cases of natural labour only. It is quite true that under Clause 12, Sub-clause 5, the omission to send for a medical practitioner where the case is not one of natural labour is regarded as a form of misconduct for which the midwife may be removed by the Midwifery Board from the Midwives Register. But the limitation should be clearly defined in a separate and early clause, as in the first Bills of the sort. We cannot notice all the points in which the promoters of the Bill have failed to accept the suggestions of the General Medical Council, but we must specify another. The General Medical Council expressed a decided opinion that existing midwives, as one of the conditions of registration, should produce some evidence of character and capacity. This condition does not appear in the wide clause for registering existing midwives in the present Bill. Surely, too, it is somewhat absurd to give a midwife who is dissatisfied with the penal action of the Midwifery Board the right of appeal to the Privy Council—a right which medical men do not possess under the Medical Acts.

The Bill of the Parliamentary Committee and that of the Lancashire and Cheshire Branch may be considered together. But they differ materially. The former follows the line of the old Midwives Bills, only substituting the title midwifery nurse for that of midwife, and clearly limiting the function of such persons to cases of natural labour. It penalises the use of the titles "midwifery nurse or midwife," or any word implying registration under the Act by those not registered. In addition—and this is the chief difference—the Bill of the Lancashire and Cheshire Branch, in a new section, penalises to the extent of £5 unregistered persons who, after a certain interval, "habitually for gain" attend women in labour, always and properly excepting those attending a woman during labour in a case of emergency. It is difficult to see how "women and newly-born infants are to be protected from the practice of midwifery—nursing by ignorant and untrained persons"—the purpose set forth in the preamble of the Bill of the Lancashire and Cheshire Branch—if some such prohibition is not made clear. But it must be made equally clear that no terror is contained in the Act for kind people acting in emergencies and in remote places. One of the most important features of the Bill of the Lancashire and Cheshire Branch is its large definition of the word midwifery nurse: it is said to mean, "A woman who attends cases of natural labour, *and afterwards tends the mother and child during the lying-in period under such rules, regulations, and medical control or supervision as may be from time to time laid down by the Midwifery Nurses' Board.*" Both Bills create a Midwifery Nurses' Board, to be appointed by the General Medical Council. In the Midwives Bill such a board is to consist of 12 registered practitioners, 3 appointed by the Royal College of Physicians, by the Royal College of Surgeons, and by the Apothecaries respectively, 3 by the Incorporated Midwives Institute, and 3 by the Lord President of the Council, 1 of whom, at least, shall be a woman. The Parliamentary Bills Committee requires the General Medical Council to appoint a Midwifery Nurses' Board of 12. The Lancashire and Cheshire Branch provides that the General Medical Council shall appoint the board to consist of 29 registered medical practitioners to be distributed as follows: for London and southern counties, 7 representatives; Birmingham, midland, and eastern counties, 5; Lancashire, Cheshire, Westmorland, and Cumberland, 6; Northumberland, Durham, and Yorkshire, 6; Wales and counties of the west of England, 5. The duties of the board are to frame rules of course of study, prescribe the subjects to be studied and the general standard, to frame rules for regulating the practice of midwifery nurses, all subject to the approval of the General Medical Council. The Bill of the Lancashire and Cheshire Branch in several additional sub-clauses defines the powers of the board. The Bill of the Parliamentary Committee strangely makes erasure from the register of a midwifery nurse "for infamous conduct" the act of the General Medical Council. That of the branch empowers the Midwifery Nurses' Board to appoint a committee or committees of not less than 3 to investigate charges, and gives to such committee or committees the power of erasure. The Bills are not explicit as to places of meeting, examination, &c. Both Bills, for reasons which it is difficult to understand, make the General Medical Council responsible for the register of midwifery nurses and for its publication In the Bill before Parliament it is one of the duties of the Midwifery Nurses' Board to establish and keep the register. It is obviously important that each locality should have an easy way of knowing whether its midwives or midwifery nurses are registered. The Bill now before the House provides that one copy free of charge be sent to each county council. In the Bill of the Parliamentary Committee it is provided that each medical officer of health be supplied with a copy. The Bill of the Lancashire and Cheshire Branch requires such a copy to be sent to the clerk of the local sanitary authority. Dr. Rentoul and those who agree with him would support a local registration of midwifery nurses We can only notice one point more in these Bills—that of fees. It is obvious that this system, however humble or local, cannot be worked without fees. The Bill before the House fixes the fee to be paid by women for examination at 2 guineas. The Bill of the Parliamentary Bills Committee and that of the Lancashire and Cheshire Branch leave the sum to be fixed by the Midwifery Nurses' Board. They provide that all moneys should be paid to the General Medical Council and all expenses be paid by that body. The branch thoughtfully adds that in case of any deficit arising it shall be paid out of Her Majesty's Treasury.

It remains only to notice shortly a contribution to the discussion of this subject in THE LANCET of Feb. 29th, 1896, by Dr. W. Fraser, entitled, "Suggested Outline of an Act for the Prevention of Puerperal Fever." Therein it is proposed that the medical officer of health shall keep a register of midwives. After twelve months no midwife is to be placed on the register without a certificate satisfactory to the General Medical Council, and no medical practitioner is to take a pupil or give a certificate unless sanctioned by the General Medical Council. The Local Government Board is to issue directions to midwives. The medical officer of health may prevent any woman attending cases for a period not exceeding six months. Appeal lies to the medical officer of the county. The medical officer of health is to make full inquiry into all puerperal deaths from sepsis in his district. The medical officer of health may prohibit any midwife or other person engaged in nursing from practising for two months under a penalty of not more than £20. Every medical officer of health may inspect the residences of midwives. A record of those midwives habitually receiving pregnant women into their houses is to be kept The record and the house shall be open to the inspection of the medical officer of health. Every registered practitioner may report a midwife to the medical officer of health or to her examining board for any breach of instructions supplied by the Local Government Board. Every registered midwife shall have power of recovery of charges for attendance as a midwife nurse. Every medical officer of health may warn unregistered persons assuming titles or practising midwifery. Should the offender disregard the warning she will be liable to a penalty of not more than £20. Medical practitioners are to notify still-births to the medical officer of health and to receive a fee of 2*s.* 6*d.* Any person interring, or certifying for the interment of, still-births without the authority of the medical officer of health is to be liable to a fine of £10. Sanitary authorities are to pay medical officers of health for their trouble under this Bill.

DR. DE BOSSY OF HAVRE, stated to be the oldest medical man in France, celebrated his 104th birthday on Good Friday.

ROYAL METEOROLOGICAL SOCIETY.—The monthly meeting of this society was held on Wednesday evening, the 15th inst., at the Institution of Civil Engineers, Westminster, Mr. E. Mawley, President, in the chair. Mr. E. D. Fridlander, B.Sc., gave an account of some observations of the amount of dust in the atmosphere made at various places during a voyage round the world in 1894–95. Not only did dust occur in the air of inhabited countries, over the water surfaces immediately adjoining them, and up to an altitude of 6000 or 7000 ft. among the Alps, but it was also found in the open ocean, and that so far away from any land as to preclude the possibility of artificial pollution, and its existence has been directly demonstrated at a height of more than 13,000 ft.

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THE HISTORY, METHODS, EXPENDITURE, AND POLICY OF THE CIVIL RIGHTS DEFENCE COMMITTEE.

(*Continued from page 576.*)

IN THE LANCET of Feb. 29th we gave a summary of the objects and aims of the Civil Rights Defence Committee, and we now proceed to afford some further particulars concerning its origin and operations.

When Mr. R. B. Anderson was illegally imprisoned in Trinidad Mr. Conrad F. Stottmeyer, one of the oldest and most respected inhabitants and subsequently Mr. Anderson's surety, Mr. Toppin, and Mr. Wayman consented to act as trustees to a fund to be called the Civil Rights Defence Fund, to enable Mr. Anderson to proceed to England to lay the grievances of the colony before the public and to seek redress for his own wrongs. In all about £150 were subscribed, and out of this advances of 7*s.* a day were made to Mr. Anderson during the greater part of three and a half months he was kept under an excessive and illegal bail of £1000 to enable him to live to come to England. When this allowance was discontinued Mr. Anderson visited Barbadoes, a colony enjoying the advantage of representative institutions, which the colonists, being a spirited and independently minded people, have most jealously guarded ever since the colonisation during the Civil War in the seventeenth century. There he stayed for about six weeks, and was instrumental in founding at a public meeting the West Indian Civil Rights Defence Association, since called the West Indian Union, with branches in other West Indian colonies, and its monthly journal, the *Civil Rights Guardian*.

Coming to England well provided with introductions, credentials, and sworn evidence, Mr. Anderson obtained a hearing in many quarters, and his friends being impressed with the gravity of the grievances and oppression of a British colony including his own, constituted themselves into a society under the name of the British and West Indian Alliance, to take up and investigate, on the part of the people of this country, the complaints of the West Indies, and to coöperate with, and act in England for, the West Indian Union in all cases approved by the Alliance. On Sept. 4th, 1891, Mr. Anderson delivered at St. James's Hall, before the Balloon Society of Great Britain, a lecture entitled "A Plea for the West Indies," and this secured useful support. He obtained interviews with the British Foreign Anti-Slavery Society and the Aborigines' Protection Society, and won their acquiescence at least. Mr. Anderson also obtained an interview of three-quarters of an hour with one of the permanent secretaries and one of an hour with Lord Knutsford, the Secretary of State for the Colonies, but these interviews resulted only in the usual official *non possumus*. Subsequently the Alliance held a meeting at St. James's Hall and another at Southport. Meanwhile, Mr. Anderson had commenced his action against the three Trinidad judges, and had obtained from Sir Francis Jeune special leave to serve the writ on Sir John Gorrie in Trinidad out of the jurisdiction, and he succeeded also in serving Mr. Cook and Mr. Lumb in England, just catching the latter on board ship at Southampton as he was leaving for Trinidad. On this a motion was made in the Legislative Council in Trinidad for an inquiry into the judicial administration, and was carried by a majority of six to two of the unofficial members, the officials being permitted to abstain from voting. The application for inquiry was backed up by strong representations to Lord Knutsford and to the Prime Minister, Lord Salisbury, on the part of the Council of the West Indian Alliance. Lord Knutsford made some concessions and Sir W. Markby and Sir F. Pollock were sent out as a Royal Commission to investigate the complaints which had been made. A Committee of the Legislative Council of Trinidad and Tobago was applied to to conduct the prosecution of the charges. This prosecuting Committee in Trinidad telegraphed to Mr. Anderson to come out and to give evidence in Trinidad and to conduct the prosecution for them in Tobago and remitted the money to enable him to do so. It so happened that in the action against the Trinidad judges which Mr. Anderson instituted in September, 1891, in the Court of Queen's Bench, and which he had been conducting quite independently of the Alliance and the funds provided by Trinidad, a stay of proceedings had been obtained by the defendants in order that they might be placed in possession of the particulars of the damages sustained by Mr. Anderson for which they had asked. This lull enabled Mr. Anderson to proceed to Trinidad and give his evidence, but the Commissioners did not go to Tobago. The result of the inquiry was the amotion of Mr. Cook from office and the interdiction of Sir John Gorrie pending charges being brought against him. Prior to returning home Mr. Anderson visited several of the West India islands, holding meetings to strengthen the branches of the Union and establish others. After his return he laid his case before the British and West India Alliance, and its Council warmly espoused it. A deputation, consisting of General Graham, Mr. T. Shepherd Little, M.P., the Hon. Stuart Erskine, and other gentlemen, waited on the Council of the British Medical Association, which had previously gone fully into the details of the case, and now, Jan. 11th, 1893, in response to the deputation, adopted a resolution authorising the editor of their journal to publish Mr. Anderson's case for his benefit amongst the members of the Association, and the Parliamentary Bills Committee to do what they could to further the steps which he was taking in his application to the Privy Council. In this way a subscription was promoted and about £42 were raised, enabling the initial steps of the appeals to the Privy Council to be taken. That the response in a case involving professional rights so important and individual wrongs so unprecedented was not more general was probably due to the fact that the importance of defending these rights and redressing these wrongs did not come home to the profession in England until later, when the judgment of the Court of Appeal made Mr. Anderson's wrongs without remedy, and showed that medical men are absolutely at the mercy of all judges of record both for the recovery of their charges and their own personal safety. Besides this, amongst a certain section of the profession there is a mistaken repugnance to claiming the right to be paid for their services, although Mr. Anderson had claimed it in a way the least harsh and exacting that could be devised and under circumstances which compelled him to do it or be cheated with his eyes open—an example which would have been contagious in a colony like Tobago. Moreover, the course which Mr. Anderson had taken to compel the Colonial Office to investigate the Trinidad scandal was very much resented by the Department, and without being able to trace the source of the scandals Mr. Anderson found that a report was being widely circulated both within and outside the profession that he was a mischievous, cantankerous, meddlesome agitator. Added to this the wrongs which he had endured were so outrageous as to seem almost incredible to all who had not some insight into the matter, to prevent people from investigating the case and to lead them to conclude that some defect in Mr. Anderson's conduct had been a prime factor in the case, instead of his indomitable courage enabling him to survive an ordeal to which others had been induced to succumb. Thus the very iniquity of the wrongs done to him seemed likely to deprive him of all hope of redress.

The first and strongest accession of help brought by the investigation carried out by the Commissioners was that of Bishop Mitchison, formerly Bishop of Antigua, in the Leeward Islands, who wrote that "after reading the damning report of the Royal Commission he could no longer abstain from taking part with the Alliance in the movement." About this time Mr. Anderson was in his worst and greatest difficulty. His own relatives did all in their power to help him; an aunt, now in declining years, sacrificed nearly her all, and other friends who could ill spare it have assisted him to the best of their ability. His pension of £50 goes to support his wife and family in Tobago, and all that he has has been devoted to his immediate necessities. At this juncture Mr. Anderson obtained help from certain friends, without which it is difficult to see how he could have lived to carry on the struggle. The same may be said of the help which he has had from time to time from many sources, for seldom from month to month, from week to week, and sometimes from day to day, has Mr. Anderson known whence would come either the means of subsistence or the means to carry on the contest against the whole strength and influence of the official and judicial powers of the State, which seemed to be perverted to oppress him, wear him out, and crush his resistance. In Trinidad during the long delays in hearing his appeals, deliberately devised for the end just specified, Mr. Anderson for ten

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months out of eighteen was the guest of Mr. Tucker, who till he went there to oppose the decision of Sir John Gorrie had scarcely known him by sight. It will here be as well to point out that Mr. Anderson took extreme precautions to secure evidence and support in regard to the general oppression of himself and his fellow colonists. He obtained statutory declarations from clergymen and magistrates which he read with telling effect both in Barbadoes and at St. James's Hall. He had the concurrence of many fellow petitioners in the petitions sent to the Queen in Council. As to his professional conduct he had the written testimony of the only three other medical men in the island of Tobago. He also obtained unanimous votes in support of his professional conduct and rights from the Barbadoes Branch of the British Medical Association, and subsequently, on its formation, from the Trinidad and Tobago branch, so both as to his statements of the injuries done to himself and his fellow colonists and as to his own conduct he occupies a practically impregnable position, and of this these facts, coupled with the report of Sir W. Markby and Sir F. Pollock, should convince the most sceptical.

(To be continued.)

THE NILE EXPEDITION.

THE latest intelligence from this expedition shows that there is great activity at Wady Halfa and that preparation is general for the advance of the force. There are two points on which the authorities may, we think, be fairly congratulated. The first is that the feeling with which the expedition is regarded by some of the tribes in the Soudan appears to have undergone a great change in our favour. Some of those who fought against us at El Teb and Tamai have now become friendly and have not only proffered help to the expedition, but have been making a series of attacks upon Osman Digna's forces, and others have been doing useful work as scouts outside the limit of our own military operations. The other encouraging factor is that the report of the Anglo-Egyptian movement on the Nile has had the effect of drawing off a portion of Osman Digna's troops from Kassala in other directions, thereby enabling the Italian garrison of Kassala to make a successful sortie and defeat the force besieging that place. Official telegrams from Massowah state that the Dervishes threatening Kassala have been routed and driven across the River Atbara, and that the stores of the garrison have been recently replenished. The latest news, moreover, is to the effect that Italian troops will continue to hold Kassala and that the Government do not intend to evacuate the position.

The work of the Transport Department of the Nile Expedition is being energetically pushed forward, and Wady Halfa has been for some time, and still remains, as we have said, a scene of great activity. The railway has now been completed some miles beyond Sarras, and will soon be extended to Akasheh. Rations for the whole force for the next four or five months are being landed and stored at Wady Halfa, and, in short, all arrangements are being made for a serious campaign in the autumn, up to which time the troops will most probably not advance beyond Akasheh, between which place and Wady Halfa railway and telegraphic communication will have, in the meantime, been established.

In addition to the gathering of the Dervishes in and about Dongola a considerable portion of Osman Digna's force seems to have gone in the direction of Suakim, the garrison of which place will no doubt require to be strengthened, but it is hoped and believed that the Egyptian force at Suakim and Tokar—with the aid of the neighbouring tribes friendly to us and strongly opposed to Osman Digna's rule—will be quite sufficient for the present to cope successfully with any troops which Osman Digna can bring against them.

The medical arrangements on the Nile will be a hospital for the Egyptian troops of 340 beds at Wady Halfa, which will act as the provisional base of the expedition, in addition to a portion of the barracks converted into a hospital, a section of a field hospital at Sarras, a hospital at Ambagol, and a field hospital of 100 beds at Akasheh. Hunter Bey, the senior medical officer of the Egyptian army, is making the arrangements, aided by Surgeon-Captain Trask and Surgeon-Captain Penton. It is hoped that river transport by native boats, which is far the most comfortable and best for sick and wounded, will be arranged for the conveyance of sick and disabled men from the stations in front to the base hospital at Wady Halfa. Until this is done their removal must be effected by *cacolets* on camels—an inferior, and indeed unsuitable, method for any sick or badly wounded men. Additional hospital provision and arrangements will have to be made for the British portion of the force. The heat is great—it reaches 107° F.—but it is commonly tempered by a cool breeze from the north at some period of the day. There are considerable diurnal variations of temperature—a difference of as much as 30° F. sometimes taking place between the temperatures of the day and night. The climatic heat is, however, very different to that of India. It is a matter of great importance, of course, that there should be no overcrowding of the troops, that any available means of free ventilation should be turned to account, that the soldiers—especially the European soldiers—should have good cover from the direct effects of the sun, that the camps and camping grounds should be kept scrupulously clean, and that there should be ample supplies of ice. The men of the British battalion are stated to be in fairly good health and in excellent fettle, but there has, as might have been anticipated, already been some inefficiency from sickness among them. As the result of all our previous knowledge and experience we may fairly expect that the principal diseases that will have to be encountered will be fevers—especially heat fevers and typhoid fever—diarrhœa and dysentery, with cases of sunstroke and heat-exhaustion. It is understood that British troops will not be sent to Egypt to take part in the campaign until the hot weather is over, and that Sir Redvers Buller will assume command of the expeditionary force when the advance on Dongola is made. As we have already said, the army generally has the greatest confidence in the proved capacity and soldier-like qualities of Sir Redvers Buller, who has already made a reputation for himself in the fields of South and North Africa. It seems to be generally agreed that great improvement has taken place in the military bearing, discipline, and general appearance of the Egyptian troops.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

SANITARY ADMINISTRATION IN THE PORT OF LONDON.

THE current half-yearly report of Dr. Wm. Collingridge, the medical officer of health of the Port of London, is very interesting reading, and it contains, moreover, suggestions of much value. The Cholera Surveys of recent years which have been undertaken by the Medical Department of the Local Government Board have done excellent work in serving to stimulate port sanitary authorities throughout the country to a better comprehension and execution of duties imposed upon them by the Legislature; and the energetic and praiseworthy action of the Corporation of London has provided a fitting example which other port sanitary authorities may well follow. It is surely in keeping with the spirit of the times that the port of the greatest city in the world should administer its affairs with no niggardly hand—it can, indeed, well afford to set an example both in administration as well as in liberality. During the half year referred to by Dr. Collingridge's report 14,054 sanitary inspections of vessels were made, and it was discovered that in 3·8 per cent. of these cleansing orders were necessary. In connexion with these inspections it is stated that the proportion of dirty forecastles has steadily decreased since systematic inspections have been carried out. Of the total number of vessels inspected, 82·4 per cent. were British, 9·05 were Swedish and Norwegian, 3·29 were German, and the remaining nations were represented in smaller percentages. Many of the improvements carried out during the year were in regard to lighting and heating, and Dr. Collingridge very properly insists strongly on the importance from a sanitary standpoint of affording as much light as possible. In connexion with the question of structural requirements Dr. Collingridge refers to the necessity of the port sanitary authorities inspecting the plans of all

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vessels prior to their construction, as, although the officers of these authorities would have little to say to the design of a vessel, they would be able to suggest improvements as regards fittings, ventilation, lighting, &c., and thus spare infinite subsequent trouble to all concerned. The important modifications which have been recently introduced into the instructions of the Board of Trade as to the survey of crews' spaces, &c., are referred to with much satisfaction by Dr. Collingridge, and he especially mentions the prevention of condensation in the berths and the provision of proper lighting and ventilation. In the instructions referred to it is for the first time laid down that the minimum size of bunks in vessels built or measured after the issue of the instructions shall not be less than six feet long and two feet wide. Medical inspection on the part of London has, Dr. Collingridge observes, worked without a hitch and with but the least delay to shipping; he contemplates that the Quarantine Act when in force will by the removal of needless restrictions still further facilitate matters. The enormous amount of inspectorial work which is necessitated in the Port of London may be gathered from the fact that the limits of the district extend from Teddington to the Nore. It has been found, in fact, that with the two steam launches hitherto at the disposal of the sanitary authority it is impossible to carry out the inspection thoroughly over the whole area, and Dr. Collingridge has asked the authority to provide a third launch. He points out that under the Public Health (London) Act, 1891, it is as much the duty of the port sanitary authority to cause inspection to be made of the ships in their district as it is for an inland sanitary authority to inspect the houses in theirs, and he shows that with the present fleet such inspection is impossible. The port sanitary committee has had Dr. Collingridge's request under their consideration, and we are glad to see that before deciding upon the matter they adopted the very sensible course of themselves making trips down the river and thereby ascertaining the impossibility of complete inspectorial supervision with but two steam launches. A considerable portion of Dr. Collingridge's report is devoted to the important subject of food inspection, a matter which engages a large portion of the inspectors' time. For instance, during the six months under review there were destroyed 451 carcases of mutton and lamb and 1546 quarters of beef, besides numerous cases of eggs, fruit, and fish. A very large number of frozen rabbits and hares are imported during certain months of the year from New Zealand and Australia, and these are all inspected on their being unloaded from the vessels. Much care has to be exercised in dealing with these rabbits in transit from the docks, as they are extremely susceptible to changes of temperature and decomposition readily ensues. The importance of this supervision of our food-supplies entering by sea which is exercised by the officers of the London Port Sanitary Authority cannot be overrated, and Dr. Collingridge draws attention to the possibility of the introduction of infection by meat and milk, insisting that inasmuch as there is no information as to the condition during life of the animals which furnish the meat and milk it is necessary to be the more particular in subsequent examination. In the appendix to the report the sanitary committee have published the whole of Dr. Theodore Thomson's very thorough report to the Local Government Board upon his survey of the London Port Sanitary District. In conclusion, we commend Dr. Collingridge's report to port medical officers of health, and we trust it will find its way into their hands.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6451 births and 4164 deaths were registered during the week ending April 11th. The annual rate of mortality in these towns, which had declined in the five preceding weeks from 20·7 to 18·3 per 1000, rose again last week to 20·0. In London the rate was 20·3 per 1000, while it averaged 19·8 in the thirty-two provincial towns. The lowest rates in these towns were 13·0 in Brighton, 13·3 in Croydon and in Derby, 14·2 in West Ham, and 14·5 in Huddersfield; the highest rates were 22·0 in Salford, 24·7 in Oldham and in Bolton, 25·1 in Manchester, and 27·5 in Leeds. The 4164 deaths included 666 which were referred to the principal zymotic diseases, against 631 and 615 in the two preceding weeks; of these, 276 resulted from measles, 206 from whooping-cough, 76 from diphtheria, 42 from diarrhœa, 40 from scarlet fever, 24 from "fever" (principally enteric), and 2 from small-pox. No fatal case of any of these diseases occurred last week in Huddersfield; in the other towns they caused the lowest death-rates in Brighton, Cardiff, Bradford, Preston, and Hull, and the highest rates in Wolverhampton, Birkenhead, Bolton, Oldham, and Sunderland. The greatest mortality from measles occurred in London, Bristol, Oldham, Birkenhead, and Sunderland; from scarlet fever in Salford and in Bolton; from whooping-cough in Bolton, London, Salford, Leeds, and Derby; and from "fever" in Wolverhampton. The 76 deaths from diphtheria included 45 in London, 4 in Birmingham, 3 in West Ham, and 3 in Bolton. Two fatal cases of small-pox was registered in Bristol, but not one in London or in any other of the thirty-three large towns. There were 21 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 11th inst., against 43, 33, and 23 at the end of the three preceding weeks; 5 new cases were admitted during the week, against 9, 2, and 2 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2587, against 2773, 2744, and 2676 on the three preceding Saturdays; 226 new cases were admitted during the week, against 277, 224, and 186 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had declined in the six preceding weeks from 404 to 270, rose again to 301 last week, but were 102 below the corrected average. The causes of 73, or 1·8 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Salford, Oldham, Leeds, and in nine other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Blackburn, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the three preceding weeks from 19·6 to 18·7 per 1000, rose again to 19·7 during the week ending April 11th, but was slightly below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 12·1 in Paisley and 13·0 in Aberdeen, to 21·8 in Leith and 27·4 in Perth. The 576 deaths in these towns included 29 which were referred to whooping-cough, 20 to measles, 17 to diarrhœa, 12 to "fever," 7 to diphtheria, 6 to scarlet fever, and not one to small-pox. In all, 91 deaths resulted from these principal zymotic diseases, against 52 and 61 in the two preceding weeks. These 91 deaths were equal to an annual rate of 3·1 per 1000, which almost corresponded with the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 21 in each of the two preceding weeks, rose to 29 last week, of which 18 occurred in Glasgow, 4 in Edinburgh, 3 in Aberdeen, and 3 in Paisley. The deaths from measles, which had been 6 and 8 in the two preceding weeks, further increased to 20 last week, and included 9 in Glasgow and 5 in Dundee. The deaths referred to different forms of "fever," which had been 4 and 6 in the two preceding weeks, further rose to 12 last week, of which 7 occurred in Glasgow and 2 in Edinburgh. The 7 fatal cases of diphtheria also showed a further increase upon recent weekly numbers, and included 3 in Glasgow. The deaths from scarlet fever, which had been 6 and 5 in the two preceding weeks, were 6 last week, of which 3 occurred in Edinburgh and 2 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 107 and 87 in the two preceding weeks, rose again to 110 last week, but were 51 below the number in the corresponding week of last year. The causes of 40, or nearly 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·8 and 25·5 per 1000 in the two preceding weeks, declined to 25·4

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during the week ending April 11th. During the thirteen weeks of last quarter the rate of mortality in the city averaged 25·3 per 1000, the rate during the same period being 19·5 in London and 17·7 in Edinburgh. The 170 deaths registered in Dublin during the week under notice were within one of the number in the preceding week, and included 10 which were referred to the principal zymotic diseases, against 7 and 8 in the two preceding weeks; of these, 4 resulted from diarrhœa, 2 from scarlet fever, and 1 each from small-pox, diphtheria, whooping-cough, and "fever." These 10 deaths were equal to an annual rate of 1·5 per 1000, the zymotic death-rate during the same period being 4·1 in London and 2·8 in Edinburgh. The fatal cases of diarrhœa, which had been 3 and 2 in the two preceding weeks, were 4 last week. The 2 deaths referred to scarlet fever, corresponded with the number in each of the 2 preceding weeks. The 170 deaths in Dublin last week included 20 of infants under one year of age, and 44 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from the numbers recorded in the preceding week. Two inquest cases and 4 deaths from violence were registered; and 76, or more than a third, of the deaths occurred in public institutions. The causes of 12, or more than 7 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-MAJOR KEAYS has been posted to Limerick and Surgeon-Major Harran to Cork. Surgeon-Major Dugdale and Surgeon-Captain Daly have embarked for Egypt. Surgeon-Major Adams has been appointed to the Thames District. Surgeon-Captain Gray has been posted to the South-Eastern District and Surgeon-Captain Brown to Cork. Surgeon-Lieutenant Probyn has joined at Chatham, Surgeon-Lieutenant Statham at Edinburgh, Surgeon-Lieutenant Cooper at Canterbury, Surgeon-Lieutenant Brereton at Portsmouth, Surgeon-Lieutenant Forrest at the Curragh, and Surgeon-Lieutenant Grattan at Athlone. Surgeon-Lieutenant Hooper is appointed to the Coldstream Guards in succession to Surgeon-Lieutenant French, transferred to the North-Western District.

ARMY MEDICAL STAFF.

Surgeon-Major-General John Colahan, M.D., is placed on retired pay. Surgeon-Lieutenant-Colonel James Coats, M.B., retires on retired pay. Surgeon-Captain William Henry Bean, half-pay, retires from the service receiving a gratuity.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Major R. R. H. Whitefield has been appointed Civil Surgeon of Patna; Surgeon-Major A. Tomes to act as Civil Surgeon of Howrah; Surgeon-Captain F. C. Clarkson to act as Civil Surgeon of Midnapur; Surgeon-Captain H. W. Pilgrim to act as Civil Surgeon of the 24th Parganas, and also to act as Medical Inspector of Emigrants (Colonial Emigration). Surgeon-Captain D. M. Moir is appointed to act as First Resident Surgeon, Presidency General Hospital; Surgeon-Captain E. O'Kinealy to act as Second Resident Surgeon, Presidency General Hospital; and Surgeon-Captain R. Bird to be Resident Medical Officer of the Medical College Hospital, Calcutta. Surgeon-Captain W. C. Vickers, M.B., C.M., to be District Medical and Sanitary Officer, Kistna, vice Surgeon-Lieutenant-Colonel A. J. Sturmer, appointed Surgeon, Fourth District; and Surgeon-Captain P. C. Gabbett to act as Resident Physician, General Hospital. The following promotion is made, subject to Her Majesty's approval:—Surgeon-Lieutenant-Colonel to be Brigade-Surgeon-Lieutenant-Colonel; Andrew Deane, M.D., vice Brigade-Surgeon-Lieutenant-Colonel Henry Black Purves, retired; Brigade-Surgeon-Lieutenant-Colonel William Price, M.D., Indian Medical Service (Madras), Principal, Medical College, Madras, and Senior Medical Officer, General Hospital, Madras, retires from the service subject to Her Majesty's approval.

NAVAL MEDICAL SERVICE.

Fleet-Surgeon Robert Turner has been placed on the Retired List, with permission to assume the rank of Deputy Inspector-General of Hospitals and Fleets.

The following appointments are notified: — Staff-Surgeons: Joseph Crowley, M.D., to the *Grafton;* John L. Aherne to the *Lion;* and John B. B. Triggs, M.B., to the *Active.* Surgeon Harold P. Jones to the *Grafton.*

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain William H. B. Crockwell to be Surgeon-Major.

YEOMANRY CAVALRY.

Northumberland (Hussars): Surgeon-Lieutenant A. Brumell to be Surgeon-Captain.

VOLUNTEER CORPS.

Artillery: 3rd Middlesex: Henry Walter Syers, M.D., to be Surgeon-Lieutenant. 1st Hampshire (Southern Division, Royal Artillery): Ernest Frederick Eliot, gent., formerly Surgeon-Captain, to be Surgeon-Lieutenant. 2nd Lancashire: Surgeon-Lieutenant-Colonel J. Johnstone resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the corps on his retirement. 5th Lancashire: Surgeon-Lieutenant Douglas John Mayhew Bone is appointed Lieutenant. The Highland: Second Lieutenant George Geddes, M.B., is appointed Surgeon-Lieutenant. *Rifle:* 3rd Volunteer Battalion the Royal Fusiliers (City of London Regiment): Surgeon-Lieutenant W. Barter, M.D., to be Surgeon-Captain. 5th Volunteer Battalion the King's (Liverpool Regiment): Surgeon-Lieutenant Michael Joseph Mahony is appointed Second Lieutenant. 2nd Volunteer Battalion the Lincolnshire Regiment: Surgeon-Lieutenant R. E. E. South to be Surgeon-Captain. 1st Volunteer Battalion the East Yorkshire Regiment: Francis William Fullerton, M.D., to be Surgeon-Lieutenant. 3rd Volunteer Battalion the Lancashire Fusiliers: Surgeon-Lieutenant J. T. Smith to be Surgeon-Captain. 1st Volunteer Battalion the Duke of Cornwall's Light Infantry: Surgeon-Lieutenant C. R. Lawrie to be Surgeon-Captain. 1st Nottinghamshire (Robin Hood): Surgeon-Lieutenant W. J. Sprott, M.D., to be Surgeon-Captain.

Royal Engineers: S. R. Dyer, M.D., late Captain, to be Surgeon-Lieutenant to the 1st London Volunteers, and not as stated in our previous issue.

THE ARMY MEDICAL STAFF IN INDIA.

It is well known that some of the authorities in India and the medical service of that country have for a long time been desirous of having the medical charge of the British force serving in India handed over to them in addition to that of the native army. If this were done there would no longer be two military medical services for India, the Army Medical Staff not going to that country in medical charge of the European regiments. The *Army and Navy Gazette* has called attention to the subject and states that a rumour to this effect must be acknowledged to have some foundation, adding that it is believed a scheme has actually been proposed by the authorities at home to those in India for the removal altogether of officers of the Army Medical Staff from India replacing them by officers of the Indian medical service. The scheme is not at all likely, however, to find favour with the present Commander-in-Chief in India or with the military authorities of the European army in that country. However popular and acceptable it would be to the Indian medical service it would be exactly the reverse with that of the British service. The object of the Home and Indian Governments is probably one of supposed economy in the first place, and in the second to have a restricted service for home and the colonies so as to vastly reduce the size of the army medical department and do away with, or materially lessen, the large amount of foreign service of which its officers complain so much at present. The British Government, no doubt, hopes to meet the difficulty of obtaining candidates for the Army Medical Staff by such a wholesale reduction, but a scheme of this kind would revolutionise the service and arouse, we imagine, an immense amount of opposition.

THE BEST BOOT FOR THE INFANTRY.

All interested in the health and comfort of our army will read with interest and pleasure the letter which we print below. Nothing tells so much against a soldier as to be badly shod, nothing makes his toil more arduous and his work less efficient. It does not necessarily follow that the article which wins a prize allotted from an academic point of view is found to be thoroughly efficacious in practical tests, but the boot worn by our troops in Ashanti seems

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to have justified the prize awarded to it, and we hope the Adjutant-General will take note of the fact.

To the Editors of THE LANCET.

SIRS,—It really does appear that the Boot question for the Infantry soldier is nearly settled. The boot that won the prize for an Army Boot last year has been tested in Ashanti. Officers and men speak highly of its durability and suppleness. Will the Adjutant-General oppose the pattern? I am of opinion that all public servants in uniform should have a boot of the same quality, pattern, and price.

I am, Sirs, your obedient servant,
W. H. ALLSOPP, Lieutenant-Colonel.

Junior Carlton Club, April 13th, 1896.

MONTHLY AVERAGE TEMPERATURE OF THE AIR AT WADY HALFA.

	1894.			1895.		
	Max.	Min.	Medium.	Max.	Min.	Medium.
January	73·9	46·6	59·5	75 4	45 5	60·1
February... ...	77·2	52·3	63 5	84·7	49 8	66·5
March	88·0	56·1	71·1	91·4	56·6	73·4
April...	94·8	62·4	78·8	97·2	63·0	80·6
May	106·0	71·2	88·7	106·5	73·6	89·9
June...	107 6	75 9	91·4	107·0	73·6	90 3
July...	104·7	75·0	89·8	106·2	75·2	90·9
August	103 1	75·0	89·1	104·2	76·1	89 8
September ...	99·9	73·9	86 3	100·2	74·8	87·0
October	100 6	68·3	83·7	93 9	67·3	80 1
November ...	82 4	56 3	69 3	85·3	59·9	72·2
December ...	77·0	48·7	62·4	78·4	51·4	64 2

The mean temperature is calculated from the maximum and minimum of the twenty-four hours, together with observations taken at 9 A.M. and 9 P.M. These tables have been calculated from the weekly returns published by the Egyptian Sanitary Department, to which we may refer readers who may be anxious for more information regarding the climate of Upper Egypt. As the troops advance southwards the heat may be expected to increase, but that other factors besides proximity to the equator influence the temperature is evident from the subjoined table, which has been compiled from the same sources as the other. Wady Halfa, it may be mentioned, is as nearly as possible two and a half degrees south of Assouan.

MEAN TEMPERATURE OF THE AIR AT FIRST AND SECOND CATARACTS.

1894.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Assouan	61·3	63·3	70·9	79·5	90·3	93·6	93·0	90·7	86 9	87·1	72 5	63·1
Wady Halfa ...	69·5	63·5	71·1	78·8	88·7	91·4	89 8	89 1	86·3	83·7	69·3	62·4

Unfortunately, the comparison between the two stations cannot be given for 1895 as the reports from Assouan are incomplete.

THE MATABELE RISING.

The situation in Matabeleland is assuming a grave aspect. Sir Hercules Robinson has arranged to send an Imperial force of cavalry and some mounted infantry into that district as an addition to the volunteers and police force already there. It is thought locally that Sir Hercules Robinson was nevertheless right in advising that reinforcements from this country were not necessary, at any rate at present, as a large number of men accustomed to field service could be easily raised in the country. The fighting has been pretty severe and a number of men of the Colonial forces have been killed and wounded. The Hon. M. Gifford and the wounded generally are reported as doing well. There is a widespread rising of the Matabeles; the white settlers are exposed, of course, to a good deal of danger; and it seems highly probable that reinforcements will have to be sent from this country.

REORGANISATION OF THE INDIAN MEDICAL SERVICE.

A very important notification regarding the new reorganisation of the Indian Medical Service proposed by the Governor-General in Council has been published with the sanction of the Secretary of State for India, and the new scheme is to take effect from the 1st inst. The Medical Services of Bengal, Madras, and Bombay are now amalgamated in one service under the direct administrative control of the Government of India, with a Director-General as head of the amalgamated Indian Medical Service, together with other changes in the direction we indicated last week.

ASHANTI HONOURS.

The Queen has been pleased to give directions for the following appointments to the Most Distinguished Order of St. Michael and St. George, in recognition of services rendered in the recent expedition to Ashanti. To be Ordinary Members of the Third Class, or Companions of the said Most Distinguished Order: — Surgeon-Lieutenant-Colonel Montgomerie Blennerhassett and Surgeon-Major Edmond Munkhouse Wilson.

THE REGULATIONS FOR ADMISSION INTO THE ARMY MEDICAL STAFF.

We recently adverted to, and briefly commented upon, the proposed changes in the system of examination for admission into the Army Medical Service. These changes have since been embodied and published in an Army Order. They are in the direction we have already indicated and mainly with the view of strengthening the examination in medicine and surgery and putting other subjects in a relatively subordinate position.

THE PLAGUE AT HONG-KONG.

According to the latest telegraphic intelligence from Hong-Kong to the Colonial Office sixty-seven cases of bubonic plague occurred in the week ending 14th instant, making 482 cases altogether since the beginning of the year. The disease seems to be confined to the natives, no cases having so far been reported among the European residents.

NAVAL MEDICAL SUPPLEMENTAL FUND.

At the quarterly meeting of the Directors of the Naval Medical Supplemental Fund, held on the 14th inst., Inspector-General T. Russel Pickthorn in the chair, the sum of £55 was distributed among the several applicants.

Correspondence.

"Audi alteram partem."

THE WRITTEN AND UNWRITTEN LAW OF THE ROYAL COLLEGE OF PHYSICIANS, LONDON.

To the Editors of THE LANCET.

SIRS,—The question of advertising by medical men has been much before the public both in the medical and general periodicals of late. There is a resolution of July 27th, 1882, of the Royal College of Physicians of London relating to this matter which reads as follows: "That the system of extensively advertising medical works and the custom of giving, whether for publication or not, laudatory certificates of medicinal and other preparations or of medical or surgical appliances is misleading to the public, derogatory to the dignity of the profession, and contrary to the traditions and resolutions of the Royal College of Physicians." Would you kindly inform me where these "Traditions and Resolutions" are to be found that I may be able to read the subject?

I am, Sirs, yours faithfully,
S. LEONARD CLIFT, M.R.C.S. Eng., L.R.C.P. Lond.

Church-road, Bournemouth, April 16th, 1896.

*** The word "Traditions" almost conveys the answer to our correspondent's question. The greater part of the law of the Royal College of Physicians of London is *unwritten*, consisting only of well recognised traditional principles and their application to particular circumstances. No attempt has ever been made to reduce these principles to a code, and we think that such an attempt would be of doubtful wisdom, as it would considerably fetter the operations of the College and lower its dignity simultaneously. But the College is not without a form of written law. Its authority in matters of professional conduct is wielded by the Censors' Board, and

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the proceedings of this Board as embodied in the minutes and read at each quarterly meeting of the College constitute a very important collection of decisions. Certain By-laws, again, have been enacted from time to time by the College to define a line of conduct in particular contingencies, of which those at present in force may be found in Chap. XXVI. of the *By-laws and Regulations of the College*, a copy of which may be had on application to Mr. Fleming, the bedell, at the office of the College. Lastly, certain Resolutions of the College, passed generally on the recommendation of the Censors' Board and aimed at some growing offence against professional honour and good manners, have been printed and a general currency given them. It is such a Resolution that our correspondent has quoted, and it was passed by the College on July 27th, 1882.—ED. L.

MATERNAL SYPHILIS.

To the Editors of THE LANCET.

SIRS,—Many of the difficult questions connected with syphilis and maternity are dealt with in Dr. Coutts's able and interesting Hunterian Lecture in THE LANCET of April 11th. Quite unaware of Dr. Coutts's lecture and views I submitted to you a paper on the same subject on March 25th, approached rather from the gynæcological side, in which I ventured to remark on the prevalence and manifestations of syphilis in married women subsequently to abortion or delivery, and I attempted to urge the primary origin of syphilis in the mother rather than the "paternal syphilis" of the fœtus with "syphilis by conception" in the mother. Dr. Coutts states that "all observers are agreed in the fact that a very large proportion of the mothers of syphilitic infants exhibit no outward evidence of the complaint even after prolonged and careful search." Dr. Coutts mentions 100 mothers who showed manifestations and 100 who were *apparently* free from syphilis. This percentage agrees with the figures of Mr. J. Hutchinson, who also has stated: "It is exceptional for such mothers to suffer from ostensible syphilis." Such statements as these have considerably perplexed me, for while I have been willing to admit apparent immunity in the mothers of syphilitic children brought to children's hospitals, I have been very much struck with the constant and spontaneous complaint of mothers who in gynæcological practice attribute their ill-health to abortion or confinement with no history of previous illness. Such complaints may be classed as debility, general ill-health, severe headaches, loss of or thinning of hair, sore throats, eruptions, palmar psoriasis, subinvolution and prolapse, leucorrhœa and hyperæmia of the vaginal mucous membrane, menorrhagia, erosions of the os, endometritis, chronic ovarian and tubal disease, and superficial sores of the anus and affections of the rectum. If these are not ostensible signs of syphilitic infection they in many cases are a sequel to a syphilitic pregnancy, while gummata, as in Charrier's case, and diseases of the bones and nervous system are by no means uncommon in married women in whom no suspicion of syphilis has arisen, but who have been pregnant by a husband who has had syphilis in early life. I regret I am unable at present to give complete and comparative statistics; I am, however, indebted to Mr. Henry Lee for kind permission to make use of his case-books, and I have collected a sufficient number of cases myself to satisfy me that ill-health in women subsequently to a syphilitic conception is far more common than is supposed, and that the views of Charrier, Cullerier, Notta, and others, who hold that "every syphilitic child is born of a syphilitic mother," are worthy of greater clinical recognition. A. Fournier states, "Syphilis in the child nearly always implies syphilis in the mother"; while Mr. Hutchinson himself, in interpreting Colles' views, sets forth that immunity and syphilisation are synonymous, and that the possibility of later manifestations cannot be excluded. Moreover, the works of Diday, Tyler Smith, and L. Parker clearly demonstrate the importance and recognition of syphilis in the mother subsequently to a syphilitic conception. If a mother is thus capable of being infected, it is obvious that the power of transmission to the offspring outlasting that of direct infection of the mother is of small significance.

The theoretical explanation of syphilis in the fœtus and in the mother is possibly of second importance to the clinical recognition of syphilis in parous women. At the same time it is of such interest that it compels attention. I confess "paternal syphilis" and "syphilis by conception" do not satisfy me. The absence of primary disease in the mother applies to both paternal and maternal origin, for in nulliparous women primary disease may be so slight as to escape notice or altogether absent, while the lumbar glands may be enlarged and the inguinal glands normal. The absence of syphilis in the mother with manifest syphilis in the fœtus is not conclusive, for absence of manifestations in a mother who has contracted it in the usual way is, as Dr. Coutts notes, not impossible. While Dr. Coutts considers there is no proof of the attenuation of the syphilitic virus in the male I confess I lean to the primary syphilisation of the wife, with partial or complete immunity, till pregnancy disturbs such latency and manifestations result subsequently to abortion or delivery. The following points seem to support such theory: 1. It is no uncommon thing to find that intercourse and marriage lights up latent disease in men, and genital superficial lesions or modified urethritis appear. In a disease dependent on periodical activity of germs and production of antitoxin it seems almost unreasonable to doubt that the genital secretions of the male or the relapsing lesions of the penis are incapable of producing at a period of minimum activity syphilisation without obvious manifestations. 2. In a few cases that have presented themselves to me I have noted that pregnancy occurring in women who had previously suffered from syphilis, the syphilis which was latent was lighted up and manifested itself in ulcerated throat, genital sores, and eruption. 3. In pelvic absorption the extent of glandular distribution may considerably modify the virus and general infection.

The maternal origin of syphilis in the fœtus in every case appears to be more reasonable than that the spermatozoon possesses the ability to infect the fœtus and secondarily the mother. As regards this point I understand Dr. Coutts disbelieves, as I do, in "syphilis by conception," but I do not follow him when he admits immunity by conception, partial or complete, which I take it, is syphilis by conception. One other point I would like to touch on in Dr. Coutts' valuable lecture. He explains Diday's "law of decreases" by immunity gained by the evolution of some chemical principle or antitoxin antagonistic to the growth of the germs. That is one explanation of immunity in general, but I hold strongly to the theory of elimination of syphilis through the skin and secretions, and beg to quote Dr. J. F. Payne in his manual of General Pathology: "It is one of the oldest traditions in medicine that diseases which produce an exanthematous eruption are thrown off by the skin, which, expressed in modern language, means that the poison, or micro-organism, is eliminated by exfoliated epidermis and by the cutaneous secretions. Considering the case of syphilis, there is nothing impossible or even improbable in this theory." I am, Sirs, yours faithfully,

JOHN A. SHAW-MACKENZIE, M.D. Lond., &c.,
Formerly Registrar to the Victoria Children's Hospital, and late Pathologist and Physician to the Out-Patients,
April 13th, 1896. Chelsea Hospital for Women.

THE ETYMOLOGY OF MEASLES.

To the Editors of THE LANCET.

SIRS,—Dr. William Sykes, in a learned paper on the Origin of English Disease Names,[1] which will have been read with general interest, has, in following Professor Skeat as to the derivation of "measles," taken up a position which I had already shown[2] to be untenable. Trench, in his "Select Glossary," had derived measles from the mediæval Latin *miselli*, diminutive of *miser*, meaning the leprous, although he did not explain how measles came to be associated with leprosy. Professor Skeat, in his "Etymological Dictionary," did not doubt—it is, indeed, beyond doubt—that *miselli* reappears in the Norman-French form of mesels, or mesles, or mezeals; but he rejected Trench's etymology of measles on the ground that it is not the same word as mesles. "The spelling with the simple vowel *e*," he says, "instead of *ea* or *ae*, makes all the difference. The confusion between the words is probably quite modern." This bland assertion, improbable on the face of it, seeing that it relates to so inconstant a thing as spelling, has sufficed for Dr. Sykes, who thereupon pronounces

[1] THE LANCET, April 11th, 1896.
[2] History of Epidemics in Britain, vol. i., p. 632, 1893.

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me to be "probably in error," as well as "dogmatically" so, in defending the old derivation of Trench and in making it intelligible by showing that Gaddesden had actually grouped the small spots of morbilli with the broad, dusky red spots on the legs of *pauperes et consumptivi*, who were called "anglicè *mesles*." I had already shown that the separation in orthography between mesles and measles asserted by Professor Skeat had no existence. Four English writers of the Tudor period—Pace (in a letter of 1518), Skene, Cogan, and Lodge—use the forms mezils, mesillis, or mesels, where they mean morbilli; while four others—Elyot (1541), Phaer, Clowes, and Kellwaye—write the word with *ea*, or in the way that has become fixed by subsequent usage. There was no uniformity: how could anyone look for it? Again, in the printed text of Shakespeare (who spelt his own name in five different ways) we find, "Those meazels which we disdain should tetter us" (*Coriolanus*; Act IV., Sc. 1), meaning a scurvy rabble, such as the mesells or lazars or beggars in the "Vision of Piers the Ploughman," of whom Professor Skeat was doubtless thinking. There was, in fact, only one word, with the usual latitude of spelling, still used occasionally in its original sense as late as the time of Shakespeare, but in its common use diverted to the meaning which Gaddesden's reference to it as a larger form of morbillous spots, in his chapter "De Variolis et Morbillis," had opened the way for. His "Rosa Anglica" had great authority for more than two centuries, and was printed almost as soon as printing began, so that it is not difficult to understand how mezils, or mesles, or meysyls, or measles should have got that specific meaning of morbilli which we find it to have about the beginning of the Tudor period. The first mention of an epidemic under that name which I have noted is under the date of January, 1483, a certain infirmity then reigning, as was said, in Canterbury—namely, le meysyls, by reason of which the King did not accompany the Queen into the city. Dr. Sykes thinks that I had erred, as he supposes, by taking a too exclusively English standpoint in examining "the literature of the subject," meaning that I had paid no heed to the dictionary derivation of measles from the Dutch *maeseln*. But how can one's point of view be too exclusively English when we discover the very fountain and origin of this English medical term in a freak of classification by Gaddesden? Measles having been shown to be the same word as mesles, the association of the latter with morbilli in the "Rosa Anglica" surely determines our priority over the Dutch.

I am, Sirs, yours faithfully,

C. CREIGHTON.

Great Ormond-street, London, W.C., April 13th, 1896.

MIDWIVES' REGISTRATION.

To the Editors of THE LANCET.

SIRS,—We trust you will allow us to remind those members of the profession who are in favour of the education, registration, and supervision of midwives that a Bill for securing these objects has been set down for reading in the House of Commons on May 6th. We desire to point out that no time should be lost in bringing the question under the notice of Members of Parliament and putting the case for legislation fairly before them. We are aware that a number of our brethren are opposed to such legislation, but we know also, and we think it very important that Members of Parliament should know, that a very considerable number are in favour of it. The object of this letter is to urge the advocates of legislation to give their active support to the present Bill, which is identical with the amended Bill of Lord Balfour of Burleigh, introduced and read a second time in the House of Lords last year. We are, Sirs, yours faithfully,

ROBERT BOXALL, M.D. Cantab., } Hon. Secs., Midwives'
ROWLAND HUMPHREYS, } Registration Association.

Fellows-road, N.W., April 13th, 1896.

To the Editors of THE LANCET.

SIRS,—In your issue of April 4th your Liverpool correspondent calls attention to the threatened dismissal of the visiting staff of the Liverpool Lying-in Hospital and to the appointing of midwives in their stead. This is a speedy nemesis, and should open the eyes of all practitioners who are in favour of the so-called registration of midwives. For some years the medical staff of this hospital has lectured and granted elegant diplomas to midwives. It has also stood by and allowed their district midwives to attend, on their sole responsibility, all out-door confinements, and without the aid of the district medical staff. Why, then, it is asked, can the visiting medical staff take valid objection to the plan being put into force in connexion with women confined in their hospital—which is, and has been, in force with their approbation among the home patients? Consistency of conduct is a valuable weapon, and it being forgotten is likely to recoil some day upon those who lay it aside. I do not, however, wish to blame unduly the visiting medical staff; I wish to use it as an illustration of the true and ulterior motives of the supporters of midwives registration. Thus Mr. H. C. Burdett suggested that no resident medical officer should be employed in small lying-in hospitals, but that his place should be taken *by a midwife*.[1] This excludes resident medical officers. The committees of the City of London Lying-in and of the British Lying-in will not allow medical students to be trained in these hospitals in midwifery. This excludes medical students. In March, 1895, the Leicester board of guardians tried to appoint a midwife to take the place of their district medical officer, but the Local Government Board would not allow it. This proposed to do away with the district medical officer's conducting pauper confinements. In November, 1895, the Peterborough guardians ("guardians" of the poor in inverted commas) sent a circular letter to all the other Poor-law guardians in England asking them to resolve: "That the members of the board are of opinion that it is desirable that boards of guardians shall have discretionary power of appointing duly qualified midwives for attendance at childbirth *in place of the district medical officer*, subject to the condition as laid down in the Poor-law Board's Circular, No. 88." A most modest suggestion for those who should be *the real* guardians of sick women and infants! In the Hospital Annual, 1891, Mr. Burdett again writes: "It behoves all midwives just now to be sure of obtaining a good certificate. ..... *Every reason which was brought forward for the registration of medical men applies also to midwives.* ....." Another modest remark! Dr. W. Grigg, lecturer to pupil midwives at Queen Charlotte's Hospital, said: "I am sure you will agree with me in hoping the day is not far distant when all midwifery will again fall into the hands of women." Why, I ask, should the lying-in room of the poor be again made the first stage to the chamber of death? The Midwives Institute, in its prospectus, modestly states: "As some confusion exists in the public mind as to the difference between midwives and monthly nurses, it may be well to state that a midwife is qualified to attend all cases of natural labour—that is, she undertakes the cases herself *without a doctor, and is, in fact, engaged instead of one.*"

I think, Sirs, the above quotations show clearly that the promoters of this iniquitous Bill propose (*a*) to exclude medical students from lying-in hospitals for training; (*b*) to exclude all resident medical officers; (*c*) to exclude all visiting medical staffs; (*d*) to exclude the district Poor-law medical officers from attending Poor-law confinements, and (*e*) generally to degrade and prostitute the Medical Act, 1886, and to revert to those death-dealing times when midwifery was an occupation of the uneducated and dangerous. At least thirteen women die each day in England in childbed. Is not this sad and disgraceful death-rate—not to mention the sick and maimed rates—sufficient to prompt us to insist on the elevation of the practice of midwifery to a much higher level than it occupies to-day, and to do everything to prevent its degradation and retardation?

I am, Sirs, yours faithfully,

Liverpool, April 15th, 1896. ROBERT R. RENTOUL.

"THE EFFECT OF MUSCULAR WORK UPON THE ALKALINITY OF THE BLOOD."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of April 11th (p. 1020) Mr. Fotheringham contrasts a statement of mine in THE LANCET of March 7th (p. 611) with one in the paper by Dr. Hutchison which follows it, and asks, "Which is the correct view?" I reply that probably both are correct, as their opposition is apparent rather than real. The conclusion I draw from my facts and figures (p. 614) is "that the effect of exercise is to increase the function of urea," and as I have pointed out in my book that the excretion of urea and of acid in the urine

[1] See Pamphlet, No. viii., 1888, Hospitals Association.

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generally rise and fall together, it follows that the effect of exercise is to raise the acidity of the urine and diminish the alkalinity of the blood. And my Figures 1 and 2 (p. 611) show that while there is at first a fall of urea and acidity, this is followed by a rise that more than makes up for the fall, so that the total effect of the exercise is to raise the acidity of the urine and probably to diminish the alkalinity of the blood; and Dr. Hutchison points out (p. 616) the correspondence between the increase of the blood's alkalinity after meals and the appearance of the "alkaline tide" in the urine, and he adds, "The latter is to be regarded as the expression and result of the former." Mr. Fotheringham's statement that my entire theory of the cause of fatigue rests on the assumption that the effect of exercise is to increase the alkalinity of the blood is only half the truth, as my thesis is that fatigue is the result of the defective capillary circulation which excess of uric acid in the blood produces, and that if the uric acid has not been introduced (vegetarianism) or has been previously cleared out by solvents the alkalinity of the blood is a matter of no consequence. But, as is above shown, and as Mr. Fotheringham will find further reasons for believing in my book, the changes in the acidity of the urine are to a certain extent good and reliable indices of the corresponding changes in the alkalinity of the blood.

I am, Sirs, yours faithfully,

Brook-street, W., April 14th, 1896. ALEXANDER HAIG.

"THE DUTIES OF DIVISIONAL SURGEONS IN CASES OF INFECTIOUS DISEASES."

To the Editors of THE LANCET.

SIRS,—Dr. W. Thyne complains that my letter is no answer to his inquiry and that I admitted two flagrant breaches of professional etiquette. I beg to differ with him. I have done nothing of the kind, as I fail to see that I have done anything unprofessional. Dr. Thyne adduces several other instances of similar misconduct occurring in his practice. He says some months ago scarlet fever attacked several families of the police force. "In one instance the divisional surgeon ordered the family out in the garden at the end of a fortnight (at least, so the mother told me). I was also told that the inunction of a medicament which I ordered had not the sanction of his approval. In another case the divisional surgeon got the patient out of bed in order to examine his throat." To the above charges I simply have to say that they are totally untrue. With the exception of the two cases mentioned in his letter of March 21st, I have not seen any case of infectious disease amongst the families of the police for sixteen months in which he has been the medical attendant. Dr. Thyne also says that other divisional surgeons whom he had consulted disclaim any mission to offend professional propriety. I quite agree with them on that point; I had none when I had the whole of my brother practitioners to work with; but now I have a gentleman to contend with who degrades his profession, who undersells his brother practitioners by taking away their private patients and offering to attend a whole family for 2½*d.* per week, against 6*d.* paid by all the other clubs in this town. Notwithstanding Dr. Thyne's threat to report me to Mr. Mackellar, the chief surgeon, I can assure him I have no malice towards him and that when he gives up his ½*d.* fees divisional surgeons and his fellow practitioners will be delighted to show him all the courtesy that is due to him as a gentleman and a professional man.

I am, Sirs, yours faithfully,

W. J. HARNETT, F.R.C P. Edin., D.P.H.,

Barnet, April 14th, 1896. Divisional Surgeon, Barnet.

*** This correspondence must now cease.—ED. L.

DR. BOUDET DE PÂRIS' "STÉTHOSCOPE AMPLIFICATEUR" AND THE PHONENDOSCOPE.

To the Editors of THE LANCET.

SIRS,—I have been somewhat surprised to notice that although the phonendoscope has been for some time before the public and a detailed description of it appeared in the columns of THE LANCET of Feb. 29th, no one has thought fit to point out that it is simply a modification, and I may say a very trifling one, of a stethoscope that has figured for years in a French catalogue. It is true that the precursor of the phonendoscope would seem to be as little known in its native country as in England, for a high clinical authority to whom I showed it recently, pointing out the identity of the two instruments, at first supposed I was attempting to vindicate the claims of an English inventor. The *Comptes Rendus de la Société de Biologie* of March 6th contain, moreover, an account of a demonstration given there by Dr. Bianchi, with cuts of his instrument and figures illustrating the localisation of organs by a *new method* of investigation, and no one appears to have had a word to say as regards priority. If any excuse beyond that of doing justice to one who is no more is necessary for raising this question, I may say that personally I owe a kind of debt of courtesy to the late Dr. Boudet de Pâris which I am thus enabled to discharge, although fifteen or sixteen years ago I called attention to the antecedent claims of another person when he invented his electric diapason.

Dr. Boudet de Pâris invented a number of instruments for studying the sounds of the heart and arteries, all of which may be found in the catalogue of C. Verdin, the well-known maker of philosophical apparatus—the sphygmophone, the cardiophone, the micro-stethoscope, and the "stéthoscope amplificateur à membrane d'ébonite." The first three, as well as a myophone, have electrical transmission of the sound from a microphonic receptor to a telephonic ear-piece, but the "stéthoscope amplificateur" is practically the phonendoscope. The only difference is in the shape and the arrangement of the membrane, which, I venture to think, is better in "Boudet's stethoscope." Dr. Boudet de Pâris' stethoscope consists of a hollow cone with a membrane or plate fixed about half an inch from the open base; there is a stem as in the phonendoscope, which can be brought into play when fine localisation is desired by a screw. When the stem is screwed away from contact with the skin the instrument is the same as the phonendoscope without the second plate, which is removed when the stem is not employed. Boudet's stethoscope appears to me superior in that the vibrating membrane is more perfectly insulated from any sound except that which comes from beneath the portion of skin enclosed by the rim of the chest-piece.

Dr. Bianchi speaks of a new method of mapping out organs by his instrument, and the same *Comptes Rendus* gave diagrams showing the position of the liver, spleen, kidneys, and other organs. The effect of drinking on the contour of the stomach is shown with a precision that reminds one of the diagrams of modifications of heart dulness lately published by Schott's pupils. The following is the *modus operandi*. The button-shaped end of the stem is placed on the organ to explore and the vicinity stroked gently "as if smoothing ruffled fur." The stroking may be centripetal, centrifugal, or parallel to the contour Whilst on the organ a rough sound is heard; when its limit is reached the timbre suddenly changes. One lobe of the lung may be differentiated from another, and one cavity of the heart from the other, the exact line of the intraventricular septum determined, &c. I will not discuss the possibility of these delicate delimitations, but here again, Is Dr. Bianchi right in presenting the method as his own? There is not a word about any such mode of exploration in the prospectus which accompanied the phonendoscope two months ago, where it simply claims to be an intensifier of sound. Dr. Bianchi has, in my opinion, accidentally no doubt, re-invented a "stéthoscope amplificateur" which is not only identical in principle with that of its prototype, but, notwithstanding the difference of form, identical in amplifying power. There is only one difference between the two instruments, and that is not of intensity but of quality. For some acoustic reason the phonendoscope is clangorous and metallic. This would, perhaps, be of no importance in auscultatory percussion, as we are listening to sounds of our own creating and all that is required is distinctness; but in auscultation of sounds emanating from within the thorax we must be sure of having them transmitted without modification of their quality. In this respect "Boudet's stethoscope" is a much more perfect instrument, and it is most surprising to me that its existence should be so little known.

I am, Sirs, yours truly,

April 13th, 1896. OSCAR JENNINGS.

"THE QUESTION OF MEDICAL DEFENCE."

To the Editors of THE LANCET.

SIRS,—I was very glad to see Dr. Lovell Drage's letter in THE LANCET of the 4th inst., although, like yourselves, I do

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not agree with his principal conclusion. I am fully in sympathy with the proposed enlargement of the powers of the British Medical Association, but should be sorry to see the absorption of the defence unions by this body. We know that these unions have hitherto done their work excellently well; we do not know that they would be equally efficient if merged in the larger association. It should be remembered that medical defence has a collective as well as an individual bearing. The latter is well looked after by the defence unions, but they do not touch the former, which concerns the defence of the whole profession in any particular locality against enemies from without—e.g., the societies trading in medical attendance—and foes from within—e.g., members of the profession who adopt reprehensible practices which yet may not be "infamous" in a legal sense.

The difficulty in constituting the British Medical Association a court of control is that it has not, and cannot have, any greater punitive power than expulsion from itself, which to many is no penalty at all. The corporations, however, have already very extensive powers, which the profession would gladly see increased if they became representative bodies. It is to them, therefore, that we should turn our attention, and I invite Dr. Drage and those who think with him to support the effort which is now being made to secure representation for the Members of the largest corporation of all, the Royal College of Surgeons of England.

I am, Sirs, yours faithfully,

April 12th, 1893. W. G. DICKINSON.

"SUBCUTANEOUS EMPHYSEMA OCCURRING DURING LABOUR."

To the Editors of THE LANCET.

SIRS,—As Dr. Moffat says in THE LANCET of March 28th the above is a somewhat rare accident. In January of this year a primipara whom I attended showed well-marked emphysema over the thorax, face, and neck. This appeared after the second stage of labour was over and disappeared in about six days. It is of interest to record that she had emphysema in the same regions during an attack of influenza some years ago. The labour was rather tedious and the forceps were used. During the labour the patient had several bad fits of coughing (due to bronchial catarrh), which may have been the direct cause of the subcutaneous emphysema.

I am, Sirs, yours truly,

April 13th, 1896. ALEXANDER INNES, M.B. Aberd.

PUBLIC HEALTH APPOINTMENTS AND THE "LOCAL" CANDIDATE.

To the Editors of THE LANCET.

SIRS,—The recent election of medical officer of health for Sunderland is but another example of the useless and irritating expenditure of time, money, and personal comfort into which busy sanitarians in important public positions are so often unnecessarily led by the specious advertisements of sanitary authorities. To corporations with no soul to save or body to kick the mere fact that a "local" candidate has declared his intention to face the starter is too often quite sufficient to ensure his success (be his merits or demerits what they may) against the most highly qualified "stranger." The applicants for the appointment in question included one of the recent temporary inspectors of the Local Government Board and the health officers of several large Lancashire and Cheshire towns, men of proved ability and administrative experience. The Council nevertheless, by an overwhelming majority, entrusted the health interests of 140,000 people in this notoriously typhoid-stricken town to the hands of an estimable general practitioner, possessing the necessary academic qualification, but virtually without further practical experience of the duties of such a post. Comment is unnecessary; but I may, perhaps, be permitted to suggest to the town councillors of Sunderland and to others similarly actuated that under such circumstances it would in future be more straightforward to include in their invitation for applicants a statement of preference for any legally qualified *local* candidate. Then medical officers of health who are unable to practise the Scriptural precept and gynæcological feat of being born again (the accouchement, of course, to take place in the town they desire) will only have themselves to thank for their failure there.

I am, Sirs, yours faithfully,

April 14th, 1896. SEMPER VIGILANS.

FEVER HOSPITALS.

To the Editors of THE LANCET.

SIRS,—The authorities of the London Fever Hospital are making large additions to their institution in Liverpool-road, presumably for the accommodation of an increased number of patients suffering from infectious diseases. The new wards will be within a few feet of my garden. Will you kindly inform me what public authority (if any) regulates the erection of such buildings, or can any person or number of persons build fever wards where they choose in London? Thanking you in anticipation,—I am, Sirs, yours obediently,

Gibson-square, Islington, N., April 7th, 1896. H. G. D.

*** We rather doubt the conclusion arrived at, having been informed that the governors of the hospital have decided to improve their ward accommodation and to pull down some of the existing buildings, hence we should not be surprised that, compared with the past, the accommodation provided will in the future be less rather than more than it was. As regards the "few feet" referred to, it will be remembered that the limit of ascertained safety adopted by the Local Government Board and all sanitary authorities for the treatment of infectious fevers other than small-pox is actually based on the long experience of the London Fever Hospital, where the buildings intended to receive infected persons and things stand 40 ft. from the boundary of the hospital site. With this 40 ft. it was found that even where the admissions of fever cases numbered 3000 a year no spread to the houses around occurred. We can hardly believe that the governors are departing from this settled precedent of safety. We believe that apart from an injunction no remedy would apply, but we should advise our correspondent to learn the actual facts by communication with the hospital authorities.—ED. L.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Death of Mr. George Holt.

IN the death from pneumonia of Mr. George Holt, head of the well-known firm of Lamport and Holt, Liverpool has lost a prominent citizen and University College, Liverpool, a true friend. One of the promoters of that foundation, he ever took the greatest interest in its success, which was substantially shown by his first subscription of £10,000 which was requisite to complete its equipment for incorporation in the Victoria University. It was in its medical school that he took a special interest, and his benefactions to it have been numerous. The chairs of Physiology and Pathology were endowed by him in the amount of £10,000 each, to which was added a further sum of £10,000, for the maintenance of laboratories in those branches of investigation. In addition to these benefactions he presented its medical faculty in 1886 with the sum of £2000 for distribution during the ten succeeding years in tutorial scholarships of the value of £100 each. These have been of the greatest service to industrious students in affording them opportunities for research in special departments of the medical school which otherwise might not have occurred to them. He further fitted up in a complete manner Ashton Hall as a pathological and bacteriological laboratory which is one of the most complete of its kind in this country. Besides providing accommodation for the teaching of morbid anatomy, pathological chemistry, and bacteriology, provision is also made for private investigation in pathology. This building further contains the museums of hygiene and materia medica. This does not exhaust the list of his benefactions; a further sum of £1000 was given as a donation to the college library, to be expended in annual instalments of £100. He was also a generous contributor to the maintenance fund of the college and a warm friend of education in general. Indeed, it is probably as a benefactor of University College that his name will live longest in local memory. He presided at the annual meeting of the Royal Infirmary on Jan. 30th, looking the picture of

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health, and on his retiring from the chair unostentatiously presented the funds of that charity with the handsome donation of 500 guineas. A large and representative attendance at the funeral testified to the esteem in which he was held by all classes.

Glanders in Liverpool.

At the weekly meeting of the Health Committee, held on the 9th inst., attention was drawn to the alarming spread of glanders among horses in Liverpool. Both the medical officer of health and the veterinary superintendent, it was stated, were desirous of taking drastic measures, since the disease was serious not only to horses but to men also. In one stable seven horses had to be killed. It was urged that the committee should approach the Board of Agriculture on the subject, as it was necessary to have further powers. A member stated that at present horses were sent out from infected stables to work without restriction throughout the city and to drink at the same troughs as other animals. Alderman Bligh mentioned as within his own experience a fatal case of glanders contracted by a woman from a diseased horse, and felt, with other members, that it was absolutely necessary that the committee should have some powers of quarantine. A special committee was appointed to inquire into and to report on the matter, with power to wait as a deputation on the Board of Agriculture and on the Lancashire County Council. The deputation, consisting of two aldermen and two members of the city council together with the medical officer of health and the veterinary superintendent, proceeded to London on Monday to wait upon the Board of Agriculture and to confer with the officials of the London County Council as to the best means of stamping out the disease.

Liverpool Workhouse Extension.

The limited accommodation in this workhouse for able-bodied paupers has long been a subject of anxiety to the guardians of the parish. Several schemes have been suggested for relieving the pressure on the available space. At the last meeting of the select vestry the recommendations of a special committee appointed to consider the matter came up for discussion. The chairman moved the adoption of the report, which recommended that a site of not less than thirty acres be secured within easy access of the parish, and that on it should be placed a thoroughly equipped asylum for the bedridden and infirm; that the existing buildings at Kirkdale (which are now used as schools), with such slight alterations as circumstances might require, should be utilised as a relief workhouse for healthy inmates, and that the large building on Brownlow Hill, in which there are now upwards of 1000 medical and surgical cases besides infirm and able-bodied paupers, should be used as a hospital. He also pointed out that there are now 1000 more inmates in the workhouse than there were ten years ago. Upon a vote being taken the recommendation of the special committee was rejected. A resolution was afterwards carried that pavilions be erected in front of the Kirkdale site to provide for the sick poor now located in the attic wards. It may be mentioned that this huge workhouse contains about 4000 inhabitants.

Success of Liverpool Medical Students.

At the recent examination for the final M.B. Victoria seven candidates from University College, Liverpool, presented themselves. Six of these were successful, two obtaining first class, and one second class, honours. The fact of all the honours being carried off by Liverpool students has given great satisfaction here, and is an indication of the rapid strides which this school has made since the endowment of the chairs of anatomy, physiology, and pathology, so ably filled by Professors Paterson, Sherrington, and Boyce. All these gentlemen have been unwearied in their efforts to bring the Liverpool School of Medicine well to the front.

Birkenhead Medical Society.

The annual dinner of this society was held on Saturday evening last, under the chairmanship of Dr. Harris, J.P., the President of the society. The dinner, which was of a *recherché* character, was enlivened by a delightful musical programme. Dr. Harris made an excellent chairman, and under the influence of his geniality of manner and witty speeches the evening passed off in a most enjoyable manner.

April 15th.

WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Sad Death of Mr. John Miller Kirkman.

A VERDICT of suicide whilst temporarily insane was returned by the coroner's jury at the inquest held on April 9th upon the body of Mr. John Miller Kirkman, M.R.C.S. Eng., L.R.C.P. Edin., of Wootton Bassett, near Swindon, who committed suicide by cutting his throat with a razor and then taking hydrocyanic acid at Wootton Bassett on April 7th. Mr. Kirkman, who had lately complained of being overworked, should have attended the Quarter Sessions at Salisbury held on that day to give evidence in the case of a labourer at Swindon who was charged with attempting to commit suicide by cutting his throat. Much regret is felt by the inhabitants of Wootton Bassett, for Mr. Kirkman was a well known and much esteemed resident, extremely popular, and identified with all movements for the good of the town.

The Hospital Saturday Fund at Bristol.

The Mayoress of Bristol has lately received the ladies associated with the various hospitals of Bristol for the purpose of making arrangements for the successful working of the proposed Hospital Saturday. It was agreed that there should be a house-to-house canvass, as well as a street collection, and in order to carry this out efficiently a ladies' committee was appointed. It was thought that the villages round Bristol, which send many cases to the infirmary and hospital, should be included in the sphere of operations. The Hospital Saturday will in all probability be held in June. The Bristol people have of late had their attention called to the urgent need of their two great medical charities for increased support, for in spite of strict economy the committees of the Royal Infirmary and General Hospital have found their expenditure considerably exceed the annual income. Under these circumstances it is desired to make this year's Hospital Saturday productive of substantial results.

Lunacy in Somerset.

The visiting committee of the Somerset and Bath asylum, in their annual report, which was read at the quarterly meeting of the Somerset County Council held on April 7th, stated that the number of patients on the 31st of March, 1896, was 349 males and 522 females. There were 182 persons boarded out, 60 being at the Bristol City Asylum. The total number of patients, including those boarded out, was 1053, an increase of 24 over that on the same date last year. The patients at Wells were considerably in excess of the accommodation. The overcrowded state of the asylum rendered the administration difficult and hindered the medical treatment of the patients. The expenditure on account of the Western Joint Asylum was £81,168. It is hoped that there will be accommodation for 200 patients at the commencement of the new year in the new asylum.

The Jenner Society.

At the meeting of the Gloucestershire Standing Joint Committee held on April 7th the chairman (Sir J. E. Dorington) laid before the committee Dr. Bond's proposal to form a Jenner Society, and said that the only way to check the dissemination of mischievous views which were contrary to all scientific knowledge was by putting the public right, and it was proposed with this object to start a Jenner Society in Gloucestershire which they hoped might spread throughout England and counteract the mischief wrought by the Anti-Vaccination Society. The Lord-Lieutenant (Earl of Ducie) was willing to become president, the Dean of Gloucester chairman of the executive committee, with Mr. Lloyd Baker as honorary treasurer and Dr. Bond as honorary secretary, and he hoped a good start would be made that day and that they would get members in Bristol and Cheltenham and grow to be a great society. Twenty-one gentlemen had already signed as willing to become members. The vice-chairman and several other gentlemen expressed themselves as thoroughly in sympathy with the proposition. The chairman also said that three cases of small-pox had occurred in the county asylum, where there were over 1000 patients and nearly 200 attendants, but the whole of the patients and attendants were at once vaccinated, and the disease was stayed.

The University College of South Wales and Monmouthshire.

The total subscriptions promised up to the present for the

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new building fund of the University College of South Wales and Monmouthshire amounts to over £16,000. This is a most encouraging response to the appeal which was recently made at a public meeting, but as the condition of the Treasury has to be fulfilled by July next there still remains a considerable sum to be collected. Mr. Louis Tylor, the treasurer of University College, confidently anticipates that this sum will be raised. The Treasury has authorised the payment of £10,000 to the building fund, this being half the sum promised by her Majesty's Treasury on condition that £20,000 was collected in South Wales and Monmouthshire.

Death of Mr. David Thomas of Llandovery.

Mr. David Thomas, J.P., M.R.C.S. Eng., L.S.A., died at his residence, Mile End House, Llandovery, Carmarthenshire, on March 31st, in his eighty-second year. Mr. Thomas took the qualification of M.R.C.S. in 1838, and the L.S.A. a year later. Deceased, who was extremely popular in the town, had retired from practice for some years. He had been connected with the Llandovery Corporation for many years, and at one time filled the office of mayor. Mr. Thomas was formerly assistant surgeon to the Royal Carmarthenshire Rifle Volunteers, and was a justice of the peace for the county. The funeral took place on April 4th, at Llandingat Church, Llandovery, amidst general tokens of sorrow and esteem.

April 15th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh Royal Infirmary.

AT a meeting of the managers held this week Mr. John Walcot presented an interim report by the house committee on the state of the fire appliances in the infirmary. In the report it was recommended that the more urgent of the suggestions made by the firemaster should be at once carried out at an estimated cost of £83 and that the infirmary should be connected with the police office by a special telephonic wire. The report was approved.

Bequests by the Earl of Moray.

In allocating the sum of £50,000 bequeathed by the late Earl of Moray to the city of Edinburgh, county charities, and other institutions, his trustees have apportioned the sum of £20,000 to the University Court of the University of Edinburgh as an endowment for the promotion of original research in the University, £3500 to the Sick Children's Hospital, £2500 to the Leith Hospital, £2000 to the Longmore Hospital for Incurables, £1000 to the Chalmers' Hospital, £1000 to the Church of Scotland Deaconess's Hospital, £500 to the Victoria Hospital for Consumption, £500 to the Maternity Hospital, and £100 each to the New Town and Western Dispensaries, the Dental Hospital, and the House of Refuge.

Edinburgh University Graduation Ceremonial.

At the spring graduation ceremonial, which took place on the afternoon of Saturday, April 11th, Principal Sir William Muir, Vice-Chancellor of the University, being in the chair, one of the four gentlemen presented by Professor Sir Ludovic Grant for the honorary degree of LL.D. was Dr. Douglas Argyll Robertson. The address to graduates was delivered by Professor Prothero, who occupies the Chair of History in the University.

Opening of the Royal Observatory, Edinburgh.

The new Royal Observatory on Blackford Hill, Edinburgh, was formally opened on Tuesday, April 7th, for the teaching of astronomy on University lines. Lord Balfour of Burleigh, Secretary for Scotland, performed the ceremony of declaring the Observatory opened. Among those present were the principal and many of the professors of the University, as well as a large number of ladies and representatives of scientific societies throughout the country. The Astronomer-Royal for Scotland, Professor Copeland, read an interesting account of the history of the Observatory, and the architect, Mr. W. W. Robertson, gave an explanation of the reason of some of the architectural arrangements. The observatory is furnished to a large extent by the astronomical instruments and library presented to the nation a few years ago by Lord Crawford.

Deputy Commissionership in Lunacy.

Lord Balfour of Burleigh, Secretary for Scotland, has appointed Dr. Charles Macpherson, Bonar Bridge, to be a Deputy Commissioner in Lunacy for Scotland in place of the late Dr. Lawson. Dr. Macpherson is a graduate of the University of Glasgow and is medical officer to the Sutherlandshire Combination Poor-house.

The Case of Mr. Stocks.

The extraordinary treatment that has been experienced by Mr. G. M. Stocks will require, surely, some public explanation.

Glasgow Royal Infirmary.

Dr. J. W. Allan has been appointed dispensing physician to the Glasgow Royal Infirmary in place of Dr. Auld, resigned. Dr. Allan's promotion leaves a vacancy on the staff of the extra dispensary physicians.

Public Health Scotland Bill, 1896.

The corporation of Glasgow has drawn up a memorial on the subject of this Bill suggesting a number of additions and alterations. It is especially pointed out that many of the provisions of the Local Police Acts go further than those contained in the proposed Bill. The corporation are advised that the powers they thus possess would be interfered with in so far as these were in excess of those granted under the new Bill should it became law. Hence they suggest the insertion of a clause to prevent such interference. In particular it is instanced that the capacity of the authorities to deal with infectious diseases, school attendance and infectious diseases, supervision of dairies, &c., will be lessened unless such a clause is inserted in the Act. With regard to the section of the Act dealing with the inspection of dairies and which authorises such inspection by the medical officer only under an "order of the magistrate, justice, or sheriff," whilst examination of the cows is only to be undertaken if the medical officer is accompanied by "a veterinary inspector or some other properly qualified veterinary surgeon," the memorialists submit that these provisions are a most inopportune decline from the power of inspection already possessed by the Glasgow authorities by which the medical officer or sanitary inspector can at any time enter any byre or cow-shed if the milk obtained therein is being sent for sale within the city. The memorialists also object to the clause making the inspection of the cattle contingent upon the presence of a properly qualified veterinary surgeon. They insist that this is unnecessary as the detection of those conditions in cows which render the consumption of their milk dangerous can be made, and indeed was in the first place made, by medical men; they doubt too whether it would be possible in many counties to find a properly qualified veterinary surgeon to act with the medical officer.

The Health of Dr. T. B. Russell of Glasgow.

Dr. Russell's convalescence has not been quite so rapid as was anticipated, and he has applied to the Health Committee for a month's further leave of absence from his official duties.

The New Infirmary Scheme, Paisley.

The directors of the Paisley Infirmary are now in a position to proceed with the erection of the new infirmary according to the original plans. These plans involved the construction of three pavilions, but the estimates being much in excess of the amount anticipated it was decided to limit the building to two pavilions. The directors have, however, lately received information that the full amount—about £10,000—required for the third pavilion has been raised, and they have therefore decided to proceed with the original scheme. It is understood that the gentleman who has been mainly instrumental in obtaining the sum required is Mr. Peter Coats, himself a handsome subscriber to the scheme as well as the donor of the Nurses' Home.

University of St. Andrews and University College, Dundee.

The relations between the University of St. Andrews and the Dundee College do not improve, and the position appears to become more and more complicated. The Secretary for Scotland, who has been appealed to, feels himself precluded from interfering as long as litigation between the University and the College is going on. There is a party in the University Court determined apparently to keep Dundee outside the academic circle, and in pursuit of this policy an endeavour is to be made to equip St. Andrews with teaching in medical and scientific subjects. Thus, though the Universities' Commissioners have reported against the proposal, it was decided

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at the last meeting of the University Court to establish lectureships in anatomy and materia medica at St. Andrews. The motion was carried by the casting vote of the chairman—the Marquis of Bute.

Montrose Asylum.

At the monthly meeting of the board the report of Dr. Sibbald, Commissioner in Lunacy, was read. It indicated complete satisfaction with the management and arrangements of the asylum.

April 14th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

"The Hospital for Incurables."

UNDER the above title a long series of letters have recently appeared in the daily journals of Dublin in reference to the action of the visiting committee of governors in dismissing two of the inmates for impertinence. The editor of the *Irish Times* is addressed by one who signs herself a "Lady Life Governor," and who complains bitterly of the injustice involved in such a severe punishment for such a comparatively small offence. She is subsequently attacked by one of the governors, a J.P. and town councillor, and accused of hysterical exaggeration, of misplaced sympathy, &c., and described in a rather sneering fashion as an example of the type of lady Poor-law guardian recently enfranchised in Ireland by Parliament. She and the other lady governors of this large and admirably managed institution have, however, found a champion. A moderate and sensible letter has appeared from Judge Kane stating that he, as one of the visiting committee, made a careful investigation into the case of the two women, both of whom had been insubordinate and impertinent to the lady superintendent, and therefore deserved punishment. The learned judge, however, goes on to say that the punishment which was inflicted was in his opinion "harsh, uncalled-for, and utterly disproportioned to the offence." He concludes by paying a high compliment to the lady governors for their special and invaluable services to the hospital. The whole occurrence will afford a lesson to a certain section of the governors of this great charity and perhaps serve to remind them that there are occasions when justice may be suitably tempered with mercy.

The Sale of Food and Drugs Act.

A curious case came before the Recorder of Belfast on April 8th. It was an appeal from the magistrates, who fined a man £3 and costs, or in default a month's imprisonment, in an action brought under Section 6 of the Sale of Food and Drugs Act, with reference to the sale of what is known as linseed cake meal. The meal had been sold to the inspector under the Food and Drugs Act, and when submitted to the public analyst he found it adulterated with 30 per cent. of farinaceous matter. For the defence it was urged that linseed meal and linseed cake meal were different substances, and that linseed meal practically could not be procured in an absolutely pure condition, and that linseed cake meal was not a drug within the meaning of the Food and Drugs Act. In giving his decision the Recorder said linseed meal appeared to be used for two purposes—feeding cattle and for human purposes. If for the former the 56th and 57th Victoria protected the purchaser, because it provided that an invoice should be given. This had not been done in the above case, and hence he must assume that it was not sold for cattle. If this was not done the seller had been guilty of an offence under the Act he mentioned (56th and 57th Victoria). It was used in medical practice, but it appeared that owing to its adulteration the faculty were giving up its use. That prosecution was to put an end to that. It had nothing to do with the selling of linseed cake for the purpose of cattle feeding nor had he (the Recorder) anything to do with that question. The prosecution was for selling linseed cake meal as such, and the opinion of one witness produced by the defendant was that it was not the article for which it was sold. Could anyone have a doubt when it was used for human purposes that it was a drug? He thought the magistrates had acted properly in convicting in that case, and he would confirm their decision, with costs.

Proposed Sewerage Scheme for Portadown.

The town commissioners of Portadown have for some time been anxious to abate a serious nuisance existing in a part of that town, and they adopted a scheme; but as it was proposed by it to empty the sewage into the River Bann, which is contrary to the Rivers' Pollution Act, the Local Government Board refused to advance the money (£1200) necessary to carry out the work. On April 8th, at a meeting of the commissioners, the matter was again very fully considered, when the town clerk read a letter from two civil engineers suggesting three possible solutions of the difficulty. After considerable discussion the board decided to defer its decision for a time, and appointed a sub-committee to confer with the engineers for the purpose of ascertaining whether any better arrangement could be adopted. Portadown is a very difficult place to arrange a sewerage scheme; for it is situated in a very flat district with the River Bann flowing through on its way to Lough Neagh. It is contrary to law to empty sewage into this river, and owing to there being no fall any other satisfactory plan is hard to devise.

The Winter Session, Belfast.

The winter session came to an end this week at both Queen's College and the hospitals. The medical examinations of the Royal University will begin on April 28th and the summer session at Belfast will commence at the beginning of May.

The Coroner and the Sanitary Authorities.

A matter which has never before arisen in Belfast came before the coroner's court on April 13th. It seems that the coroner considered it necessary to hold an inquiry in reference to the death of a child which had resulted from measles—a disease at present epidemic in some districts of Belfast. As the coroner did not want to subject the jury to the necessity of going into the house where the deceased child was lying and possibly carrying the disease to their children and families, and as he did not wish to put the police into the position of touching the body, as they also might convey the disease to their families, he requested the police to ask the sanitary authorities to have the body conveyed to the room specially fitted up in the new morgue for the purpose of depositing bodies of persons who died from infectious disease. The sanitary authorities replied that they had no power to do so, and accordingly the body was not removed. The jury not having seen the body of the child they could not hold an inquest. The coroner adjourned the inquest for a day and sent a formal application to the sanitary authority to have the body removed. The coroner said he was bound to send a report to the Lord Chancellor, and in case the sanitary authority did not carry out this order, and he exercised the same right as a magistrate, he would write to the Local Government Board. The section of the Public Health Act referred to by the coroner (the 158th) contains the following: "Where the body of one who has died of any infectious disease is retained in a room in which persons sleep or live, or any dead body is in such a state as to endanger the health of the inmates of the house or room is retained in such house or room, any justices may, on a certificate signed by a legally qualified medical practitioner, whose fee for giving the certificate shall be one guinea, to be paid by the sanitary authority, order the body to be removed at the cost of the sanitary authority to any mortuary provided by them, and request the same to be buried within a time to be limited in such order." At an adjourned inquest held on April 14th it was reported that the sanitary authorities had removed the body to the morgue. After hearing the evidence the coroner, in summing up, said that at the last meeting of the corporation the Lord Mayor had expressed his dissatisfaction at the high death-rate of the city—30 per 1000. He (the coroner) trusted some steps would be taken to try to reduce this rate. Unfortunately the sanitary authorities of Belfast had not adopted the Notification of Diseases Act, although most of the leading cities in the empire had. Measles was now prevailing in Belfast, and yet no steps had been taken to isolate such cases because the sanitary authority had no power to isolate them. The jury, in their verdict, said that the case clearly proved the necessity for the adoption of the Notification of Diseases Act by the corporation.

April 15th.

ROYAL INSTITUTION.—Dr. Poore is to deliver the Friday evening lecture on April 24th, at 9 P.M., on the Circulation of Organic Matter.

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PARIS.

(FROM OUR OWN CORRESPONDENT.)

The English Language and the Mosoow Congress.

As was to be anticipated, the managers of the forthcoming International Medical Congress have given way on the language question. Communications may therefore be read in French, Russian, German, and English, the first-named remaining the only official language, whatever that may mean. The protests of Dr. Fränkel of Berlin and Dr. Felix Semon of London have likewise borne fruit, and a special section devoted to Laryngology will accordingly be instituted.

Death of Dr. Constantin Paul.

It is not long since the distinguished therapeutist Dr. Dujardin-Beaumetz was removed from our midst, and now another scarcely less renowned authority on therapeutics has joined the majority. Dr. Paul died on Sunday last from albuminuria at the comparatively early age of sixty-three. Appointed *agrégé* of the Paris Faculty in 1866, he became successively physician of the St. Antoine, Lariboisière, and Charité Hospitals, and was elected a Member of the Academy of Medicine in 1880. He took a special interest in diseases of the heart, and in 1883 he published a work that was widely read, entitled "Diagnostic et Traitement des Maladies du Cœur." But general therapeutics were his favourite study. In 1876 he helped to bring out a new edition of the once universally consulted "Traité de Thérapeutique et de Matière Médicale" of Trousseau and Pidoux. His communications on the action of drugs were numerous, no discussion on such a subject at the Academy of Medicine being considered complete without a pronouncement from him. This year he was elected president of the Société de Thérapeutique, and last year in the Fête Nationale (July 14th) the Cross of the Legion of Honour was publicly pinned on his breast in the courtyard of the Hôtel Dieu by the President of the Republic. Dr. Paul leaves one son, a well-known artist.

The Balsam of Peru Treatment of Scabies.

Dr. Jullien and Dr. Descouleurs call attention[1] to the advantages of the above non-sulphurous treatment of itch, their conclusions being based upon 300 cases observed both in private and hospital practice. It is known that the acarus placed on a watch-glass and exposed to sulphur fumes may remain alive for sixteen hours, and that it generally survives over an hour's immersion in flower of sulphur and Helmerich's ointment. Dr. Descouleurs placed six in contact with balsam of Peru and found that in ten minutes two were dead; in twenty minutes three more had succumbed; and the last of the six died soon after. This experiment confirms the conclusions of Burchardt, who, moreover, discovered that the balsam kills the eggs as well. It is probable that the volatile oil—cinnamein—that according to Frémy is the essential constituent of the balsam, kills the acarus at a distance through asphyxia and not through a corrosive action or by disruption, for Hebra has shown that the parasite can live for a week in water at 30° C., and Dr. Descouleurs has witnessed survival for three and a half hours in glycerine. The application of the method is simplicity itself. No soap is required, the balsam being painted on the surface and then gently rubbed into the whole body with the hand. The remedy being volatile penetrates readily into the "runs" without involving the necessity of opening these up. The patient remains thus all night, a warm bath being taken in the morning, when the cure is said to be complete. A repetition of the process, if necessary, produces no irritation of the skin. Inveterate cases that had resisted the classical and rather severe *frotte* at the St. Louis Hospital were all invariably cured by this method, which would seem to be specially indicated when scabies is complicated with impetigo, eczema, ecthyma, and boils, and also in cardiac cases, pregnant women, and feeble subjects with delicate teguments—e.g., babies. The rather agreeable odour of the balsam tells greatly in its favour, especially in private practice. Dr. Feulard stated that he has used it for some time in the form of ointment at the Children's Hospital, where he also successfully employs it against seborrhœic eczema of the scalp and impetigo.

April 14th.

[1] Société Française de Dermatologie et de Syphiligraphie, April 10th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Health of Italy in 1895.

THE Commendatore Bodio, Director-General of Statistics for the Italian Kingdom, has drawn up a singularly clear and instructive memoir on the social condition of Italy in 1895. Beginning with the population, he tells us it increases steadily by an excess of births over deaths equal to 10 per annum for every 1000 inhabitants. The same proportion obtains in England (not in Scotland or in Ireland), in Germany taken as a whole, and in the Scandinavian countries, while in France the population still continues stationary, if, indeed, in some years the deaths have not actually exceeded the births. As to the sanitary condition of the kingdom, Signor Bodio contents himself with signalising the causes of death. Mortality from infective diseases (as, indeed, has been noted in THE LANCET) has for several years been on the wane. From small-pox 16,249 died in 1887, as compared with 2606 in 1894. Typhoid fever, which numbered 27,800 victims in 1887, counted no more than 13,639 in 1894. But, on the other hand, there has been a sensible increase in the deaths from bronchitis, pneumonia, enteritis, nephritis, &c., so that the total mortality is about the same as before. "This means," according to Signor Bodio, "that the poor population which fares badly, if even rudimentary precautions of hygiene are to-day a little less openly defied than before the sanitary service of the communes was enlarged and reorganised, is more severely decimated by the ordinary causes of death, which find their natural prey in organisms enfeebled and ill-provided with resisting power." The demonstration of the improvement attained is most evident in the city of Naples, where good potable water has replaced that of the wells sunk in the subsoil. Here Signor Bodio's figures are sufficiently eloquent. Typhoid fever, which numbered 468 victims in 1881, counted but 173 in 1893. The section on superior or professional education is full of interest. The excess of "avvocati" (barristers), a class which swells the ranks of professional politicians, not to say agitators, and is far too greatly represented in the Legislature, is still an evil to be deplored. The average per annum of "laureati in legge" (graduates in law) is, according to Signor Bodio, 1000, while those who can possibly make a livelihood out of it are about 500. Not only so, but the residual 500 of each previous year has to be counted in till the country literally swarms with "legal unemployed," who take refuge in journalism, platform propagandism, and every sort of political and social movement. Less to be lamented is the over-production of "laureati in medicina," for even if they do not practise they diffuse and raise the standard of that best of all knowledge—that which makes a man "the intelligent custodian of his own health." Still, the profession is greatly overstocked in Italy, with the inevitable result of a not always healthy competition. There are in the kingdom 66 practitioners for every 100,000 inhabitants, while in France the proportion is 40, in Austria 34, and in Prussia 32.

Professor Maragliano's Anti-Tuberculous Therapeutics.

The Ligurian Medical Congress has just been sitting at San Remo, and its most interesting feature has been Professor Maragliano's paper on Tubercolosi Latente e Tubercolosi Larvata (Tuberculosis Latent and Masked). He insisted on what Dr. Edward S. Smith pointed out some fifty years ago on the "pretubercular stage" and elaborately particularised the indications which precede what he described as the "explosion of tuberculosis." It is at this stage that sero-therapy has most chance of success, and therefore its diagnosis, from the point of view of his own therapeutics, is of primary importance. Carefully graduated injections of "tuberculina" he showed to have a special and valuable diagnostic power in determining the existence of the "stage" in question. He was followed by Professor Lucatello, who gave the results of 492 cases of tuberculosis treated on the Maragliano system by Italian practitioners. All these cases were well marked, most of them grave, but after the serum injections as many as 90 per cent. showed diminished pyrexia, arrest of pulmonary lesion, and increased weight of body. These results exceeded the expectations of Professor Maragliano himself. The two memoirs (Maragliano's

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and Lucatello's) will shortly appear in the official "Atti" and cannot fail to interest the profession.

April 11th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Trional.

DR. DRESS has published in the *Medicinische Presse* an article on trional in which he claimed for this remedy advantages not possessed by other hypnotics. On account of its solubility it acts more quickly than sulphonal, and it produces a sleep which lasts from six to eight hours and is seldom followed by unpleasant symptoms. In one case a cumulative effect was observed, the explanation being the bad condition of the patient. Trional has no disadvantageous influence on the disintegration of albumin in the organism, thereby differing from chloral hydrate, which affects both the heart and bloodvessels. According to Dr. Dress the dose should not exceed 2 grammes (= 31 grains). Sleep of eight hours' duration may be obtained in all cases where wakefulness is due to pain, but in neurasthenic sleeplessness a dose of 1 gramme (= 15½ grains) is sufficient. Trional must not be taken dry, but always with about 100 c.c. (= 3½ fluid ounces) of warm liquid, and the patient may drink mineral waters in order to increase the alkalinity of his blood. Dr. Dress has employed trional in 30 cases, including 19 adults and 11 children. In the adults the sleeplessness was due in one case to neurasthenia, in 2 to hysteria, in 1 to phlegmon of the hand, in 3 to arthritis, in 3 to lumbago, in 1 to prurigo, in 1 to neuralgia of the fifth nerve, in 1 to the results of a burn, in 2 to intercostal neuralgia, in 1 to carcinoma of the womb, and in 3 to pulmonary phthisis. Among the children it was due to otitis in 3 cases, to meningitis in 1 case, to night-terrors in 2 cases, to chorea in 1 case, to enteritis in 2 cases, to pneumonia in 1 case, and to furuncle of the ear in 1 case. For the adults the dose varied from 1 gramme (= 15½ grains) to 1·5 grammes (= about 23 grains), and for children from 0·2 gramme (= about 3 grains) to 0·8 gramme (= 12 grains). In 28 cases sleep occurred after twenty minutes, but in 2 cases—those of phlegmon and enteritis—it came on only after three hours, and the patients complained of giddiness, tinnitus aurium, and nausea. In these instances the drug had not been taken in the manner directed.

"*Pseudo-hemisystolis.*"

At a meeting of the Medical Society of Prague Dr. Hering described the case of a female patient who had been admitted to the hospital with insufficiency and stenosis of the mitral valves and insufficiency of the tricuspid valves. The apex beat was in the sixth intercostal space, the radial pulse was frequent, irregular in rhythm and intensity, and very small. There was also pulsation of the jugular and subclavian veins and of both saphenous veins, the venous pulse alternating with the arterial. Dr. Hering has named this state "pseudo-hemisystolis." Though the occurrence of this condition has not hitherto been satisfactorily ascertained, it may nevertheless be supposed that under pathological circumstances the contraction of both ventricles does not take place at the same time. The temporary decrease of the volume of the pulse may be due to both the acceleration of the heart's action and to the trifling quantity of blood in the arteries, whereas the venous pulse is produced by the fact that owing to the insufficiency of the tricuspid valves a quantity of blood is driven back into the auricle during each systole of the right ventricle, and thus a wave is produced in the venous trunks.

Female Medical Practitioners.

The Minister for Public Instruction has just issued a decree relative to the recognition of diplomas obtained by women from foreign universities. In order to be admitted to practice in Austria the female candidate must be an Austrian citizen and must be at least twenty-four years of age. She must also have passed the full examination (Reifezeugnis) of an Austrian gymnasium and must have attended a five years' course in a medical school, the requirements of which are equal to those prevailing in Austrian universities. In every case the professors of the university to which the candidate will be admitted have to decide the question of her admission and the result is to be reported to the Ministry. If admitted the candidate is required to pass all the examinations with the exception of those in zoology, botany, and mineralogy.

Death of Professor Josef Spaeth.

Professor Spaeth, the celebrated Vienna obstetrician, died on March 29th in the seventy-third year of his age and about ten years after he had retired from academical life. He was born at Bozen, in the Tyrol, in 1823, was appointed assistant at the School of Midwifery in the Josef Academy in 1855, was promoted to the ordinary professorship in 1856, and in 1873 became chief of the obstetrical clinic, where he remained until 1886. From the long list of his scientific works I need quote only his "Clinical Gynæcology and Midwifery," "Outlines of Gynæcology," and "Text-book of Obstetrics for Midwives." In 1872 he was elected rector of the university. Professor Spaeth was not only an excellent teacher, but also a benevolent man, who practically exemplified his principles by bequeathing his entire fortune to the Society of Sick Students. The funeral was attended by a great many leading medical men, and his pupil, Professor Schanta, eulogised the merits of the deceased.

The Salaries of Medical Teachers.

According to a Bill which has just been submitted to Parliament the Government intends to augment the salaries of the professors. Hitherto there have been three scales—namely, £180 a year for the professors in Vienna, £166 for those in Prague, and £155 for those in other towns, the professor also receiving fees for his lectures. In Austria lectures are delivered five times a week and the fees are fixed at 10*s.* 6*d.* a half-year. Teachers have now the choice between the above salaries with the fees for lectures and the augmented salary, with gratuitous lectures, which has been fixed at £266, £300, and £333. "Extraordinary" teachers will be paid £133 and the *privat-docents* will be unpaid as hitherto.

April 12th.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

The Moultan Murder and the Votiaks.

No medico-legal case of recent years in Russia has given rise to so much discussion and to so many and such diverse expressions of opinion as the trial and sentence of seven Votiaks for what is generally spoken of as the Moultan murder. Although the events which led to the trial occurred four years ago the matter is still as hotly discussed as though they had happened yesterday, in this respect resembling an equally notorious case at home. The intemperate expressions of opinion over the sentence on Mrs. Maybrick (a sentence passed nearly six years ago, and yet even now the subject of controversy in England and of interpellations in the American Senate) find their exact analogue in the articles and letters to the press which attempt to re-try the convicted Votiaks sentenced for the Moultan murder. The facts of that murder may be briefly stated. On May 6th (18th), 1892, the dead body of a Russian peasant was found in a marshy spot near the village of Moultan, in the government of Viatka (in European Russia). The head had been cut off from the body and was not found; several dorsal vertebræ had been removed so as to enlarge the opening into the thorax, and through this opening all the thoracic viscera had been extracted. There was some evidence to show that the victim had been suspended head downwards before life was extinct, in order to collect the blood flowing from an opening made into the abdominal veins. These circumstances led the authorities to conclude that the murder had been committed with a religious object, and that the blood and viscera had been thus obtained for the purposes of some rite of the nature of a sacrifice to heathen deities. Seven men, mostly but not all Votiaks, were tried and sentenced to varying terms of imprisonment. The case was tried a second time on appeal, but without affecting the result, and the convicted, or those which survive (for some are stated to have died since the trial), are now working out their sentence. The case is one of the highest medico-legal interest, but it would be impossible here to even mention the countless points which have led to discussion and to the formation of most opposite opinions even by experts. These points may be roughly classified as medico-legal and ethnological or anthropological. In the last number of the *Vratch* Professor Bellin sets out at

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full length the medico-legal points, and comes to the conclusion that the necropsy was made so long (one month) after the murder that even the cause of death could not be ascertained, and his opinion is that the murder was an ordinary one and that the removal of the head and viscera was accomplished some days after death with the object of throwing suspicion on the Votiaks, who have frequently been charged with offering human sacrifices. The ethnological evidence on this last point is equally conflicting. M. Korolenko, a well-known writer, recently read a paper on this subject at a meeting of the Anthropological Society in the Academy of Medicine. He came to exactly the same conclusion, and further stated that no charge of human sacrifice had ever been substantiated against the Votiaks. On the other hand, a M. Poplavski, in an article in a lay paper, quotes several instances occurring in the last two decades where the evidence of human sacrifice was certainly very strong, if not conclusive, and mentions people now living who could corroborate his statements. Altogether the question is not unlike that of the charges of murder of Christian children brought against the Jews in the middle ages, and even now revived occasionally in some highly anti-Semitic corners of the Continent. Unfortunately no miraculous *alma redemptoris* broke from the dead lips of the murdered Russian peasant at Moultan to set at rest for ever the secret of his fate. It would be idle to speculate on the nature of that secret. In the presence of conflicting statements on both sides, and in the absence of the detailed evidence, which, however, twice satisfied the Russian courts of justice as to the guilt of the accused, it is impossible to form an unbiased opinion.

The Russian Ambulance Corps for Abyssinia.

The ambulance corps organised by the Russian Red Cross Society to proceed to Abyssinia in aid of the sick and wounded Abyssinians left St. Petersburg last week. A large crowd collected at the station and loudly cheered the expedition as the train started. Telegrams from Odessa announce the safe arrival there of the corps, and before these words appear in print it will be well on its way to Port Said, whither it is being conveyed on board the volunteer steamer *Rossia*. The expedition consists of ten medical men, six *feldschers*, twenty sisters of mercy, three agents, and one priest, and it is well supplied with provisions sufficient for three or four months. The Italians have consented to allow the expedition to pass through their African territory. Next week a similar but smaller corps is to be sent by the same society to Naples to aid in nursing the invalided Italians.

April 13th.

PHILADELPHIA.

(FROM OUR OWN CORRESPONDENT.)

The University of Pennsylvania.

THE medical faculty of the University of Pennsylvania recently submitted a recommendation to the board of trustees of the University to the effect that, beginning with the year 1896, the entrance requirements of the medical department be increased, and, further, that they should be increased annually thereafter until 1899, by which time they will have become the same as those required by the department of arts. It is also proposed to make the tuition fee $200 instead of $150 per annum. The Harvard Medical Faculty have recently adopted a rule, to become operative in June, 1901, making it necessary for candidates to the medical department to have a degree in arts, science, literature, philosophy, or medicine from a recognised college or scientific school. An effort is being made to establish a fellowship in anatomy in the University of Pennsylvania as a memorial to the late Dr. Joseph Leidy.

Jefferson Medical College.

Dr. George Dock of Ann Arbor, Mich., having declined the chair of Pathology and Bacteriology in the Jefferson Medical College, it was tendered to, and accepted by, Dr. W. M. L. Coplin, a former demonstrator in the institution, but recently Professor of Pathology in the Vanderbilt University, Tennessee.

"Emotion Products."

The Biblical expression, "Though your sins be as scarlet," would seem to have some foundation in fact if we believe the claims made by Dr. Gates, who says that the various human emotions and passions, good and bad, result in the formation of definite secretions. These, circulating in the blood, act upon the brain and thus cause vice or virtue. He believes that they are excreted with the perspiration, in which they can be shown by chemical tests. He says he had isolated forty "emotion products." Vice and virtue give rise respectively to poisonous or beneficial products, "but the worst of all these secretions is that of guilt." Dr. Gates states that if some of the perspiration of a person "suffering from conscious guilt" be mixed in a test tube with a few drops of selenic acid a pink colour will result.

The New Photography.

Interest in the "x" rays seems unabated, judging from the frequent reference made thereto by the daily papers and the periodicals. Several enterprising tradesmen of this city have the apparatus at work in their shop windows, and popular lectures on the subject are being given for the benefit of churches and other institutions. Some very excellent work has been done by Mr. Goodspeed and Dr. Cattell, however. Dr. Dalley and Dr. Egbert have been experimenting with a view to finding whether or not the "x" rays exist in sunlight. They used an ordinary photographer's printing frame, in which was fitted a sheet of aluminium $\frac{1}{17}$th of an inch in thickness. Under this was placed a positive plate or lantern slide, and next a sensitive unexposed plate. The frame was then backed with lead foil and tightly closed. It was then exposed to sunlight for two hours. A fair negative was obtained, although slightly over exposed. The positive plate was next replaced by a negative one and the time of exposure reduced to one hour. A better picture than the first was obtained, but it was found that the best results were yielded by an exposure of twelve minutes. Other experiments were made in which the aluminium was replaced by cardboard, vulcanite, and black paper, giving fairly good results in each case. These experiments would seem to indicate the need of care in the making of plate holders.

Obituary.

GEORGE F. STAINTHORPE, M.R.C.S. ENG., L.R.C.P. EDIN.

THE death of Mr. Stainthorpe of Newcastle at his residence, Benwell Old Lodge, at the age of seventy-four, will be much regretted by a large circle of friends, private and professional. This highly respected member of the medical profession was a Hexham man by birth, and obtained the diploma of the Royal College of Surgeons of England in 1854. He was chosen as a lecturer to the old Newcastle School of Medicine, and in 1859 became L.R.C.P. Edin. He commenced practice in the western part of Newcastle, and as that end of the town developed his practice became proportionally large and important. He was a kind and capable medical attendant, with whom many of his patients formed bonds of permanent attachment, while a certain reserve of manner was noticeable in him only when dealing with strangers. Some ten years ago he removed from the neighbourhood of the Cattle-market to Eldon-square, and two years later he decided to retire. He was attended during a lingering illness by Dr. Thomas Stainthorpe of Hexham, his brother, and Mr. Richard Ellis of Rye-hill.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The death of the following eminent medical man is announced:—Dr. L. Didelot, *Professeur Agrégé* of Physics in the Medical Faculty of Lyons.

LITERARY INTELLIGENCE.—A new and cheaper edition of "Home Nursing and How to Help in Cases of Accident," by Samuel Benton, L.R.C.P., M.R.C.S., &c., will be published next week by Messrs. Abbott, Jones and Co.—The Rebman Publishing Company, Limited, 11, Adam-street, Strand, have in the press for publication a serial work exemplifying the uses of the new photography in medical and surgical diagnosis, entitled "Archives of Clinical Skiagraphy," by Sydney Rowland.

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THE

INTERCOLONIAL MEDICAL CONGRESS OF AUSTRALASIA, 1896.

FOURTH SESSION.

(FROM OUR SPECIAL CORRESPONDENT.)

THE fourth session of the Intercolonial Medical Congress of Australasia commenced at Dunedin, New Zealand, on Monday, Feb. 3rd, and closed on Monday, Feb. 10th.

Never in the history of medicine in New Zealand has so great a gathering of its followers taken place as that which the week following on Monday, Feb. 3rd, witnessed in Dunedin, the chief city of the South Island of the colony of New Zealand, and it speaks well for the spirit that animates our profession that men should flock from all parts of Australasia to interchange ideas, and to make the acquaintance of those whose names stand foremost in the ranks of medical science in those colonies.

The true keynote of the aims of these great medical congresses was struck by Dr. Batchelor, the President, in his opening address,[1] when he said that medical science is bound up closely with our own common humanity and that the people gladly acknowledge the benefits that it is daily conferring upon them. As showing the interest which the Government of New Zealand have taken in the Congress, it is worthy of note that that body has kindly promised to pay half the cost of publishing the transactions of the Congress.

It is impossible to estimate duly the labour entailed on the executive committee in the arrangements for the successful carrying out of the programme, which included also the social as well as the scientific objects of the meeting. The Congress met for the first time in New Zealand, so that we are not well experienced in Congresses, and the capacity of the authorities with regard to organisation was tested to the uttermost with a brilliant result. Dunedin may well be proud of the pleasant if arduous duty that she has had to perform, and it must be a great satisfaction to those who have devoted so much pains to secure the success of the Congress to know that it cannot but bear good fruit.

On the invitation of his Worship the Mayor of Dunedin (Mr. Wales) the members of the Congress partook of luncheon in the Choral Hall on the opening day, Monday, Feb. 3rd. The Mayor occupied the chair and was supported by his Excellency the Governor on his right and on his left by the President of the Congress, the Hon. Richard Seddon (Premier of New Zealand), the Hon. Mr. Grace, the Hon. the Colonial Treasurer, and many distinguished Dunedin citizens. In replying to the toast of the "Medical Profession" Dr. Batchelor heartily welcomed the visitors to Dunedin and emphasised the value of meetings of this nature.

One is vastly impressed with the value of these intercolonial congresses to all who thus gather together. Medical men are not as a rule apt to possess narrow conceptions of life and its duties, but even they are sometimes insular and parochial in their views and need occasionally to see other countries and rub shoulders with their professional brethren elsewhere. Our Australian *confrères* are to be congratulated on coming so far to assist us by their presence at the Congress. When they return home and tell their less fortunate stay-at-home brothers in Australia of the lovely scenery they witnessed in the lake district and the grandeur of the scene round about Mount Cook it will add to the misfortune of those who were not able to attend the Congress.

After the first morning the weather was glorious in the extreme. The air was keen and bracing, while the brightness of the sky and the clearness of the air which invested Dunedin during the Congress week was a marked contrast to the "heat wave" which drove so many away from Australia during this summer.

The whole business and pleasure of the gathering has been administered throughout with a cordial good fellowship truly representative of that spirit of hospitality which happily characterises all colonial peoples. The meeting took place in a city famed all over Australasia for its unbounded hospitality. Right well have the present citizens of Dunedin maintained their reputation in this respect, vieing as they did with one another in making social gathering after social gathering a series of huge successes.

GENERAL MEETING.

On Monday morning, Feb. 3rd, during a heavy downpour of rain, which gave way shortly after noon to truly lovely weather, the Fourth Intercolonial Medical Congress of Australasia began to assemble for the purpose of the enrolment of members in the Otago University Library. The members subsequently adjourned to the theatre associated with the University, where a general meeting of the Congress was held, about ninety members being present. The lecture-room presented an imposing sight as the members of the Congress rose to greet with acclamation the entry of Dr. Batchelor, the President, and Professor Scott and Dr. Barnett, the general secretaries.

The PRESIDENT thanked the members very kindly for the warm reception they had accorded to him. It was not his intention, he said, to make any lengthened remarks at that stage, but he felt it would be hardly gracious on his part to take the chair without attempting to express his heartfelt gratitude at the great honour which had been conferred upon him in his election to the important position of President. One felt grateful for honour of any kind, but those honours which came from his professional brethren were, he always thought, the very highest which could be conferred upon a professional man; and they had conferred on him the very highest honour the profession in Australasia could confer on one of their colleagues when they elected him to that important office. Certain deputies had been appointed by the various Governments. Mr. Springthorpe specially represented Victoria; Dr. Love, Victoria; Dr. Sprott, Tasmania; and Mr. James and Dr. Brown, New Zealand. There had also been a gentleman appointed by the Government of Western Australia, but his name had not yet been received.

Report of Executive Committee.

The report of the executive committee was then read and adopted. There were now on the roll of the congress more than three hundred members.

Dental Section.

The PRESIDENT mooted the desirability of adding a dental section to the congress and after some discussion it was decided "that the question of the establishment of a dental section be transmitted to the executive committee of the next congress with power to take action in the matter."

Contagious Disease Act.

Professor SCOTT (Dunedin) laid on the table a memorial from the Women's Christian Temperance Union of Victoria on the subject of the Contagious Diseases Act. After some discussion it was decided "that the memorial be referred to the public health section."

The Hon. Mr. GRACE (Wellington) placed on the table a number of important documents relating to the subject which had been forwarded to him from England—chiefly reports of parliamentary commissions and results of investigations.

An Intercolonial Medical Journal.

Dr. BARNETT (Dunedin) brought up the question of establishing an intercolonial medical journal. They had a small

[1] Published in THE LANCET, April 4th, 1896.

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quarterly journal of their own and they knew also of the Australian Medical Gazette, the Australian Medical Journal, and the Intercolonial Medical Quarterly, but they were anxious to have one strong representative magazine for the whole of the colonies.

Mr. SYME (Melbourne) was also strongly of opinion that it was highly desirable that they should have in Australasia one strong united journal.

After considerable discussion it was decided by forty-two to twenty-six votes "that the Executive Committee of next session be invited to give special attention to this matter."

THE INAUGURAL CEREMONY.

The inaugural ceremony in connexion with the Congress was held in the Choral Hall in the evening and proved a brilliant success. Nearly all the members of Congress were present and a very large number of distinguished ladies and gentlemen from all parts of the colony; in fact, the hall was so packed that there was scarcely standing room left.

His Excellency the Governor, Lord GLASGOW, was received with great enthusiasm and declared the Congress open. In the course of his remarks he said: I believe that you are, nearly all of you, aware that this is one of a series of Congresses which have been held during the last few years in Australasia. The first was held in Adelaide in the year 1887, the second in Melbourne in 1889 (the year of the great exhibition there), the third was held in Sydney in the year 1892, and this is the fourth of the series. I may point out that Dunedin is a town of 40,000 inhabitants, whereas Melbourne is a town of nearly 500,000 inhabitants and Sydney of 450,000. On behalf of New Zealand I may perhaps be allowed to say that it gives us great pleasure to think that so many medical men have come over and have paid this visit to our lakes, because we feel sure that when they return to their country they will say there is no place where it is more delightful to spend a hot summer than in the lake country of New Zealand. I think the medical profession of Australasia are to be congratulated upon having formed this corporation, if I may use the expression, and of having undertaken to meet together in this series of congresses as they have been doing for the last few years. This nineteenth century is a century which is remarkable for many things: I think among other things it is remarkable for being a century of congresses. On every possible subject people meet together to talk it over, and there can be no possible doubt that in all scientific bodies it is of the utmost use that the members should meet together and talk over the subjects in which they are interested. We all know that this is the case with the Royal Society at home, and with the different associations connected with science, and we are to be congratulated on the fact that the great medical bodies in these colonies are not behindhand in taking an interest in their work, but have met in the same way as they do at home for the purpose of talking over the work in which they are engaged. I think it is hardly necessary for me to assure the members of the Medical Congress of the interest which the public of New Zealand take in their work. I do not think there are many medical men in the world who are fitted to do their work if they are not the friends of those among whom they practise. You are all centres of groups of friends, and it is through your friendship with them that you are able to do your work efficiently. It is because in this colony, as in the others, we are well acquainted with the usefulness of the work you are here to do and the way in which you do it that we heartily show our interest in the work you have assembled to do, and wish you Godspeed in it. I now beg, Mr. President, to declare this Congress, the Intercolonial Medical Congress of Australasia, open, and to wish it Godspeed in its work.

The Premier of New Zealand (the Hon. RICHARD SEDDON) then welcomed the visitors to New Zealand, and the President read the inaugural address on the Present and Prospective Conditions of Medical Education, which was published in THE LANCET of April 4th.

THE SECTIONS.

The work of the sections began on Tuesday, Feb. 4th.

MEDICINE.

PRESIDENT'S ADDRESS.

Mr. HAYWARD read the presidential address, prepared by Dr. A. A. Lendon of Melbourne who was unable to come to the Congress. The author of the paper invited attention to the question as to the share which the general practitioner takes in the advancement of medicine, as contrasted with the work effected by those who devote themselves to some special branch of their art. What has the general practitioner achieved in the past, and what might he be expected to accomplish in the future? It was a matter of general belief that most, if not all, the advances of medical science emanate from those who are working in the more populous centres, and in a great measure that belief was justified; but general practitioners were not, and ought not, to be merely middlemen engaged in retailing the benefits discovered by those who have greater opportunities for carrying on investigations in the ward or in the laboratory; that they have independent functions and ample opportunities for exercising them in everyday practice; and that they might—nay, ought—to assist in defining the principles and in improving the practice of medicine. The best answer to the first part of the question propounded immediately presented itself, the year 1896 being the centenary of a very great event—the introduction of vaccination by Edward Jenner. "Jenner was attracted to the study of this question by a tradition which was prevalent amongst the dairymaids. When he was an apprentice a young countrywoman's statement that she could not acquire small-pox as she had already had cow-pox riveted his attention. Jenner mentioned this notion to Hunter who publicly alluded to it in his lectures and encouraged his pupil to investigate its truth when he returned to the country. Jenner set to work and collected several cases of persons who, having had cow-pox by accidental inoculation, were found to be insusceptible of inoculation with small-pox virus. He next studied the disease of the cow and he came to the conclusion, since generally thought to be erroneous, that the cow-pox arose from a disease of the horse known as the 'grease,' and he further concluded that this disease had to be transmitted to human beings through the cow, otherwise it had not the protective virtue, for men who contracted sores on the fingers from attending to horses with greasy heels were easily inoculated with small-pox; these sores were therefore probably ordinary septic processes. Jenner ascertained further that milkers might have cow-pox more than once. The chief objection raised by those to whom Jenner first announced his opinion was that occasionally instances of small-pox occurred after accidental inoculation with cow-pox, so that the rule could not be absolute; moreover, those who had had small-pox were not exempt from taking cow-pox. Thus foiled Jenner set to work again and demonstrated that all the sores met with on the udder of the cow were not true cow-pox, and, further, that it was only in a certain stage of the development of the vesicle that the true virus of cow-pox could be communicated so as to be protective against small-pox. Milkers were liable to contract sores on their fingers which were not true cow-pox. In 1796 the climax was reached. A girl named Sarah Nelmes contracted cow-pox on her hand, and on May 14th Jenner inserted some of the matter taken from the vesicle into two superficial incisions on the arms of a boy named James Phipps. Six weeks later matter from a small-pox pustule was inserted into the boy's arms but he was found to be proof against inoculation." Had Jenner lived in the nineteenth century his services to humanity would perhaps have earned him rewards and titles. But it could scarcely be said that his discovery was not appreciated. The only danger to his reputation lies in the fact that this generation does not really know what small-pox meant a century ago and hence parents, moved by their infants' tears, were easily persuaded that "they did not hold with" vaccination and that it engendered all sorts of diseases in after life, as though skin eruptions and delicate health were unknown before the days of Jenner. Nothing had been added to Jenner's great discovery and nothing had been found to detract from it. The work Jenner did was essentially work of observation such as any general practitioner might carry out, and if its value were estimated by the saving of life it probably had higher merit than the enunciation of the antiseptic theory or the discovery of anæsthesia. What as to the future? What work was there for the general practitioner to do in the twentieth century to advance the science of medicine? The achievements of the past must be the augury for the future. The work that it was possible for him to do was boundless; it may not like Jenner's mean the saving of countless lives, but it will add to our common stock of knowledge. Could we suppose, for instance, that we had yet perfected the

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methods of physical examination of the chest? Could we flatter ourselves that we were approaching the solution of the difficult problems of brain physiology and pathology? Could we assert that our methods of treatment of phthisis were strikingly successful? It would probably be, as of yore, in the class of chronic or of hereditary diseases, or of those ailments which do not require hospital treatment, that the general practitioner would find his richest harvest. One reason why the general practitioner is not doing so much to advance medicine in the present day, the address went on to say, was to be found in the voluminous literature—book and periodical, monograph and annual digest—with which he is supplied like so much peptonised mental food. "It prevents his thinking out problems for himself. He becomes too reverent for authorities and can scarcely believe the evidence of his senses if it conflict with what the books say. The authorities are not infallible and medical knowledge is transitional; the theory hazarded yesterday is accepted as truth to-day and may be disproved to-morrow. Let us question all authority—I do not say disregard it—as far as we are able and doubt all the more the statement that is most dogmatic. Then shall we, the general practitioners, having shaken off the trammels of tradition and authority, be more likely to do our share in the advancement of medicine as Jenner did his one hundred years ago."

Mr. Hayward (Adelaide) was subsequently elected chairman in this Section in the unavoidable absence of Dr. Lendon.

SURGERY.

PRESIDENT'S ADDRESS.

There was a general muster of members in the chemistry lecture room, the President, Dr. BATCHELOR, being in the chair, when

Mr. O'HARA, F.R.C.S.I., senior honorary surgeon of the Alfred Hospital, Melbourne, read his presidential address. He expressed regret that it should have been found necessary to divide medicine and surgery into separate sections. "The two sciences are so closely allied that I feel each section must be losing much valuable teaching in many subjects of common interest. There are in these days of over-specialism certain specialities which can stand alone, as, for example, that of the oculist; but the general surgeon must be a physician, and I hold that to gain eminence as a surgeon one must possess in a high degree the diagnostic powers which are so generally associated with the physician. Any address on contemporary surgery would be incomplete without reference to the loss sustained through the death of Pasteur. He undoubtedly first established the germ theory of putrefaction, and Sir Joseph Lister put it into practical use and introduced to the world the antiseptic treatment of wounds. Having had a large experience in operating under various atmospheric conditions, I have come to the conclusion that where sepsis occurs in a wound it has in most cases been introduced by the operator's hand or by the materials employed during the operation. The most prominent feature in the treatment of disease of late years has been the introduction of sero-therapy, and the most successful results up to date have been achieved with diphtheria. In 1890 Behring of Berlin published his discovery that the serum of immunised animals had a specific action on the diphtheria bacillus. To obtain a sufficient supply of the serum different animals were experimented on, and it was finally decided that the horse was most suitable. It was found to resist without suffering immense doses of the diphtheria poison, and a large supply of the serum could be obtained by simply tapping the jugular vein, a painless proceeding in the case of the horse. The published results of such authorities as Ehrlich, Kossel, Wassermann, Roux, Washbourn, Goodall, and Card in Europe are sufficiently satisfactory to induce us to use the serum in every case. It may not be a specific in all cases, but it has given the most remarkable results in the most hopeless cases and reduced the mortality to less than one-half of that recorded before its introduction. So absolutely hopeless is a case of inoperable cancer that any remedy suggested will be gladly welcomed and will not lack the benefits of a fair trial. That a malignant tumour has disappeared after an attack of erysipelas is an established fact. In my own practice I have had such an experience. The patient, aged fifty years, had a well-marked scirrhus of the right breast, with involvement of the axillary glands. I removed the breast and cleared out the axilla. In two years' time the patient consulted me for a small recurrence in the axillary scar, the greater portion of which I was able to remove. Some of the deeper parts were so intimately mixed up with the artery and vein that I had to leave them. Two days after operation she developed an attack of acute cellulitis, which extended down the arm to the hand. It was necessary to make free incisions into the arm and back of the hand and convalescence was slow. However, it is now six years since the last operation and she is in perfect health with no sign of recurrence. Fehleisen has had a similar experience with a case inoculated with pure cultures of the streptococcus erysipelatis. Bruns and Coley have seen improvements follow an attack of erysipelas and state that the results were more satisfactory in sarcoma than carcinoma. Coley also stated that the factitious erysipelas has not been attended with such good results as the accidental. In treating a case of inoperable recurrent carcinoma four years ago I was astonished to find that a strong solution of ichthyol seemed to arrest the growth. The patient's health improved, and the pain, which was constant and severe, gradually diminished. I determined to push the ichthyol and injected one drachm of a 10 per cent. solution into the margin of the growth daily. The improvement was most marked and when she left my care to return to England she had increased in weight, felt well, and the ulcerated surface had healed considerably at its edges and was only one-third the size it had been two months previously and all disagreeable odour had completely disappeared. I was not able to trace the patient subsequently and cannot, therefore, say what the ultimate result was. I have now under my care a woman whose breast I removed three and a half years ago for a scirrhus that had arrived at the stage of surface ulceration. The axilla appeared to be free at the time, and, her strength failing, I did not remove the glands, as is my custom. A year afterwards the glands became affected and there was marked œdema of the arm. I then cleared out the axilla and prescribed ichthyol internally. She gained flesh and improved rapidly in her general health. A small recurrence took place in the scar subsequently, which was removed, and in spite of all this operative interference she is now in better health than she was four years ago—now there is no sign of disease and she is still taking an ichthyol pill three times daily. I could quote many other cases of inoperable carcinoma where decided improvement took place after the administration of ichthyol, but I cannot claim to have absolutely cured one case, and I only bring it before you as a useful adjunct in the treatment of inoperable cancer. In sarcoma the results have been negative. If the parasitic theory of cancer expounded by Professor Foa at the Medical Congress in Rome proves to be correct we are then within reasonable distance of finding some remedy for it." After alluding to intestinal surgery Dr. O'Hara continued: "I take this opportunity to allude to the strictures passed by Sir W. Priestley on the tendency to over-operate in gynæcology. There is no doubt that along with the great improvements in the methods of operating in this specialty there has been a large increase in the number of operations performed. At the same time I think that, as the majority of gynæcologists are honourable men, outbursts of this kind can serve no useful purpose and only tend to bring unmerited opprobrium on the profession at large—a result which, I am sure, no one would regret more than Sir W. Priestley himself."

In this Section Mr. H. A. de Lautour led off with a paper on a Simple Apparatus for the Treatment of Dislocation of the Acromial End of the Clavicle.

In the Sub-section of Surgery devoted to diseases of the eye, ear, and throat Dr. JACKSON (of Melbourne) presided. A discussion took place on the Test for Vision in Sailors and Railway Men. A committee was appointed to draw up a report.

ANATOMY.

PRESIDENT'S ADDRESS.

Dr. WATSON, Professor of Anatomy in the University of Adelaide, delivered the following presidential address:—

"Allow me in the first place to return you my very cordial thanks for electing me president of this very important section. Any honour conferred by one's professional brethren I, in common with gentlemen occupying similar positions, appreciate very highly. It is not my intention at this late hour to occupy your time longer than is absolutely necessary. At this time of the year

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the mind of the hard-worked professional man naturally turns to thoughts of rest and relaxation. I may add that the gathering together of so many professional brethren from all parts of Australasia in this hospitable and scientific focus of the most interesting country on the face of the globe must, apart from its scientific aims, tend to promote that social intercourse and brotherly love which should exist amongst the members of a learned profession such as ours. Our section, although low down on the list, includes those subjects upon which the basis of all scientific medicine must naturally rest. The whole fabric of clinical skill stands on a foundation of anatomy, physiology and pathology and pharmacology requiring for their comprehension a prior knowledge of the subsidiary sciences of physics, chemistry, and biology. The most profound knowledge of the above subjects as pure sciences does not by itself qualify a man for the conscientious practice of his profession. The teacher who only deals with anatomy as a pure science often fails to attach due value to those points which are important in the practice of medicine and surgery. Such a teacher attaches a high value to pure sciences as a means of cultivating the power of observation and stimulating and exercising the reflecting and reasoning faculties. We have heard the same thing said of dead languages, &c., so prone to create hopeless, helpless exasperation in otherwise intellectual individuals not possessing a congenital bias towards their study. It goes without saying that, without ample practical experience, pure scientists cannot be satisfactory healers of the sick. As well might one expect a man to erect fortifications and build bridges who, although he had gone through a course of mathematics and made himself familiar with trigonometry and the calculus, had not practised in the workshops. It cannot be denied that our profession has undertaken the charge and patronage of a body of knowledge only part of which has an application in practice. We do not study anatomy and physiology merely for the sake of pathology, or pathology merely for the sake of cure. For example, physiology of the brain has been studied with a large amount of success in order to explain the ordinary operations of our mind. In fact, it might be said that psychology and the studies depending upon it are at present waiting on physiological investigation; and physiology is a pure science apart entirely from its application in medicine. And the same is true in pathology, which is an indispensable handmaid to physiology. If we were to require our students to study only so much physiology and pathology as are required for the recognition of the diseases they will be called on to treat what would become of the studies of physiology and pathology themselves? The main thing in purely professional education is that the practitioner shall have a scientific interest in his work. This serves a double purpose, because, in addition to being the best guarantee for conscientious treatment, the interest in one's work becomes permanent because it is a scientific interest. This is too often overlooked. There is nothing we want so much as to have an abiding interest in our ordinary work, and it is only a scientific interest which can prevent it from becoming monotonous and stale. Everyone ought to know that the good medical man has not only to possess the requisite knowledge but to have an effective interest in his cases; and what interest can be so good for his patient as a scientific interest? The accompanying sympathetic interest is not acquired; it is cognate and instinctive rather than taught, and I hope we all have it without any training. What the medical man wants to know are the cause and the course of the disease. What does that mean but as intimate a knowledge as we can have of the normal and abnormal growth of tissues! A mere recognition of symptoms and a book of prescriptions added to a pleasant manner may make a student a financially successful practitioner, because unfortunately the general public cannot understand what more is required. But from an educational point of view a medical man who confines himself to that is simply a legalised quack. What he ought to know is cause, and effect, not signs and symptoms alone. The signs and symptoms are effects, and he ought to know their cause: only then is his occupation a profession, and not a mere money-making investment of his life; only then does the patient have the best that we can do for him, both in point of knowledge and of interest in his case. At present the medical profession in every civilised country has undertaken the patronage of anatomy and physiology, and their patronage consists in requiring our students to study them. All professions which can claim to be learned professions are patrons of a learning which is not merely useful for money-getting, but the value of which is as knowledge—mere knowledge; and what knowledge is of greater value than the knowledge of ourselves?"

[Our correspondent expresses his indebtedness to the *Otago Daily Times* for the reports of the presidential addresses in the various sections.]

(To be continued.)

Medical News.

UNIVERSITY OF EDINBURGH.—The following is the official list of candidates who have just completed the first professional examination for the degrees of M.B. and C.M.:—

Violet G. S. Adams, T. H. W. Alexander, Eliza M. Anderson, A. J. Baird, S. A. Ballantyne, J. W. Barrack, J. A. Black, G. H. Boyden, L. P. Brassey, George Brogden, Launcelot Bruce, Adam Brydon, Malcolm Campbell, Riley Carr, W. J. Collinson, John Craig, T. Ashton Davies, Horace B. Dodds, J. P. Douglas, D. R. Evans, Edward Ewart (with distinction), A. Binny Flett, A. S. Frank, William Girdwood, J. L. Green, Robert Hamilton, Herbert Harris, A. E. Henton, Katie W. Hogg, Edith J. Hudson, John Jamison, Joseph Johnstone, Langworthy Laurie, R. G. Leach, E. A. Loch, Gerard Lowther, C. B. M'Conagy, Bessie G. Macdonald, John M. Macdonald, A. F. Mackay, T. A. Mackenzie, H. J. M'Lean, A. G. M'Leod, R. A. M. Macleod, James Macpherson, L. W. Macpherson, A. A. Martin, Harry Mason, E. T. Melhuish, Mary J. Menzies, M. C. Morgan, Janet A. S. Mouat, A. C. Neethling, Horace C. Nixon, C. F. Noble, L. D. Parsons, Winifred J. Pierce, S. C. Pritchard, William Purves, F. G. Ralston, T. E. Richards, Catherine M. Richardson, David Robertson, G. H. W. Robertson, R. A. Ross (with distinction), Richard Rutherford, H. D. Shepherd, F. D. Simpson, C. R. Smith, C. E. Southon, Bernard Stracey, Esther M. Stuart, F. T. Thompson, G. R. Turner, Charles Vartan, D. L. Wall, William Wallace, C. Heron Watson, P. D. Whiriskey, W. G. Williams, M. Ruth Wilson, T. J. G. Wilson, and Frank Young.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. O. Hildebrand has been promoted to an Extraordinary Professorship of Surgery. Dr. Oestreich has been recognised as *privat-docent* in General and Anatomical Pathology.—*Greifswald:* Dr. Otto Schirmer has been promoted to the Chair of Ophthalmology in succession to the late Dr. Rud. Schirmer.—*Cracow:* Dr. Klecki has been recognised as *privat-docent* in General and Experimental Pathology.—*Halle:* Dr. R. Wollenberg has been promoted to an Extraordinary Professorship of Psychiatrics.

DIPHTHERIA MORTALITY IN LONDON IN 1895.—Diphtheria showed a smaller fatal prevalence in London last year than in 1894, though still in excess of the average for the decennial period 1885–94. There were 2316 deaths from this cause in the metropolis in 1895, but there were 3265 in 1893, and 2670 in 1894. Thus the decrease, substantial as it was in 1895 over the preceding year, compared still more favourably with the total of two years back. The rate of mortality from diphtheria in 1895, variously stated in the annual summary of the Registrar-General as 0·52 and 0·53 per 1000 persons living, contrasts with the decennial average rate of 0·38. The mortality in 1895 was by no means uniform over the several groups of sanitary districts, as we find that, taking 0·52 as the rate for London as a whole, the groups run thus:—Northern, 0·40; central, 0·42; western, 0·48; southern, 0·51; and eastern, 0·81. In London in 1895 the increase over the decennial average has been at the rate of 37 per cent., but in the northern group it has only been 8, and in the central group 17, the other groups showing—in the western, 33; in the southern, 42; and in the eastern group as much as 69 per cent. increase. Or reading the data in another fashion, we find that if London be regarded, in so far as the rate of mortality in 1895 is concerned, as represented by 100 then the various groups had mortality rates severally of 77 in the northern, 81 in the central, 92 in the western, 98 in the southern, and 156 in the eastern group. Both as regards increase over the decennial average and as regards relation to the total mortality ratio in 1895 the southern and eastern (especially the latter) show to great disadvantage. It is in reality the excessive rate in the eastern group which raises the London rate to its present position. The notified cases in the year 1895 numbered for the whole metropolis 11,426, and on this total the 2316 deaths work out to a case mortality of 20·3, but this total of notifications includes some duplicate notifications of single cases, though these are trivial in number as

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compared with the aggregate of attacks. The hospital cases in London last year were 3688, or just 3 fewer than in the preceding year; but the number of fatal cases among them was much less—namely, 824, or 22·3 per cent. of the admissions, as compared with 1041 deaths, or 28·2 per cent. of the admissions in 1894. Whether the decline be put down to the use of serum or be explained in some other way it is a pleasing feature in the hospital records. In actual figures the decrease in deaths from diphtheria in London in 1895, as compared with the previous year, was 611; whilst if croup be added to the diphtheria deaths the total of fatalities reached 2460—a number only 376 fewer than in 1894, and 299 in excess of the decennial average.

WE are informed that the Peninsular and Oriental Company have recently entered into contracts for four mail steamers of the highest class, similar in type to, but larger than, the *Caledonia*, *Australia*, and *Himalaya*, now running in the Eastern services, which will accommodate about 500 first and second-class saloon passengers. These vessels are each 500 feet in length, with proportionate beam and power, measuring about 8000 tons register, with machinery to indicate 11,000 horse-power. They are being built by Messrs. Harland and Wolff and Messrs. Caird and Co., and the first two ships, which have been named the *India* (which was launched on Wednesday last) and the *China* (to be launched on June 13th), will be ready for service during the coming autumn.

BRISTOL HOSPITAL FOR CHILDREN AND WOMEN.—The thirtieth annual meeting of the subscribers of the Bristol Hospital for Children and Women was held on March 21st, the Mayor presiding. From the report it appeared that during 1895 there had been 855 children and 31 women admitted as in-patients, and 1237 women and 3096 children were treated as out-patients. The committee regretted that in consequence of ill-health Dr. Roué had been obliged to resign his appointment as one of the acting staff. The ordinary revenue of the hospital has not been sufficient to meet the expenditure by £150, so that, including the small balance to the debit with which the year commenced, the treasurer's account shows an adverse balance of £189 16*s.* 8*d.*

THE DIFFUSION OF SMALL-POX.—In Gloucester the intensity of the disease has been maintained, the record total of 210 cases in the week ending April 4th giving way to the total in the week ending last Saturday. But the daily notifications reached their maximum on Friday of last week, when there were 48 attacks brought to the knowledge of the Town Council. Next day the cases fell to 26, on the Sunday they fell further to 14, and on Monday of the current week only 13 fresh attacks were chronicled. It is to be hoped that this favourable decline may be continued, while the immense number of recent vaccinations will exert a beneficial effect on the progress of the epidemic. The rush to the public vaccination stations has not abated, the vaccination of some half of the citizens has been effected. The remaining half are not all unprotected, as a large proportion of the adult population have the benefit of infantile vaccination. In the fortnight ended on Saturday last there were no fewer than 4414 persons vaccinated by the public vaccinators, and the guardians have made a complete change of front, and have by their latest procedures hit the anti-vaccination party very hard indeed. There were 5 cases of small-pox in the Cheltenham Hospital at the close of the first week of April. At Bristol 11 cases of small-pox came to the knowledge of the health officer in the two weeks ended April 9th, 6 being connected with a previous case at Barton Regis. Two were so slight as to be difficult of diagnosis, and it took thirteen hours' search to find one patient in the city, this instance being illustrative of the dangers attending mild and unrecognised attacks. At Exeter ten days ago there were 13 cases in hospital, coming from St. Thomas, Heavitree, and elsewhere; and a resolution of the guardians to enforce the Vaccination Acts, which have for so many years been a dead letter there, was recently carried by a majority of 12 votes to 4. At Coventry the determination of the guardians to enforce vaccination has led the anti-vaccinationists to a resolve to stay if possible the carrying out of the guardians' intention. Cases of small-pox are reported at many places in the Forest of Dean—namely, 2 at Alvington, 4 at Steam Mills, 2 at Bollow, 2 at Whitcroft in Weston, and 1 each at Dinny and Cinderford Meend. The Westbury guardians, presumably acting as rural district council, have appointed an additional inspector and have contracted for an iron hospital. Three cases of small-pox have been brought into Swansea docks by the sailing vessel *Harland*, and all were conveyed to hospital. At Heywood the small-pox patients are progressing, but it is estimated that there are 1000 unvaccinated children in the town. At West Hartlepool one of the crew of the *Harland* has sickened of small-pox, as has also a young lady recently from Gloucester. There are many manifestations of the spread of small-pox by tramps in the vicinity of Gloucester and gradual widening of this influence is to be expected.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—A quarterly court of the directors of this society was held on April 8th at 11, Chandos-street, W., Mr. Christopher Heath, vice-president, being in the chair. The deaths of two widows were reported, one having been in receipt of grants since May, 1860, and having received £1798, her husband subscribing thirty-six guineas. Fresh applications for grants were read from four widows and four orphans, and a sum of £80 10*s.* was given among them. Applications for further assistance were made from forty-eight widows and seven orphans, and a sum of £1141 10*s.* was recommended to be distributed at the July court. Four members were elected and the deaths of four announced. A further sum of £215 had been received from the executors of Miss Carpue, making in all £3215 paid. The following gentlemen were nominated for election as directors at the annual general meeting, to fill the vacancies caused by the death of Mr. Rouse and the retirement of the six seniors—viz., Mr. W. H. Bennett, Dr. Wilks, Dr. Frederick Roberts, Dr. Sylvester, Mr. Malcolm Morris, Mr. Fountaine, and Mr. Butlin. The annual general meeting was fixed to be held on May 20th, at 5 P.M.

THE LOCAL GOVERNMENT BOARD AND WORKHOUSE NURSES.—On Wednesday last Mr. Chaplin received a deputation at the House of Commons from the Workhouse Infirmary Nursing Association to discuss the question of the inadequate number of nurses employed in workhouse infirmaries, and necessary alterations in their status. The deputation was introduced by Lord Montagu of Beaulieu, who stated that the association was founded in 1879 in order to supply boards of guardians with competent and duly-trained nurses. Over 700 nurses had been appointed, and of these 135 were now at work. The present state of nursing in the majority of workhouse infirmaries was capable of improvement; it was desirable to promote the employment of paid and efficiently trained nurses in all such places; and the appointment of a hospital-trained lady superintendent to be at the head of each staff of trained nurses was essential to the efficiency of the system. The President of the Local Government Board said he would carefully consider the complaint that in so many infirmaries the nursing staff was still insufficient. The question of want of accommodation was a difficult one. As to pauper assistants, the Local Government Board had again and again discouraged their employment.

PRESENTATIONS TO MEDICAL MEN.—Mr. J. Lacy Firth was presented, at the Bristol General Hospital on the 19th ult., by the resident medical officers, students, and nursing staff, with a handsome writing table as a mark of their esteem upon his retirement from the post of resident medical officer, he having been appointed assistant surgeon to that institution.—Dr. J. S. Riddell, lecturer to the Police and Railway Ambulance Class, Aberdeen, in connexion with the St. John Ambulance Association, has been presented by the members of the class with a handsomely mounted microscope.—Mr. James Cantlie, who has been in practice for the past nine years at Hong Kong, has left on account of ill-health to return to England. Prior to his departure from that city he was presented with several addresses from public bodies, signed by representative members of the community, and was also the recipient of a handsome tea and coffee service.—On the 8th inst., Dr. W. B. Mackay of Berwick-on-Tweed, on the occasion of presenting the certificates awarded to the ambulance classes under the auspices of the St. John Ambulance Association to the members of the North-Eastern Railway servants, was the recipient of three volumes of medical works.—Dr. J. Johnston of Bolton, has been presented by the members of the ambulance class connected with the Mawdsley-street Evening Continuation

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School with a handsome ebony silver-mounted walking-stick and a pocket-book.—Dr. J. Hilton Thompson of Bolton, at a meeting in the St. Luke's School, on Saturday last, to present the certificates and medallions to the successful members of the ambulance class, was the recipient of a handsome breakfast service and a set of jugs.

FOOTBALL CASUALTY.—On the 14th inst, at Nelson, in a Lancashire League match between the Nelson and Southport Central teams, the Nelson's outside left forward fractured his right leg below the knee.

A GENEROUS GIFT.—Some time ago the directors of the Paisley Infirmary issued an appeal for subscriptions. Mr. Peter Coats, of the Ferguslie Thread Works, has promised a donation of £10,000. Mr. Coats previously subscribed £5000, and is stated to be also building a nurses' home at a cost of about £10,000.

FRENCH HOSPITAL AND DISPENSARY. — The twenty-eighth anniversary banquet on behalf of the funds of this institution is announced to take place at the Whitehall Rooms of the Hôtel Métropole on Saturday, April 25th, his Excellency the French Ambassador (Baron de Courcel) in the chair, supported by the Lord Mayor of London. Tickets (£1 1s.) may be obtained from the hon. secretary, French Hospital, Shaftesbury-avenue, W.C.

Parliamentary Intelligence.

CURRENT NOTES.

Venereal Disease in the Army.

MR. JAMES STUART has given notice that he will endeavour to find an opportunity to call attention to the state of the army in India and elsewhere as regards venereal disease and to move a resolution on the subject. In the present state of Parliamentary business there is little prospect of Mr. Stuart finding the opportunity he desires.

Shops (Early Closing) Bill.

Several Members not satisfied with the consideration given to this Bill by the Grand Committee on Trade have notified that it is their intention to move that the measure be now dealt with in Committee of the whole House.

Nursing in Workhouse Infirmaries.

On the afternoon of Wednesday, April 15th, in his room at the House of Commons, Mr. Chaplin, President of the Local Government Board, received a deputation from the Workhouse Infirmary Nursing Association. The object of the deputation was to ask the right hon. gentleman to take steps to secure the appointment of only trained nurses to workhouse infirmaries, to define the position of the trained nurse in relation to the untrained matron and the master of the workhouse, and to abolish pauper help in nursing duties. Lord Montagu, in introducing the deputation, explained to Mr. Chaplin that the Association was founded in 1879 in order to supply boards of guardians with competent and thoroughly trained nurses; that during the sixteen years over 900 applications have been received from boards of guardians, and over 900 nurses have been appointed; 135 of these being now at work. Mr. Frederick Feeney, a guardian of the poor of Cheltenham, addressed Mr. Chaplin with special reference to the unsatisfactory state of the nursing arrangements in rural districts. Miss L. Twining dwelt on the importance of separating infirmaries from workhouses, and Dr. Dolan of St. Luke's Hospital, Halifax, expressed the views of the association with regard to the position of the trained nurse.—Mr. Chaplin in his reply spoke in complimentary terms of the work of the association, and recommended it to the support of the public. He assured the deputation that the Local Government Board were fully alive to the defects in the present system of nursing in these institutions. They had already done something to remedy them although he confessed that much remains to be done, and he promised to give most careful attention to the views put forward by the deputation.

The London Water Question.

At this sitting there was a short debate upon the supply of water in the East-end of London. It arose in connexion with a Bill whose main purpose was to increase the statutory pressure required of the East London Water Company; but in view of certain circumstances connected with the promotion of the measure, the second reading was not pressed, and in the end the Bill was withdrawn.

Grants to University Colleges.

Mr. Balfour, replying to a question by Mr. Carvell Williams as to whether the Parliamentary grant to King's College would not only be restored but considerably increased, said that no increase was proposed in the Estimates this session. The Chancellor of the Exchequer, in accordance with an undertaking given by him to a deputation which waited upon him, had appointed three gentlemen—Mr. T. H. Warren, President of Magdalen College, Oxford; Professor D. G. Liveing, Fellow of St. John's College, Cambridge; and Mr. Chalmers of the Treasury—to visit the Colleges sharing in the grant made to Universities and Colleges in Great Britain and to investigate the character and quality of the University work done and to inquire generally into the position which such College occupied both financially and in other respects. When their report was received, which the Chancellor of the Exchequer expected would be some time in the autumn, he would be in a position to judge whether a case had been made out for recommending Parliament to increase the sum to each of the Colleges sharing in the grant.

HOUSE OF COMMONS.

THURSDAY, APRIL 9TH.

University of London.

Sir Albert Rollit questioned the Government again with regard to their intentions in the matter of the report of the Gresham Commission, but Sir John Gorst could give no further information than to say that the subject is still under consideration.

FRIDAY, APRIL 10TH.

The Ventilation of the House.

When the House was in Committee of Supply and considering a vote of £23,900 for work on the buildings of the Houses of Parliament Dr. Farquharson raised the question of the ventilation of the House of Commons, and asked the Government for information as to what had been done. Mr. Akers-Douglas, First Commissioner of Works, in his reply said that while better ventilation might be required in other portions of the building, so far as the legislative chamber was concerned it was certainly one of the best-ventilated rooms that could be found anywhere. He could bear witness to the very great care which was taken by the officials in charge of the ventilating department. He had taken a personal interest in the matter since his appointment as First Commissioner, and had made a point of constantly visiting the ventilating rooms, and hon. Members who had accompanied him had been greatly struck with the enormous staff and the appliances which were provided in order to secure the comfort of Members of the House. He had, in accordance with a promise made when the Estimates were under discussion last year, gone carefully into the subject, and he thought he had met the different complaints and remedied the various grievances which were then urged. Ventilating shafts had been placed in the Victoria Tower and improvements had been carried out in the kitchen and smoking rooms and other parts of the building.

Portsmouth Quarantine Stations.

Two sessions ago exception was taken to the money annually spent on the maintenance of the two quarantine stations near Portsmouth for the treatment of plague and yellow fever, and this session the Government brought in a Bill to abolish the charge and hand over the stations to the port sanitary authorities for the purposes of the latter. The Bill was brought up at this sitting of the House, and after being explained by Mr. T. W. Russell was read a second time.

MONDAY, APRIL 13TH.

Inquests on Railway Accidents.

Mr. Channing asked the President of the Board of Trade whether he could state what was the number of inquests held on railway servants killed in the discharge of their duties during the year 1895; at how many of such inquests the Board of Trade was represented by an inspecting officer, a sub-inspector, or other representative; and in how many instances the coroner applied for an official of the Board of Trade to attend as an assessor, in pursuance of Section 8 of the Regulation of Railways Act of 1871.—Mr. Ritchie replied: Two hundred and seventy-six coroners' returns were received by the Board of Trade in 1895. In no case did the coroner apply for an assessor in pursuance of the Act, but in three cases coroners asked for technical assistance, and in two cases such assistance was given, in one by an inspecting officer and in the other by a sub-inspector. In the third case the coroner asked for scientific evidence, and this the Board of Trade were unable to give.

Lead Poisoning.

Mr. John Wilson (Falkirk) asked the Secretary of State for the Home Department if he would order an inquiry into the conditions of the enamel industry with a view to dispense with the use of lead, so that the large percentage of deaths through lead poisoning might be averted.—Sir Matthew White Ridley said in reply: The hon. Member will no doubt remember that the various lead industries formed the subject of an exhaustive inquiry by a departmental committee three years ago, as a result of which stringent special rules have been established for factories where lead is used in plate enamelling. Considerable difficulty, however, is experienced in getting the workpeople to obey the rules, nor am I satisfied that they might not be amended. I propose, therefore, to have a further inquiry made.

Ill-treatment of Children.

Mr. MacAleese asked the Secretary of State for the Home Department whether he had seen the report of the National Society for the Prevention of Cruelty to Children, wherein it was stated that there were investigated last month 1965 complaints of neglect, starvation, ill-treatment, and other wrongs upon children, that 1837 of those complaints were found to be true, and affected the welfare of a large number of children of various ages, and that eighteen of the children so affected died; and would the Government consider the propriety of making more stringent the laws in existence for the protection of helpless children?—Sir Matthew White Ridley replied that his attention had not been previously called to the report referred to. The Prevention of Cruelty to Children Act of 1894, which consolidated and extended previous legislation on the subject, was passed after much discussion in Parliament, and he had not as yet seen any reason to suppose that it was ineffective for its purpose. No representations to

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the effect that the law required strengthening had been made to the Home Office by magistrates or others concerned in its administration, but should any such representations be received they would, of course, be carefully considered by him.

TUESDAY, APRIL 14TH.

The Small pox Epidemic at Gloucester.

Mr. Ascroft asked the Secretary to the Treasury, as representing the Postmaster-General, if any means were being taken by the postal authorities at Gloucester to disinfect the letters and papers deposited in the pillar boxes which were situated in the infected areas; and whether he would cause inquiries to be made as to the same and give such instructions as he may be advised were necessary to prevent the spreading of the small-pox epidemic to other parts of the kingdom?—Mr. Hanbury replied: Instructions have been given for the use of disinfectants at the Gloucester Post-office with the view of reducing as far as practicable the risks of infection during the prevailing epidemic.

BOOKS, ETC., RECEIVED.

ADLARD AND SON, Bartholomew Close, London, E.C.

King's College Hospital Reports; being the Annual Report of King's College Hospital, and the Medical Department of King's College. Vol II. (Oct. 1st, 1894—Sept. 30th, 1895). 1896.

BAILLIERE, TINDALL, AND COX, King William-street, Strand, W.C.

A Guide to the Practical Examination of Urine. By James Tyson, M.D. Ninth Edition. Illustrated. 1896. Price 7s. 6d.

CONSTABLE, A., AND CO., Westminster.

The Volunteers and the National Defence. By Spenser Wilkinson. 1896.

CHURCHILL, J. & A., 7, Great Marlborough-street, London.

St. Thomas's Hospital Reports. New Series. Edited by Dr. T. D. Acland and Mr. Bernard Pitts. Vol. XXIII. 1896.

The Pharmacopœia of the Evelina Hospital for Sick Children, Southwark. Second Edition. 1896. Price 1s. 6d.

DEIGHTON, BELL AND CO., Cambridge.

Cholera in Indian Cantonments, and How to Deal with it. By E. H. Hankin, M.A. 1895. Price 2s. 6d.

DORMAN, WM. J., Philadelphia.

Transactions of the American Surgical Association. Vol. 13. Edited by De Forest Willard, Ph.D., M.D. 1895.

Transactions of the American Gynæcological Society. Vol. 20, for the year 1895.

FANNIN AND CO., Dublin.

Transactions of the Royal Academy of Medicine in Ireland. Vol. 13. Edited by Wm. Thomson, M.A., F.R.C.S. 1895.

FERET AND FILS, Bordeaux.

Faculté de Médecine de Bordeaux, Travaux de la Clinique de Dermatologie du Dr. W. Dubreuilh. 1895.

FISCHER, GUSTAV, Jena.

Die Otogene Pyämie. Von Dr. H. Hessler. 1896.

Grundriss einer Klinischen Pathologie des Blutes, für Ärzte und Studirende. Von Dr. Rud. R. v. Limbeck. Zweite Auflage. Mit einem Beitrage die Gerinnung des Blutes, von Dr. E. Freund. 1896.

Ueber die Flimmercysten der Zungenwurzel und die drüsigen anhänge des Ductus thyreoglossus. Von Dr. M. B. Schmidt. 1896.

Beiträge zur Gallenblasenchirurgie. Von Dr. Georg B. Schmidt. 1896.

Die Krankheiten des Gehirns und seiner Adnexa im Gefolge von Naseneiterungen. Von Dr. R. Dreyfuss. 1896.

KEGAN PAUL, TRENCH, TRUBNER, AND CO., Charing-cross-road, London, W.C.

Water Analysis. By J. A. Wanklyn and E. T. Chapman. Tenth edition. 1896. Price 6s.

Domestic Sanitary Drainage and Plumbing. By W. R. Maguire. Second Edition. 1896. Price 12s.

LEA BROTHERS AND CO., Philadelphia.

The Toxic Amblyopias: their Classification, History, Symptoms, Pathology, and Treatment. By G. E. de Schweinitz, A.M., M.D. Illustrated. 1896.

LEWIS, H. K., Gower-street, London, W.C.

Current from the Main: the Medical Employment of Electric Lighting Currents. By W. S. Hedley, M.D. 1896. Price 2s. 6d.

Rough Notes on Remedies. By W. Murray, M.D. Lond. 1896. Price 3s. 6d.

Public Health Laboratory Work. By H. R. Kenwood, M.B., D.P.H. Second edition, illustrated. 1896. Price 10s. 6d.

MACLEHOSE, JAMES, AND SONS, Glasgow.

Memorials of the Faculty of Physicians and Surgeons of Glasgow, 1599-1850. By Alexander Duncan, B.A. Lond. 1896.

MACMILLAN AND CO., Bedford-street, London, W.C.

Atlas of Nerve Cells. By M. Allen Starr, M.D., Ph.D., and others. Illustrated. 1896. Price 42s. net.

NUTT, D., Strand, London.

Ein Mittelenglisches Medizinbuch. Von Fritz Heinrich. 1896.

PENTLAND, YOUNG J., Edinburgh.

Atlas of the Diseases of the Skin. By H. Radcliffe Crocker, M.D., F.R.C.P. Fasciculus 15.

Published by the NEW YORK COUNTY MEDICAL ASSOCIATION, State of New York.

Register of Members, Manual of Information. 1895.

Published by the SMITHSONIAN INSTITUTION, City of Washington.

Smithsonian Contributions to Knowledge. 989. Hodgkins Fund. The Composition of Expired Air and its Effects upon Animal Life. By J. S. Billings and others.

SAUNDERS, W. B., Walnut-street, Philadelphia.

Diets for Infants and Children in Health and Disease. By Louis Starr, M.D. 1896.

SMITH, ELDER, AND CO., Waterloo-place, London, S.W.

The Treatment of Phthisis. By A. Ransome, M.D. Cantab., F.R.S. 1896. Price 7s. 6d.

Saint Bartholomew's Hospital Reports. Edited by S. West, M.D., and W. J. Walsham, F.R.C.S. Vol. 31. 1895.

ST. BRIDES' PRESS, Bride-lane, Fleet-street, London, E.C.

The Sewerage Engineer's Note-book. By Albert Wollheim, Assoc. M. Inst. C.E., reprint. 1896. Price 2s. 6d. net.

THE F. A. DAVIS COMPANY, Philadelphia.

Diagnosis and Treatment of Diseases of the Rectum, Anus, and Contiguous Textures. By S. G. Gant, M.D. With chapters on "Cancer" and "Colotomy." By Herbert W. Allingham, F.R.C.S. Eng. Illustrated. 1896.

THE JOHNS HOPKINS PRESS, Baltimore.

Physiological Papers. By H. Newell Martin. 1895.

WHITTINGHAM, W. B., AND CO., Gracechurch-street, London.

Argon and Newton: A Realisation. By Lieutenant-Colonel W. Sedgwick. 1896.

Fruit and Gardens for the People; by the Hon. Dudley Campbell (Burnett and Russell, Strand, London, W.C., 1896).—Archives de Pharmacodynamie; par E. Gley, Paris, and J. F. Heymans, Gand; Vol. II., Fascicules 3 and 4 (H. Engelcke, Gaud, et O. Doin, Paris, 1896).—The Journal of Mental Science, April, 1896 (J. & A. Churchill, London); price 5s.—The Chalybeate Bath, Haarlem; by C. E. Daniels, M.D., Amsterdam (published by the Company for the Exploitation of Chalybeate Springs at Haarlem).—Archives de Physiologie, No. 2, 1896 (Masson et Cie, Paris).—Atlas der Pathologischen Anatomie; von Dr. O. Bollinger; II. Heft, 1896 (J. F. Lehmann, München).—Diphtheritis und Cellulartherapie; von Dr. F. Neumayer (J. F. Lehmann, München, 1896).—Der geborene Verbrecher: eine Kritische; von Dr. E. Bleuler (J. F. Lehmann, München, 1896).—Die Asepsis in der Landpraxis; von Dr. H. Doerfler (J. F. Lehmann, München, 1893).—Ueber die Untersuchung, Beurteilung und Behandlung von Unfallkranken; von Dr. A. Strümpell (J. F. Lehmann, München, 1896).—Von Sudthausen's Guide for the Use of Doctors and Apothecaries: English-German (H. Besold (A. Georgi), Leipzig).—Von Sudthausen's Sprachführer für die ärztliche und pharmaceutische Praxis: Deutsch-Englisch (H. Besold, Leipzig).—Transactions of the American Pediatric Society; Seventh Session; Vol VII.; reprint from the Archives of Pediatrics; 1895.—Queen's College, Galway: Calendar for 1895-96 (Ponsonby and Weldrick, Dublin, 1896).—A Contribution to South African Materia Medica, chiefly from Plants in Use among the Natives; by Andrew Smith of St. Cyrus, M.A.; Third Edition (J. C. Juta and Co., Cape Town, Port Elizabeth and Johannesburg); price 3s., postage 4d.—Ueber die Behandlung von Nervenkranken und die Errichtung von Nervenheilstätten; von Dr. P. J. Mobius, Leipzig (Williams and Norgate, Henrietta-street, Covent-garden, London, W.C.)—The British Gynæcological Journal; Part 44, February, 1896 (John Bale and Sons, Great Titchfield-street, Oxford-street, London, W.); price 3s. 6d.—Magazines, &c., for April: Strand Magazine, Strand Musical Magazine, Boys' Own Paper, Girls' Own Paper; Leisure Hour, Sunday at Home, The Minster, Ludgate Magazine, Chapman's Magazine, Pall Mall Magazine, Westminster Review, Contemporary Review, Friendly Greetings, The Gymnast and Athletic Review.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ANDREWS, H. A., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the Grimsby and District Hospital.

BENNETT, C. H. W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Congleton Rural District Council.

BERLYN, J. A., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Medical Officer to the Birmingham and Midland Free Hospital for Sick Children.

BIRD, J. W., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Junior Assistant House Surgeon to Hull Royal Infirmary.

BURDWOOD, J. W., L.F.P.S., L.M. Glasg., has been reappointed Medical Officer by the Bourne Rural District Council.

CALDICOTT, C. H., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Surgical Officer to the Birmingham and Midland Free Hospital for Sick Children.

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CLAYTON, J. H., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Extra Acting Surgeon to the Birmingham and Midland Free Hospital for Sick Children.

DE BUTTS, Stanley B., M.D. Brux., M.R.C.S., has been appointed anæsthetist to the Grosvenor Hospital for Women and Children, Westminster.

FRASER, W. D., M.B., C.M. Edin., has been reappointed Medical Officer of Health by the Colwyn Bay Urban District Council.

GOODING, M. R., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health by the Bideford Town Council.

HANNAH, WILLIAM TWEED, M.B., C.M. Glasg., D.P.H. Camb., has been appointed Medical Officer and Public Vaccinator for the Buxton District, Chapel-en-le-Frith Union.

HASWELL, J. F., M.B., C.M. Edin., M.R.C.S., has been reappointed Medical Officer by the Penrith Rural District Council.

HEALEY, J., M.B., Ch.B. Vict., has been appointed Medical Officer of Health, Moseley, Lancs.

HOFFMEISTER, W., M.D. Heidelb., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health, East Cowes.

KENNY, M. E., M.B., B.Ch. Dubl., has been appointed Medical Officer for the Carrick-on-Suir Union Infirmary, vice A. O'Ryan, resigned.

LAMBERT, P., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer for the Third Sanitary District of the Newbury Union.

LITTLE, E. G. GRAHAM, B.A., M.D., M.R.C.P., has been appointed Assistant Curator of the Museum at St. George's Hospital.

MACDONALD, WILLIAM, L.R.C.P., L.R.C.S. Edin., has been appointed Junior House Surgeon to the Royal Albert Edward Infirmary, Wigan.

MAW, H. S., L.S.A. Lond., has been appointed House Surgeon to the Teignmouth Hospital.

MILROY, W. CUNNINGHAM, M.A., M.D. Edin., has been appointed Senior House Surgeon to the Royal Albert Edward Infirmary, Wigan.

MORISON, J., M.D. Edin., M.R.C.S., D.P.H. Camb., has been reappointed Medical Officer of Health by the St. Albans Rural District Council.

POLLOCK, E. S., M.B., B.Ch. Dubl., has been appointed Medical Officer for the Sixth Sanitary District of the South Molton Union.

PRATT, A. A., M.B., C.M. Glasg., has been appointed Honorary Medical Officer to the Grimsby and District Hospital.

REEKS, HENRY, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Medical Officer to the Steyning Union.

REID, GEORGE A., M.B., C.M. Aberd., has been appointed Junior Assistant Medical Officer to the Cumberland and Westmoreland Co. Asylum at Carlisle.

RIDING, E., M.R.C.S., has been reappointed Medical Officer of Health for Repton.

SAVAGE, GEORGE H., M.D. Lond., has been appointed Physician for Mental Diseases, Guy's Hospital.

SCURFIELD, HAROLD, M.D., C.M. Edin., D.P.H. Camb., has been appointed Medical Officer of Health for Sunderland.

SNOW, L. M., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Second Sanitary District of the Horsham Union, vice Kirsopp, resigned.

STONEY, P. B., L.R.C.P., L.M. Edin., M.R.C.S., has been reappointed Medical Officer of Health by the Millom Urban District Council.

TURNER, C. B., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Medical Officer to the Grimsby and District Hospital.

WALCOT, THOS., M.D., C.M. Edin., M.R.C.S., has been appointed Medical Officer of Health by the York Town and Camberley Urban District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Two Clinical Assistants, for three months, on payment of £5 5s.

HALIFAX INFIRMARY AND DISPENSARY.—Assistant House Surgeon, unmarried. Salary £50 per annum, with residence, board, and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, W.C.—House Physician, for six months, unmarried. Salary £20, with board and residence in the hospital.

HUDDERSFIELD INFIRMARY.—Junior House Surgeon for one year. Salary £40 per annum, with board, lodging, and washing.

LEICESTER INFIRMARY.—Honorary Ophthalmic Surgeon.

MACCLESFIELD GENERAL INFIRMARY.—Junior House Surgeon. Salary £70 per annum, with board and residence in the institution.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Resident Medical Officer and Assistant Resident Medical Officer. Each appointment for six months. Salary for senior post at the rate of £50 per annum.

OWENS COLLEGE, Manchester.—A Senior and a Junior Demonstrator in Physiology.

OWENS COLLEGE, Manchester.—Junior Demonstrator in Anatomy.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—Assistant House Surgeon for six months. Board and residence provided, and an honorarium of £10.

SUNDERLAND BOROUGH ASYLUM, Ryhope, Sunderland.—Resident Clinical Clerk, for six months. Board and lodging provided, with a nominal salary.

WESTMINSTER HOSPITAL, Broad Sanctuary, S.W.—Surgical Registrar for twelve months. Salary £40 per annum.

WEST RIDING OF YORKSHIRE.—Medical Officer of Health for the Riding. Salary £800 per annum, with travelling expenses, and a suitable staff and laboratory and office provided. Applications to Mr. T. Edwards, West Riding Solicitor, Wakefield.

WREXHAM INFIRMARY AND DISPENSARY.—House Surgeon. Salary £80 per annum, with furnished rooms, board, gas, coal, and attendance.

Births, Marriages, and Deaths.

BIRTHS.

ATKIN.—On April 10th, at Fern Bank, Sheffield, the wife of Charles Atkin, F.R.C.S. Eng., of a son.

BERNAU.—On April 6th, at Napier, New Zealand, the wife of Henry F. Bernau, M.R.C.S., L.R.C.P., of a son.

BOXALL.—On April 12th, at Rudgwick, Sussex, the wife of Frank Boxall, M.R.C.S., L.R.C.P., of a son.

COOK.—On April 14th, at Stewarton, Ayrshire, the wife (née Puckle) of James Cook, M.B., C.M. Glasg., of a son.

EDWARDS.—On April 12th, at Brunswick-square, W.C., the wife of Robert Edwards, M.D., of a son.

FOLKER.—On April 7th, at Havelock-place, Hanley, Staffordshire, the wife of Herbert H. Folker, M.R.C.S., L.R.C.P., of a daughter.

GAGE-BROWN.—On April 9th, at Cadogan-place, the wife of C. H. Gage-Brown, M.D. Edin., of a daughter.

KING.—On April 14th, at Nicholas-street, Chester, the wife of Henry W. King, M.D. Edin., M.R.C.S., of a son.

LIEBSTEIN.—On April 9th, at Cairn Ryan, Preston, Brighton, the wife of David W. Liebstein, M.R.C.S. Eng., L.R.C.P. Lond., of a daughter.

MITCHELL.—On April 10th, at Cumberland-terrace, Regent's-park, the wife of Surgeon-Captain H. Mitchell, 2nd Life Guards, of a son.

SIMMONS.—On March 22nd, at Standerton, Transvaal, the wife of Herbert Charles Simmons, M.R.C.S., L.R.C.P., of a daughter.

THOMSON.—On April 9th, at Bridge House, Retford, the wife of George Thomson, M.B. Edin., of a daughter.

MARRIAGES

ALLEN—FRY.—On April 9th, at the Parish Church, Berwick-on-Tweed, William Herbert Allen, M.B. Cantab., second son of Theophilus Allen, of Stanyards, Chobham, to Elizabeth Christine Fry, elder daughter of George Fry, of Carlin Brae, Berwick-on-Tweed.

AVERILL—WRIGHT.—On April 9th, at Park-green Congregational Church, Charles Averill, M.D. Durh., Macclesfield, to Helen, youngest daughter of the late Joseph Wright, Summer hill, Macclesfield.

BOKENHAM—MAYO.—On April 8th, at the Parish Church, Cheshunt, Thomas Jessop Bokenham, M.R.C.S., L.R.C.P., of Devonshire-street, Portland-place, W., to Edith, eldest daughter of the late Charles W. Mayo of Colesgrove, Cheshunt, Herts.

BULLOCK-GRIFFITHS.—On April 9th, at the Parish Church, Ellesmere, Charles Penry Bullock, M.A. Oxon., M.R.C.S., L.R.C.P. Lond., of Oswestry, to Francis Elizabeth (Bessie), younger daughter of Mrs. Griffiths, Ivy House, Ellesmere.

CROWDY—SAUNDERS.—On April 8th, at St. Mary's, Bryanston-square, W., Francis Demainbray Crowdy, M.A., M.D. Oxon., of Belvedere House, Torquay, to Florence May, daughter of the late J. B. Saunders, Esq., of The Knoll, Torquay.

DOUGLAS—PEAKE.—On April 9th, at All Saints', Norwood, John J. Douglas, M.B., F.R.C.P.E., son of David Douglas, Publisher, Edinburgh, to Margaret Emmeline, younger daughter of Charles B. Peake, Woodend, Norwood.

EADY—BOYLE.—On April 11th, at Christ Church, Chelsea, George John Eady, M.D. Brux., of The Elms, Enfield, to Luna, daughter of the late Joseph Boyle, of Clapham-common.

JAMESON—STURDY.—On April 23th, at the Church of St. Mary Magdalen, St Leonards-on Sea, James Elliot Jameson, B.A., M.B. Dubl., of Upwell, Cambridgeshire, to Elizabeth Margaret (Madge), youngest daughter of Mr. Sturdy, of Warrior-gardens, St. Leonards.

REID—MAWER.—On April 11th, at Unity Hall, Wood Green, Arthur Lestock Reid, M.R.C.S., L.R.C.P., to Leila Ada, the eldest daughter of W. Mawer, F.G.S., of Southgate, Middlesex.

SMITH—BINDLOSS.—On April 8th, at Christ Church, Brondesbury, J. Anderson Smith, M.D. Lond., eldest son of J. R. Smith, Esq., of Hull, to Amy Helen Maud, younger daughter of the late Rev. Edward Bindloss, of Archangel.

UPHAM—NORBURY.—On April 9th, at St. George's Church, Stonehouse, Plymouth, Surgeon Charles Hazlitt Upham, R.N., son of the late Charles H. Upham, Esq., of H.M. Civil Service, to Mina Ethel Olive, eldest daughter of Inspector-General H. F. Norbury, C.B., M.D., R.N., of the Royal Naval Hospital, Plymouth.

DEATHS.

MCNICOLL.—On April 14th, at 15, Manchester-road, Southport, Edward Day McNicoll, F.R.C.S. Ed., L.R.C.P. Ed., aged 51 years, second son of the late David Hudson McNicoll, M.D. No cards.

ROPER.—On April 13th, at Arundel House, London-road, Croydon, Alfred George Roper, F.R.C.S. Eng., aged 77 years.

SHARP.—On April 10th, at Llandudno, William Sharp, M.D. Lambeth, F.R.S., of Rugby, aged 91.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 16th, 1896.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Apr'l 10	30·22	W.	51	47	92	59	44	...	Cloudy
,, 11	29·91	WSW	49	47	92	57	43	0·03	Raining
,, 12	29·87	N.W.	48	44	92	55	42	0·04	Cloudy
,, 13	30·08	N.	45	39	96	55	38	0·09	Fine
,, 14	30·04	S.W.	43	42	57	48	41	0·08	Raining
,, 15	30·18	N.E.	45	41	95	53	41	0·12	Cloudy
,, 16	30·22	S.W.	47	45	63	49	42	...	Raining

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (20th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.).

TUESDAY (21st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (22nd).—St. Bartholomew's (1.30 P.M.), University Colleges (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cros, (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY (23rd).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Great Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (24th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.). St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.) Gt. Northern Central (2.30 P.M.).

SATURDAY (25th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (20th).—SOCIETY OF ARTS.—8 P.M. Professor H. A. Miers: Precious Stones. (Cantor Lecture.)

TUESDAY (21st).—PATHOLOGICAL SOCIETY OF LONDON.—A Discussion on the Anatomical Results of the Radical Cure of Hernia; Specimens will be shown by the President, Mr. Golding-Bird, Mr. J. Berry, and Mr. Hutchinson, jun. Papers:—Dr. Lawrie (Weymouth): Stricture of the Sac of a Femoral Hernia.—Mr. Shattock: (1) Calculi of Calcium Oxalate from a Pancreatic Cyst; (2) Chondro-sarcoma of Humerus following Fracture. Card Specimens:—Mr. J. Clarke: (1) Multiple Embolic Aneurysms; (2) Loose Bodies from Subdeltoid Bursa.—Mr. Lunn: Aneurysm of Inferior Thyroid Artery.—Dr. Morrice (Salisbury): Deposit of Fibrin upon the Heart.—Dr. Fisher (Clifton): Thrombosis of Renal Veins in Bright's Disease.—Mr. B. Pollard: (1) Diverticulum Ilei; (2) Congenital Occlusion of (Esophagus.—Mr. Gurney (Plymouth): Metastatic Sarcoma of Both Breasts.

WEDNESDAY (22nd).—DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—5 P.M. Dr. Abraham: Case of Lichen Ruba Acuminatus.—Dr. Biddowes: Case of Xerodermia Cured by Thyroid Feeding. And other Cases.

SOCIETY OF ARTS.—8 P.M. Mr. F. E. Ives: The Perfected Photochromoscope and its Colour Photographs.

HUNTERIAN SOCIETY (London Institution).—8.30 P.M. Discussion on Joint Affections in Nervous Diseases. Dr. Beevor, Dr. Buzzard, Dr. Ord, and Dr. A. Turner will speak.

THURSDAY (23rd).—SOCIETY OF ARTS.—8 P.M. Captain C. Rolleston: The Deserted City of Vijianagar.

FRIDAY (24th).—CLINICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Evening. Mr. J. Bland Sutton: Excision of the Upper Two-thirds of the Fibula for Sarcoma.—Mr. Gordon Brodie: Deficient Development of the Lower End of Tibia after Transverse Fracture.—Mr. P. C. Wallis: Sequel to acute Swellings over the Cranium in an Infant.—Mr. R. Stanley Thomas (introduced by Mr. Pearce Gould): Deficiency in the Lower Ribs.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

TUESDAY (21st).—ROYAL INSTITUTION.—3 P.M. Professor James Sully: Child-Study and Education.

THURSDAY (23rd).—ROYAL INSTITUTION.—3 P.M. Professor Dewar: Recent Chemical Progress.

FRIDAY (24th).—CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL.—4 P.M. Dr. Dundas Grant: The Modern Methods of Operating on the Tympanic Attic and Mastoid Process.

ROYAL INSTITUTION.—9 P.M. Professor G. V. Poore: The Circulation of Organic Matter.

SATURDAY (25th).—ROYAL INSTITUTION.—3 P.M. Professor W. B. Richmond: The Vault of the Sixtine Chapel.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index for the second half-yearly volume for 1895 was given in the issue of Dec. 28th. The practice of supplying loose copies has been discontinued, the Index having been placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1895 are now ready. Bound in cloth, gilt lettered, price 18*s*.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s*.; by post, 2*s*. 3*d*.

To be obtained on application to the Manager, accompanied by remittance.

MEDICAL SECRETS AND THE TRAINED NURSE.

A WRITER in *The Times* gives a facetious turn to the discussion of the interesting question of medical privilege, which in its grave aspects must be considered for the present as *sub judice*. Nothing is more satisfactory in the discussion than the general recognition of the reticence of the great profession which gets deeper insight into human nature than any other. The letter we refer to must not be taken too literally, but in its way it is a striking illustration of this point, and suggests the sad consequences of extending to nurses the severe silence which is imposed on medical men. The writer must be of the female sex from the feeling way in which she expresses the dread and the dulness with which she anticipates such an extension of ethics. The freer tongue of the "trained nurse" gives animation to the sick room, which even extends to the whole village or neighbourhood of her operations, "till some busybody in high life awakens to the fact that she is the bee that carries the pollen of unrighteous gossip from door to door." The writer surely does not mean to imply that "training" *per se* adds to the vice of lingual incontinence. The old nurse in that respect at least might fairly be matched with the modern. But we may make this admission: that if a few of the lessons in transcendental therapeutics &c. were exchanged in the training of our modern nurses for a few lessons in common sense and the management of patients and of their friends great advantage would accrue all round. And amongst the earliest of such lessons would be the reverence due to the privacy of human nature in its weakest forms and states.

S. C. R. M.—Our correspondent's suggestive remarks will receive our attention. Nothing would be gained by the publication of his letter.

Doubtful has omitted to enclose with his communication his name and full address.

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"THE POISON OF THE PRIMULA."

To the Editors of THE LANCET.

SIRS,—The following case, at present under my care, will no doubt be interesting as bearing upon your paragraph on the primula obconica in THE LANCET of March 28th.

On Feb. 28th last I was consulted by two nuns, one of whom complained of itching on the wrists, hands, and cheeks, and also of chronic dyspepsia. I gave an ointment and a stomach mixture containing bichromate of potash, thinking that the skin troubles were dependent on the stomach affection. On March 9th the nuns returned with the same symptoms, there being nothing to see except diffuse redness of the hands. On March 14th they came again, saying the itching got worse. Being summoned on the 17th I was surprised to find the back of the hands, especially the left one, the wrists, and cheeks intensely swollen, and the right eyelids œdematous, along with intolerable itching, which effectually warded off sleep and rest. The parts were of a dusky hue and the temperature registered 103° F. I was doubtful as to its being true erysipelas on account of the hue and so I enquired carefully as to where she had been and what she did. I was told that it was her duty to attend to the plants in the glass-houses of the convent. This called up in my mind what I had read in the "Medical Annual" about a year ago concerning a dermatitis occurring in gardeners from handling primulas, and I at once concluded that this was just such another case, especially after being assured that they had a great number of these plants. I painted the affected parts with ichthyol, which soon stopped the itching, and in about a week every trace had disappeared (during which time she kept her bed); but last Monday she came to me complaining of itching on the back of the left fingers, where I found several vesicles. The paint was reapplied and with the same excellent results.

I am, Sirs, yours truly,

Victoria-villas, York, March 31st, 1896. P. W. SCHMIDT, M.B. Edin.

To the Editors of THE LANCET.

SIRS,—Last autumn a man came to my surgery suffering from a severe inflammatory eczema extending from the fingers to the elbows; both sides of the cheeks and neck were in the same condition. On questioning him I found that he was a gardener and had worked in the same situation for eighteen years, and for the last few days had been busy among some primula obconica, working with the shirt sleeves rolled up. The inflammatory condition on the neck and face had evidently been caused by rubbing those parts with the hands. I prescribed a lead lotion for him and he recovered in a few days. I also advised him not to touch the plants again with the naked hands, which advice he has followed and he has remained quite free from the complaint.

I am, Sirs, yours truly,

Bradford, April 7th, 1896. A. GRAY, M.B. Glasg.

Anxious.—The case supposed is not one which would necessarily come before the General Medical Council. A resident unqualified assistant is not so likely to bring his principal into a violation of the rules indicated by the Council as one resident outside. But apart from this aspect of our correspondent's plans he will forgive us for saying that they seem to us open to objection in an ethical respect. He does not say whether the former principal of his relative and unqualified assistant has sold his practice. But if so it is clearly not right for our correspondent to take an unqualified assistant whose popularity with the patients of his former employer might be used to draw patients from the practice. We submit to him that he should reconsider this arrangement apart from any fear of the action of the General Medical Council.

A SKIN AFFECTION PRODUCED BY WORKING IN TEAK.

To the Editors of THE LANCET.

SIRS,—I shall be obliged if you or any of your readers can inform me whether carpenters working in teak occasionally suffer from a skin affection very similar to that described as resulting from handling primula obconica and affecting the face and arms.—I am, Sirs, yours truly,

April 12th, 1896. H. N. A.

IMPURE TARTARIC ACID.

AT Devizes, on March 19th, the manager of a tea company's stores was summoned for selling a quantity of tartaric acid on Feb. 14th which was not of the nature and substance demanded. The analyst for Wiltshire stated that the sample contained 45 per cent. of pure tartaric acid, 51 per cent. being a compound of a crude acid, and there was a residue of 3 per cent.; he added that the sample, although very impure, was not injurious to health except in certain cases where it might be used medicinally and fail in the purpose intended. For the defence it was contended that the company had received a warranty from the wholesale firm supplying the acid that it was "of good mercantile quality and guaranteed genuine English make." The Bench said that the defence had failed both with facts and the law, and the defendant was fined £3 13*s.* 6*d.*

X. Y. Z.—Our correspondent is at liberty to undertake other work and would not thereby forfeit his diplomas. The profession, however, is a jealous mistress—once desert her and it will be difficult to reclaim her.

A QUESTION OF ETHICS.

To the Editors of THE LANCET.

SIRS,—I shall be obliged if you will advise me how to act towards a professional brother under the following circumstances. During the last few months I have been attending a very old lady who suffered merely from the usual infirmities of old age. I used to call to see her probably about once a fortnight. I heard to-day from her daughter (who called to pay my fees) that she died a week ago, and that on the day of her death a medical man, who happened to be passing the house, was called in and found her dying, and told them to send down to his house for a certificate of death, for which they paid one shilling. The daughter told me that the medical man was told that I was in attendance and he said he would communicate with me. I have not heard from him, though I have seen him and exchanged greetings with him almost daily since.

I am, Sirs, yours truly,

March 30th, 1896. F. L. HALLUCIS.

*** The facts are very remarkable as detailed by our correspondent, who, of course, was the right person to have filled up the certificate. We can offer no explanation of the conduct of the practitioner who was called in. The kindest thing our correspondent can do is to see him and discuss with him the ethics of the situation, of which he seems to have singular views. We should be pleased to receive any information that places his conduct in a different light, and it is always well to remember that the friends of patients sometimes err in their account of what has happened.—ED. L.

Mr. W. O. Hanlan is thanked for his communication (enclosing a copy of his letter to the Medico-Chirurgical Society of Glasgow) and his eloquent little hymn. The process alluded to is physiological, not pathological, and the main conclusion of the writer is untenable, we think; but that it would be desirable that more persons understood the hygiene of domesticity before marriage is undeniable, as it is undeniable that a widespread ignorance on such topics has led to the loss of life of many infants.

"ADVERTISING DENTISTS."

To the Editors of THE LANCET.

SIRS,—I have noticed your remarks anent the above, also Mr. Jones's reply, in which he states the Royal College of Surgeons in Ireland is quite capable of looking after itself. This statement I deny, and I state further that the said College shamefully neglects the dignity of its Licentiates in Dental Surgery. Let me here state a case. A friend of mine wrote not very long ago to the College informing it that one of its Licentiates was advertising broadcast a so-called American dentists' association, and had in a prosecution case admitted he was the proprietor, although the name of a non-licentiate only appeared as manager on the various bills and books. The reply my friend received from the College after a lapse of time was to the effect that the individual had promised not to repeat such conduct. Nevertheless, from that day to this pamphlets, books, and advertisements of the association still continue to be sent out broadcast, and the offender still defies the Royal College of Surgeons in Ireland.

I am, Sirs, yours faithfully,

April 13th, 1896. FAIRPLAY.

Enquirer.—We have already dealt with the publication which our correspondent forwards us. The coupon is, of course, the most objectionable feature.

Leytonstone is thanked for his communication. We have noticed the report in a leading article.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Somerset County Herald, Keighley News, Alnwick Gazette, Doncaster Chronicle, Carlisle Journal, Manchester Courier, Oban Times, Hereford Times, Whitby Gazette, Wakefield Free Press, South Wales Daily News, Cleckheaton Guardian, East Anglian Daily Times, Derby Standard, Chester Courant, Glasgow Herald, Derry Standard, Bradford Observer, Dundee Courier, Halifax Guardian, Bridgwater Independent, Sussex Daily News, Barnsley Independent, Newcastle Leader, Wolverhampton Chronicle, Bristol Times, Sheffield Independent, Alcester Chronicle, Birmingham Post, Freeman's Journal, Huddersfield Chronicle, Western Morning News, Leicester Post, Eastern Evening News, West London Observer, Times of India, Pioneer Mail, Builder, Yorkshire Post, Edinburgh Evening Dispatch, Bristol Mercury, Architect, Scotsman, Liverpool Daily Post, Sanitary Record, Leeds Mercury, City Press, Mining Journal, Local Government Chronicle, Weekly Free Press and Aberdeen Herald, West Middlesex Standard, Reading Mercury, Boston Independent, Hertfordshire Mercury, Surrey Advertiser, Gloucestershire Chronicle, Local Government Journal, Western Mail, Le Courrier de la Presse, Daily Free Press (Aberdeen), Leicester Daily Mercury, Newcastle Daily Journal, Evening News (Portsmouth), Bolton Evening News, Citizen, Shields Daily News, Citizen (Gloucestershire), Cromer Post, Rossenda's Free Press, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Dr. D. W. Aitken, Edin.; Dr. J. W. Allen, Glasg.; Lt.-Col. Hon. W. H. Allsopp; Messrs. Arnold and Sons, Lond.; Army Medical Dept., Lond., Sec. of; Assn. for the Suppression of Street Noises, Lond., Hon. Sec. of; Assn. for the Supply of Pure Vaccine Lymph, Lond., Sec. of.

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I.—Dr. A. Innes, Lond.; Ings House Nurses' Co-operation, Lond., Sec. of; International Med. Congress, Dunedin, Sec. of.

J.—Sir George Johnson, Lond.; Mr. F. B. Jessett, Lond.; Mr. R. Johnson, Lond.; Mr. T. W. C. Jones, Lond.; Messrs. A. Jubb and Son, Huddersfield; Jeyes' Sanitary Compounds Co., Lond., Sec. of.

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S.—Dr. P. C. Smith, Lond.; Dr. J. A. Shaw-Mackenzie, Lond.; Dr. F. H. Smith, Lond.; Dr. D. Smart, Liverpool; Mr. B. Salisbury, Marlborough; Mr. H. Sell, Lond.; Mr. G. H. Sutton, Newport; Herr R. Siebler, Berne; Messrs. S. Smith and Co., Lond.; Messrs. G. Street and Co., Lond.; Messrs. Street Bros., Lond.; South Devon and E. Cornwall Hosp., Plymouth, Hon. Sec. of; Sanitary Institute, Lond., Sec. of; Society for the Relief of Widows and Orphans of Medical Men, Lond., Sec. of; St. George's Hosp., Lond., Sec. of; St. Luke's Hosp., Lond., Sec. of; *South Wales Argus*, Newport, Editor of; Sheffield General Infirmary, Sec. of; Saanbach's News Exchange, Mainz; Semper Vigilans; S. P. P., Southsea; Statim, Lond.

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U.—University College, Bristol, Dean of.

V.—Dr. G. L. Vintras, Lond.; Vegetarian Society, Lond., Sec. of.

W.—Mr. J. H. Walters, Reading; Mr. G. M. Winter, Torquay; Mr. W. F. Webster, Studley; Messrs. C. Wright and Son, Wirksworth; Messrs. Willing, Lond.; Wrexham Infirmary, Sec. of; W. L., Lond.

X.—X., Leeds.

Y.—Yorkshire College, Leeds, Sec. of.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. E. Appleton, Thornby-on-Tees; Mr. R. R. Anderson, Carmarthen; Mr. A. E. Archer, Rosario, Argentina; Mr. A. E. Ash, Stokeville; Apollinaris Co., Lond.; A. M., Lond.; Aleph, Lond.

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E.—Dr. W. F. Eason, Bootle; Mr. C. Etheridge, Whitstable; Ecnan, Washington, co. Durham.

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The Hunterian Lectures
ON
INFANTILE SYPHILIS.

Delivered at the Royal College of Surgeons of England on March 23rd, 25th, and 27th,

BY J. A. COUTTS, M.B. CANTAB., M.R.C.P. LOND.,
PROFESSOR AT THE COLLEGE, AND PHYSICIAN TO THE EAST LONDON HOSPITAL FOR CHILDREN.

LECTURE III.[1]

MR. PRESIDENT AND GENTLEMEN,—The lesions of the osseous system in inherited syphilis are of great clinical interest. The due appreciation of their frequency and importance may fairly be claimed for modern observers. As late, indeed, as 1856 Diday writes that "the annals of science offer at most five or six well authenticated instances of them." These words of Diday and the reticence on the subject by the authorities of his day would seem inexplicable in the face of our present experience did it not appear by their writings that almost the sole affection of the osseous system Diday's contemporaries regarded as syphilitic was the presence of suppurating nodes on the long bones. Now, nodes on the long bones, whether leading to suppuration or not, are rarities in infants with inherited syphilis, and the non-discovery of them no doubt led to the erroneous impressions of Diday and others. Mr. Hutchinson states that he met with a few instances of nodes on the long bones in infants early in his career and, I gather, does not regard them as so very uncommon. Other writers, too, describe them as not infrequent, but that, being evanescent, they are often overlooked. This is as it may be, but careful and prolonged search has not enabled me to come across an instance of them in a child younger than eighteen months. In older children they are occasionally found in association with Hutchinsonian teeth and interstitial keratitis. They usually occupy the same situations as the nodes of the adult acquired form, but have seemed to me less tractable to the influence of iodide than these last.

If nodes are rare on the shafts of the long bones they are far from being so on the bones of the skull, for the researches of Parrot have clearly established the periosteal origin of the well-known cranial bosses occurring in inherited syphilis. These may appear in many places on the skull, but are certainly more frequent on the frontal and parietal bones, close to the margins of the anterior fontanelle. With regard to the contention as to what really constitutes a syphilitic type of skull in infants, I would state my conviction that the natiform skull of Parrot, with the four bosses closely surrounding the anterior fontanelle, is undoubtedly syphilitic, and in this I am happy in being confirmed by Dr. Eustace Smith. The subsequent changes in the skull brought about by rickets being superadded to syphilis have led, I believe, to a confusion amongst observers. But the cranial bosses in rickets are confined to accentuations of the frontal and parietal eminences. Mr. Macnamara has, moreover, in his interesting work on the bones and joints, shown that in extensive syphilitic disease of the bones of the skull the frontal and parietal eminences are the only parts that escape. In early cases, then, we have the means of distinguishing the syphilitic from the rachitic type of skull. But rickets is so frequent a complication of inherited syphilis that after the age of six months we are apt to get a mixed type of skull, with corresponding difficulties as to the part played by the different factors in its causation. If I ventured to criticise the classical description by Mr. Hutchinson of the later stages of inherited syphilis, it would be that the type of skull he associated with this complaint is really due to rickets following upon it. The cranial bosses in syphilis do not often last beyond the first year of life and leave no traces of their former presence, and, moreover, do not affect the situations of the frontal and parietal eminences.

As with the type of skull, the connexion between inherited syphilis and rickets has been one of discussion. The explanation of the frequent association of the two complaints would seem to me a natural and simple one. Rickets is a disease of mal-nutrition which may own many causes for its production. Amongst these, possibly, no factor is more powerful in this way than syphilis, and thus the vast majority of syphilitic infants incur a greater or less degree of subsequent rickets. The contention of Parrot, that every case of rickets has a foundation in syphilis, is to me, as with most others, inexplicable and utterly untenable. In only one case have I seen suppuration ensue upon a node on the skull. Here a tender swelling over the frontal bone occurred in a syphilitic infant about six months old, with redness and infiltration of the overlying skin. The skin gave way in a short time, and the bone beneath rapidly necrosed away, opening up the cerebral membranes; mercury, iodide, and the cautery alike failed to arrest the progress and the child died from abscess of the adjacent brain. Dr. Barlow lately mentioned that he had seen two cases of a like formidable character, but I am not aware whether he has published them or not.

By far the most important and frequent osseous affection in inherited syphilis is the inflammatory one occurring in the epiphyses and in the junctions between them and the rest of the bones. First described by Wegner in 1870, his researches have been confirmed and extended by Taylor of New York, Dr. Barlow, Dr. Lees, and many others. According to Wegner, there is found in the bones of new-born syphilitic infants and young children a morbid process taking place at the point of junction of the cartilage of the epiphysis with the diaphysis. This consists of a proliferation of the cells of the cartilage along with a retardation of ossification in its already calcified structure. At the same time this proliferation of the cartilage cells interferes with the existing blood-vessels, and the formation of new ones takes place imperfectly or is altogether arrested. As a consequence of this interference with the bloodvessels the cartilage cells themselves suffer in their nutrition and undergo atrophy or fatty change. The result of this morbid process is seen on section as a narrow, somewhat jagged line of yellowish or orange colour running along the line of the epiphyseal cartilage. This appearance, according to Wegner, is due to necrotic tissue separating the diaphysis from the epiphysis, and a further suppurative complication may lead to a complete detachment of the latter from the shaft of the bone. Taylor of New York confirms this appearance, but he—and in this he is supported by Waldeyer and Köbner—regards the yellow zone not as a necrobiosis due to deficient vascularity, but as a gummatous process due to the enormous proliferation of new cells, which by compressing the vessels lead to the destruction of the intervening tissues and the consequent separation of the epiphysis from the diaphysis. Whether Wegner's or Taylor's is the correct interpretation of the epiphyseal change is of minor moment; both are agreed as to the frequency and importance of the result produced. Along with the other changes just described the ossification of the epiphyseal cartilage proceeds irregularly, and the cartilage cells, which in health are arranged in rows, are disarranged, or are completely disintegrated and replaced by groups of smaller cells.

Such, in brief, is a summary, mainly from Henoch, of the pathological disturbances occurring in the epiphyseal cartilages upon which most modern German writers lay especial stress. It is claimed that the morbid process always appears in several places simultaneously, particularly often at the lower end of the femur, in the bones of the legs and forearms, and in the ribs; sometimes in all the long bones together. It is not necessarily confined to the larger bones, however, for it is now known that syphilitic dactylitis in reality commences with disease of the epiphyseal ends of the phalanges. Wegner, who first described this epiphyseal disorder, says it is almost constant in the bodies of infants suffering from inherited syphilis. Kassowitz, who admits its extreme frequency, had nevertheless met with a few cases where it was absent. Waldeyer, Köbner, and Fränkel describe it as being present without exception in every case of inherited syphilis, and the first two state that even when there are no naked-eye changes in the epiphyses these may be recognised with certainty by the microscope. Birch Hirschfeld, too, writes as if the absence of epiphyseal disorder were the surest proof of the freedom of the infant from syphilis. Most of the modern German authorities, in fact, would seem to regard this affection of the epiphyses as pathognomonic and distinctive of inherited syphilis, and to regard its non-discovery as conclusive evidence of freedom from it. In the

[1] Lectures I. and II. were published in THE LANCET of April 11th and 18th, 1896, respectively.

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English text-books much less attention is paid to it. This possibly arises, however, from the subject not having received the general notice that its importance deserves, owing to a non-appreciation of its prevalence.

Whether it be as frequently present as a pathological condition as some German writers allege or not, there is a consensus of opinion that this epiphysitis only calls for consideration as a clinical symptom in exceptional instances. In its milder forms it can sometimes be diagnosed by the pain elicited by pressure over the epiphyses of the long bones, more especially the lower ones of the humeri and bones of the orearms. But pain is no necessary accompaniment of syphilitic epiphysitis; and there may be considerable swelling of the epiphyses of several bones with no obvious sensory disturbance. This swelling of the epiphyses, with or without pain, as the lesion giving rise to it is a congenital one, may appear in infants of any age. When the enlargement of the epiphyses is of any considerable size, however, it usually occurs in infants of from three to six months old, but is rare after the latter age. Some writers give criteria by which syphilitic enlargements of the ends of the bones are to be distinguished from rachitic ones in the same situations, but I cannot think confusion between the two conditions can often occur. The younger age of the syphilitic patients, the want of symmetry in the distribution of the bony lesions, the greater prevalence of the lesions in the bones of the upper extremity, and even here very often a predominance in one side over the other, along with the presence of other signs of syphilis, ought to be sufficient to prevent errors of diagnosis. Still, in children over the age of six months syphilis and rickets may occur together, and here it may perhaps be an impossible matter to duly apportion to each disease its share in the causation of the epiphyseal swellings.

Suppuration as a result of epiphyseal disease of the long bones is rare in infants under a year old, and I have only known two or three examples of it. In older children suppuration over the ends of the long bones is, perhaps, commoner than in young infants, owing possibly to walking and other uses of the limbs proving prejudicial to a previous epiphysitis not entirely cleared up. A symmetrical suppurative epiphysitis in children between one and three years old is to me sufficient to warrant a strong suspicion of syphilis for its causation. In contradistinction to the case of the long bones, suppuration arising from epiphysitis of the phalanges, "syphilitic dactylitis," is not very rare. Like Mr. Hutchinson, I have only seen it in connexion with the bones of the fingers, never with those of the toes. Dr. Colcott Fox has, however, published a case where it occurred in the foot. On all these points regarding suppuration I speak with some diffidence, as such cases come more appropriately under the care of the surgeon than that of the physician. Like suppuration, separation of the epiphyses of the long bones is rare, and my experience of such cases is an extremely limited one. Dr. Barlow has lately called attention to the deformities of the limbs that may result from it owing to the awkward angles at which the epiphyses may rejoin the shafts.

By far the most interesting condition associated with epiphysitis is the anomalous one known as syphilitic "pseudo-paralysis," in which one or more of the limbs lie cold, wasted, and flail-like by the sides of the body. I have associated this "pseudo-paralysis" with epiphysitis because the generality of writers have ascribed the muscular wasting to disuse, owing to the pain ensuing on motion from the presence of epiphyseal swellings. Henoch has thrown doubts on this origin of the disorder, however, and with these I agree. It is quite possible to have marked wasting and complete immobility of the limbs in a syphilitic infant without any obvious epiphyseal swellings and with an entire absence of pain. In two cases of "pseudo-paralysis," moreover, having a perhaps exaggerated fear of epiphyseal separation, I had the affected arms confined in splints. Under the use of mercury the infants concerned recovered power and muscular tone, although their arms were rigidly fixed. I cannot, then, hold mere disuse accountable for the muscular wasting and paresis. As a possibility I would suggest a peripheral nerve origin for this "pseudo-paralysis" due to the epiphyseal disease, and its being, perhaps, akin to the nervous disorder Dr. Ord has shown may arise from primary joint trouble. Bednar, who would seem to have been exceptionally fortunate in meeting with "pseudo-paralysis," for he found it in nineteen out of sixty-eight cases of inherited syphilis, ascribed it to a syphilitic myositis. It is essentially a complication of the earlier stages of inherited syphilis, the limits of age during which I find records of its occurrence being one week and eight months. At the first-mentioned age it was noted in a case under Dr. George Ogilvie's care and at the latter in one under Henoch's care. It is possible, however, that more careful search would enable me to find it recorded at a later age than the one mentioned. My own cases, amounting to perhaps a dozen, all occurred in infants under the age of three months, most of them, indeed, in infants less than six weeks old. In several the paralysis was the earliest symptom of inherited syphilis and preceded the more unequivocal ones by an appreciable interval. In all my cases the arms alone were affected and in only three did the complaint attack both limbs; in these three, moreover, the one arm was affected before the other. In Bednar's nineteen cases the arms were affected sixteen times, the legs once, and all the limbs twice. All observers are agreed as to the special tendency for the arms to suffer and that these suffer first even in the cases where other limbs are subsequently affected. What other factors besides syphilis are necessary for its production and its pathology are still problems requiring solution.

Turning from the symptoms of the inherited to those of the acquired forms of syphilis in infancy is to enter upon a subject about which there have been the most ardent debate and controversy. That accidental syphilis is rare in infants, as they are not exposed to the ordinary channels in which infection is incurred in adults, will not be denied. Much of the uncertainty and contention regarding its manifestations undoubtedly arise from the lack of clinical material necessary for forming more definite conclusions. No one observer has seen a sufficient number of cases to entitle him to speak dogmatically on the question. Notwithstanding this, there has been dogmatism more than sufficient on the part of most writers on the subject, and I fear that only recently I may have laid myself open to the same charge. In what follows, then, I should preliminarily state that any conclusions I may draw have been formed on a limited experience of eight cases of acquired syphilis in infants under a year old, although this experience has been supplemented to some extent by a larger one of acquired syphilis in children of older age. It may well be, then, that further opportunities may lead me to largely modify my present views concerning the acquired forms in infancy. The only difference Colles recognised between the acquired and inherited forms in infancy was the liability of the mother, as well as the nurse, to contract the former. In fact, he gives cases where healthy infants were contaminated by infected nurses and makes no distinction between the syphilis so acquired and that inherited from the parents. Most writers before and since his time have concurred in making no distinction between the acquired and inherited forms in infancy. Diday, however, would seem to have recognised a difference in the two forms, for he writes: "Congenital syphilis does not assume either the behaviour, the progress, or the concatenation of symptoms of the syphilis of adults. A little observation suffices to show that we have here two diseases, analogous but not identical; that if their prognosis differ, it is less on account of the age of the subjects they attack than from the nature and character peculiar to each of them. Producing previous to any characteristic symptom a kind of atrophy or stunted condition of the whole economy, breaking out afterwards at a hundred points at the same moment, accompanied from the first by visceral lesions foreign to acquired syphilis, contagious by its slightest symptoms, congenital syphilis can only be compared to itself, and it is from its energy, much more than from the weakness of its victims, that we must ask the secret of the special dangers which it involves." Further, again, Diday writes: "Syphilis, so often fatal in new-born children when inherited from their parents, scarcely ever compromises their existence when it has been accidentally innoculated from a primary chancre in an adult." Whilst not agreeing with Diday as to the special virulence of infection attaching to congenital syphilis, I am at one with him regarding the differences between it and the acquired form, and especially so as to the much diminished constitutional disturbance in the acquired form in infancy. Mr. Hutchinson has no separate description of the symptoms of the acquired form in infants, possibly because he deemed it unnecessary, but in writing of the inherited variety he says: "Excepting in the addition of 'snuffles' these secondary symptoms are much the same as those observed in the acquired disease." It is not a just assumption from this last that Mr. Hutchinson

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denies the presence of "snuffles" in the acquired syphilis of infants, as his description of the acquired disease was drawn from that presenting in adults. If, however, his description be intended as universally applicable to the acquired form, whether in adults or infants, then the absence of snuffles in the last must be considered as a valuable criterion in differentiating them from cases of the inherited variety, where "snuffles" plays such a frequent and conspicuous part. According to Dr. Radcliffe Crocker, "Acquired syphilis in children and infants presents much the same symptoms and runs much the same course as in the adult, except that in very young children the bones at the junction of the epiphyses to the shaft are very likely to be the seat of inflammation." With regard to the similarity of the acquired form in infants to that in adults Kassowitz is in accord with Dr. Crocker, although he goes further in this direction than I gather the latter is inclined to follow. "When a healthy infant," Kassowitz writes, "is infected shortly after birth its syphilis does not differ from that of an adult, *but does so most markedly from that of a child of the same age with the inherited complaint. The difference between them, then, is one not merely due to age.*" Kassowitz has tabulated the differences between the inherited and acquired forms in infancy and his numeration is briefly as follows:—1. In the inherited form there is early involvement of the abdominal viscera, which involvement is often intra-uterine and may precede the skin eruption by months. In the acquired form any affection of the viscera is always a late symptom and seldom occurs. 2. In inherited syphilis there is a peculiar and characteristic affection of the calcifying cartilage and growing bone; this "epiphysitis" occurs early and may be intra-uterine. The early appearance and extensive distribution of this "epiphysitis" in inherited syphilis have no analogy in the acquired complaint. 3. In inherited syphilis there is frequently diffuse infiltration of the skin, especially of the face, soles, and palms. In acquired syphilis there is no such infiltration observed either in infancy or later age. 4. In inherited syphilis there is a peculiar characteristic appearance and distribution of eruption different from those obtaining in acquired syphilis in infancy. 5. In inherited syphilis vesicular eruptions are frequent, but are never observed in the acquired form. 6. In inherited syphilis prodromal coryza is almost universal, but is absent in the acquired complaint. Such are mainly the criteria by means of which, such a judicious and experienced writer as Kassowitz asserts, a distinction can be clearly made between the inherited and acquired forms in infancy. With most of the distinctions drawn by Kassowitz between the two forms of the complaint in infancy I personally agree. As minor details, however, I cannot regard a vesicular eruption as a common occurrence in the inherited form, nor can I, after reading Dr. Crocker's cases, lay the same stress as Kassowitz does on the difference between the manifestations of "epiphysitis" in the two varieties of the complaint. As far as my experience goes the commonest eruption in acquired syphilis in infants, as in adults, is the well-known roseola and its usual distribution, the same at all ages, viz., the front of the chest, the abdomen, and to a less degree the flexor aspects of the limbs. This syphilitic roseola, admittedly rare in inherited cases, was the form of eruption in seven out of my eight cases. In the remaining one, an infant that had acquired a chancre on the back of the neck from kissing by a syphilitic aunt, and that had in its turn given its mother a chancre on her breast, a universal small pustular eruption broke out all over the body. Along with the rash, too, in most of my cases I found a condition of throat identical with that occurring in adult syphilis; this is in marked contrast with what happens in the inherited form, where the throat remains, as a rule, unaffected. The chief peculiarities of the symptoms, however, in acquired syphilis in infancy are the scantiness and evanescent nature of the eruption, which may be easily missed, and the subsequent early and luxuriant growth of condylomata. These peculiarities of acquired syphilis in children were pointed out by Henoch, who apparently did not deem its manifestations identical with those of the inherited form. Dr. Barlow informs me that he has found a difference in the appearances and distribution of the eruption in acquired syphilis in infants from that occurring in the inherited variety, and that his experience tallies with that of Henoch with regard to the appearance of condylomata in the former complaint. My colleague, Mr. R. W. Parker, too, emphatically asserts the resemblance of the acquired form in infancy to that in adult age, and the manifest points of difference in the symptoms to those occurring in the inherited form. In very rare instances it may be that the eruption of inherited syphilis may imitate that of the acquired form, so that a reliable opinion as to which of the two is concerned must be formed from other considerations than the mere rash and its distribution. In contrast to this, in no instance have I seen or learnt of the symptoms of the acquired complaint approximating to those of the typical ones of the inherited variety. I would freely admit, however, in spite of the evidence and authorities I have given as to the differences between acquired and inherited syphilis in infancy, that there is perhaps no one single symptom which would serve as an absolute mark of distinction between the two complaints. When all the symptoms are, however, taken into consideration I would contend that sufficient criteria exist in most cases to prevent confusion between them.

Of the primary chancre, a fundamental necessity for the existence of acquired syphilis in infants, I have as yet said nothing, preferring an attempt to point out the differences between the complaint and the inherited form apart from its consideration. There is, of course, no need to insist upon a chancre as the primary factor in the acquired syphilis of infants, as in adults, before my present audience. Only too often, however, within my personal knowledge, owing to reckless charges against public vaccinators and others, has occasion arisen for the insistence of a chancre and of the necessary incubatory periods in acquired syphilis in infants. When the fact is firmly grasped that such syphilis in infants runs the same course, both in its primary and secondary manifestations, as in adults, most of such charges will cease to be brought or seriously entertained. The vast majority of chancres in infants must, from the nature of the case, be situated on the skin or other external part of the body, and present the same conspicuous features in them that chancres do in adults in the same situations. With the minute examinations that infants undergo for "spot or blemish," usually twice a day, there is small chance in them for a chancre to be passed over by even the most careless mother, no matter how frequently they may be missed in adults. Even when a chancre has passed away, moreover, it leaves visible and tangible traces of its former presence, lasting for months or perhaps years, which are generally easy to find in an infant's tender skin. The sticklers for the rigidity of Colles' law universally allege, when supposed exceptions to it are brought forward, that such exceptions are cases of acquired syphilis in which the primary chancres have been missed. It is to me a remarkable coincidence that it is mainly in such cases where a presumption of acquired syphilis is made to uphold the law that such conspicuous objects as infantile chancres are missed and leave no traces behind them, and that there is a total lack of evidence as to the source of infection. In each one of my eight cases there was no difficulty in ascertaining the original site of inoculation.

Another special point about acquired infantile syphilis is its power of infection. This I propose to leave until I have dealt with the infectiousness of inherited syphilis, which I now proceed to do.

On no other point in syphilis has there been more contradictory teaching than on that of the infectious nature of the lesions of the inherited form. Whilst some authorities have described inherited syphilis as exceptional in the contagious property of all the lesions it engenders, others have denied the contagiousness of inherited syphilis at all. Since the works of Diday, however, his teaching has apparently been accepted as the standard one, and the extreme virulence of the contagion of inherited syphilis has been promulgated by most writers, many of whom I suspect in this instance were more influenced by the authority of accepted doctrine than by the result of their personal experience. The opinions of the older writers on the point are difficult to gauge, as they classed cases of transmission from infant to nurse with those of transmission from nurse to infant, and seemingly deemed any discrimination between the two classes as of little moment. Hunter, in the days when he still believed in the reality of inherited syphilis, denied the possibility of transmission from the infant to another person. The elder Cullerier and most authorities up to the time of Colles would seem to have agreed with Hunter on this point. When Colles, however, published his book in 1837 he rudely upset the prevalent belief in the non-contagiousness of inherited syphilis. It

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was, according to him, the peculiar virulence of the contagion of infantile syphilis that distinguished this last from the adult type. It was not necessary, he wrote, for a woman to suckle a syphilitic infant to acquire the complaint from it—it was sufficient for any one to do so merely to dress, handle, kiss, or fondle such an infant. In fact, he would seem to have imagined the mere presence of such an infant as a menace to the unprotected and to have believed in a real "aura syphilitica" emanating from it. More than this, he again writes: "The members of the nurse's family may also contract the disease, and more easily than she, for this disease seems to acquire more force the further it becomes removed from its first origin." Most of Colles' personal observations are of little value now, as he indiscriminately mixed up cases of acquired and inherited syphilis in infants, and drew deductions from them as though they were of identical nature. He did not, moreover, acknowledge a primary chancre as a necessary part in the contraction of syphilis by an adult. For him to diagnose syphilis in a woman suckling an infected child it was sufficient that she had ulcers or other sores about the nipples, and he remarks the curious fact that in such cases the disease often limited itself to these manifestations on the breasts. Diday, following in the same steps as Colles, went even beyond the last, if possible, in his estimation of the power of contagion of inherited syphilis. "I have already stated," he writes, "and hope to prove it, that the lesions of congenital syphilis differ from those of ordinary syphilis by an infinitely greater power of contagion. And what is at the same time remarkable and deleterious in them is that they transmit the same property to the person who receives the disease from them." He considers this virulence of contagion so well established that if he saw a woman presenting signs of constitutional syphilis transmit them to her husband the suspicion would at once arise in his mind that they were congenital in character and derived from a child with inherited syphilis nursed by her. If, moreover, he learnt that a nurse had given syphilis to several men, he would consider that there were sure reasons that she had acquired the disease, not by coitus, but from suckling an infected nursling. He writes of the infection of nurses as being of daily occurrence, of thousands of examples of it being readily adducible, and he gives accounts where the presence of a single case of inherited syphilis has produced in healthy rural communities outbreaks of syphilis that can only be described as "volcanic," from the suddenness of their incidence and the numbers that were attacked. Notwithstanding the confidence and dogmatism with which Diday wrote, there were even in his own time authorities who differed strongly from him, and Ricord, the younger Cullerier, Bassereau, and others would seem to have regarded the contagion of inherited syphilis as a chimera. Maissonneuve and Montanier, too, declare that "doubt is no longer permitted" as to the non-contagiousness of inherited syphilis Diday quotes all these last named, and, in the face of their writings, it is difficult to appreciate the following remark of his. "All observers have pointed out the propagation of the symptoms by the slightest contact from the new-born child to the nurse, and it is not uncommon to see two or three families victims to the presence of a single syphilitic suckling." As to the reliance and value to be placed on Diday's opinion on the point, the following controversy is both instructive and interesting. "Remark well," Ricord writes, "that I do not absolutely reject this mode of transmission from the foster-child to the nurse, and from the nurse to the foster-child. I only say, without leaving the field of strict observation, and of the exact analysis of facts, that this mode of transmission is not yet proved." Diday rejoins, "I have no difficulty in acknowledging with him (Ricord) that among the clinical facts advanced in proof of this mode of contagion there is not one which is thoroughly demonstrative, there is not one in which the daily observations of the symptoms—on the one hand in the nurse, her relations, and those around her, on the other, in the child, its father and mother—render it evident that symptoms really constitutional have passed from the one to the other; but—and in this I regret to differ from Ricord—I am inclined to think that if the conclusive fact be wanting probable facts abound, and that to such an extent as to make up by their number for the absence of the former." In the face of his "thousand histories of infectious lactations furnished daily by experience," Diday's inability to adduce one single conclusive example is both startling and inexplicable. His evidence of the conveyance of syphilis by nurslings, too, is not convincing in the light of our present knowledge. "Primary chancres," he writes, "exist in a very small minority of cases of nurses infected by infants. Mucous tubercles form the earliest symptom in each." It is significant, too, in his cases, as in those of Colles, that the syphilis contracted by nurses from infected infants very often remained confined to the affected breast and never manifested itself by symptoms elsewhere. But the disparity between the dogmatism of Diday on the virulence of the contagion of inherited syphilis and the proofs he adduces for it is only one amongst many inconsistencies that are to be found in his writings. It may be said that, feeling as I do regarding some portions of these writings, I have devoted too much time to their consideration. But as Diday's views are still commonly held, and he is largely quoted, no one can afford to lightly ignore him. I will proceed to discuss at less length some more recent opinions on the important point at issue.

Henoch considers the occasional transference from infant to nurse as proven. In his own vast experience, however, he had never known an instance of it. Fournier writes as if the contraction of syphilis from cases of the inherited disease were extremely common and of daily occurrence. An infant with this complaint, he asserts, would not infect its own mother, but would almost infallibly infect a healthy nurse. In fact, Fournier would seem to be a living exponent of Diday's views as to the virulence of the contagion of inherited syphilis. Mr. Hutchinson says that if an infant suffering from inherited syphilis be suckled by a nurse free from taint, "the risk is great that a nipple chancre will result." But as he further says that he has only known "perhaps half-a-dozen" nipple chancres altogether, his words would seem to me to exaggerate the risk incurred, more especially when his large experience is taken into consideration. Most latter day writers are in accord with Mr. Hutchinson, and in recent text-books inherited syphilis is described as "eminently contagious," or in kindred words to the same effect.

At the present time there would seem to be a growing opinion that the virulence of contagion of inherited syphilis has been vastly exaggerated both in text-books and by authorities, and that the contraction of the complaint by a healthy person from a tainted infant is an extremely rare occurrence. Some two years back I published a case of supposed exception to Colles' law, the weak points in which were justly and forcibly dealt with by Dr. George Ogilvie. His latest description of it as "not absolutely conclusive" I think a decidedly appropriate one for the case. If this case be rejected, however, and the supposition that the infant was really suffering from acquired and not inherited syphilis be maintained then I have personally never known an instance where syphilis was contracted from an infant with the inherited complaint; and this in spite of many thousands of healthy children and adults having been exposed to infection from cases under my care. To ascertain if my experience was in any way exceptional in this respect I have made inquiries of present and former colleagues at the East London Hospital for Children, all of whom have had a large acquaintance with cases of inherited syphilis. The results of my enquiries are so much at variance with prevalent belief that I feel it incumbent upon me to give the names of the gentlemen I consulted, and this, I may state, is done with their full consent. My senior medical colleague, Dr. Eustace Smith, has only known one instance where syphilis was contracted from an inherited case, and this was one where an infant infected its own mother. The case was seen by the late Mr. Berkeley Hill, who demonstrated to his own satisfaction, but not to that of Dr. Smith, that the infant was suffering from acquired and not inherited syphilis. Dr. Smith still believes that the case was one of exception to Colles' law and apart from it has never known syphilis contracted from the inherited disease. Dr. Donkin, Dr. Dawson Williams, Dr. Arnold Chaplin, and Dr. J. A. Hayward have never known an instance where an infant with inherited syphilis has infected another person. Dr. Johnstone Campbell has known one case of exception to Colles' law, which he proposes to publish when at greater leisure, but no other example of infection from inherited syphilis has come under his notice. Dr. Radcliffe Crocker has known one instance where an infant with inherited syphilis contaminated its foster-mother and her daughter. Mr. R. W. Parker has stated that he had seen a case of exception to Colles' law, but no other example of infection from inherited syphilis. Messrs. L. A. Dunn.

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W. H. Battle, and H. Betham Robinson have never known syphilis contracted from a case of the inherited disease, and present and past resident medical officers, Messrs. P. C. Phillips, Scott Battams, and Dr. E. H. Ware, reply to the same effect. Now the experience at the East London Hospital for Children of the gentlemen I have named added to my own represents a joint experience of some thousands of cases of inherited syphilis. These syphilitic babies in the East of London, too, are indiscriminately suckled by other women besides their own mothers, and are freely kissed and fondled by numerous persons who thus expose themselves to infection from this presumedly eminently contagious disease. That the sole result, as far as could be ascertained, of many thousands of exposures to infection should be only five examples of the incurrence of syphilis, and that of these four should assume the form of exceptions to Colles's law, seems to me noteworthy and surprising in the extreme. If, as usually happens, these four examples of exception to Colles' law be curtly rejected as unreliable, then I can learn only one instance where syphilis has been contracted from a case of the inherited complaint at a large children's hospital where inherited syphilis is rife amongst the infantile patients, and where adult women are frequently treated for the acquired disease. I have no reason, either, to suspect that our experience at Shadwell is peculiar. Dr. Barlow and many others of large experience tell me that they have never known the contraction of syphilis by anyone from an infant suffering from the inherited complaint. Lately I have pestered all my friends with questions on this point and as the outcome I have learnt of two other solitary examples of its occurrence. My friend, Dr. John Thomson of Edinburgh, tells me he knows a case where a lady contracted a chancre upon her lip from kissing a grandchild with inherited syphilis, the father of the infant having incurred the disease about three years before marriage. Dr. W. S. Colman, too, tells me he knows a case where a baby with inherited syphilis infected its nurse. But three cases go but a little way to justify the descriptions usually applied to the power of contagion of inherited syphilis, especially when the experience and standing in the profession of those from whom I inquired are taken into account. That inherited syphilis is occasionally contagious is certain, but it is equally certain, I would contend, that the virulence of such contagion has been grossly and vastly over-estimated. It is impossible to reconcile the experience of certain French writers in this respect with our experience in this country, even when the greater frequency of wet nursing in France is fully admitted. There are certain reasons, or suggestions rather, by which I think the infrequency of the contraction of syphilis from infants suffering from the inherited complaint can be partially explained. The syphilis in such infants, it must be remembered, dates from conception and not from birth, and at the age at which symptoms appear such a syphilis is generally of about a year's standing, and may have lost some of its pristine virulence during both uterine and extra-uterine existence. If the views I expressed in my first lecture, too, be considered as worthy of any consideration, then it may be that some product absorbed by the mother during her first pregnancy may influence the succeeding conceptions and thus largely modify the disease in the infants resulting from them and its power of contagion. In this way I should expect a first infant more likely to convey the disease to others than succeeding ones, and I have a general impression that the histories of recorded authentic cases of such infection confirm this opinion. That the power of infection is possibly in some measure confined to the first infants in a family may help to partially explain the rarity of infection. Another reason, and a much weightier one, for the infrequency of infection from inherited syphilis is the rarity of specific sores about the mouths of infants, a fact which has been pointed out by Dr. Colcott Fox, Henoch, myself, and others. Even when such sores do appear they are a comparatively late manifestation, seldom occurring before the age of six months, and by this period, in the vast majority of instances, both treatment and time have probably so modified the complaint that conveyance to others is either in abeyance or annulled. It may be that the nasal secretion and that of mucous tubercles are infectious, but as the latter are a late manifestation the same reasoning applies to them as to sores in the mouth, and there are obvious reasons why the nasal secretion is not often encountered. The reasons I have given are, I admit, totally inadequate for a full explanation of the extreme rarity of infection from inherited syphilis, and whilst I consider that rarity established other grounds for it than those I have suggested are still to be sought.

In marked contrast to the rarity of infection from inherited syphilis is its frequency from the acquired form in infants. Only one instance is within my personal knowledge where a syphilis acquired by an infant was not communicated to one or more persons brought into contact with the child. Numerous instances are on record, from the time of Ambroise Paré onwards, where infantile acquired syphilis has been the cause of severe outbreaks amongst relatives and friends. Recently I learnt of one in the east of London where acquired syphilis in a child spread to five others in the same family besides strangers. Some of the best authenticated cases, too, recorded by Colles and Diday, who contended for the greater virulence of the inherited form, occurred where numerous persons contracted the disease from an infant with the acquired disease. In fact, it would seem to me that what these writers really contended for was more the extra virulence of infantile syphilis generally than for any difference between those of the acquired and inherited forms. Although the presence of acquired syphilis in an infant is the more dangerous to the community at large, there is, I need hardly say, no difference in virulence between such a syphilis and that acquired by an adult. But the presence of the dread disease in an innocent-looking baby is so seldom suspected that generally one or more persons are contaminated before the truth is discovered—a condition of affairs that does not often occur in the case of adults. So nearly constant, however, is the infection from an infantile acquired case, and so extremely rare that from one of the inherited form, that, in the lack of other criteria, a diagnosis between the two varieties might almost be made from the presence or absence of infection in most instances.

The few minutes remaining at my disposal I will devote to some brief considerations of Colles' law. This law in reality consists of two separate parts, the one that the mother of an infant with inherited syphilis cannot contract the disease from her own child, and the other that such an infant would almost infallibly contaminate a healthy wet-nurse. The fact of the inclusion of this second proposition is generally forgotten by writers contending for the absolute validity of the law. In dealing with the contagiousness of inherited syphilis I endeavoured to show that this part of the so-called law is far from true. It may well be, then, that the main safety of the mother lies in the little liability of the infant to transmit the disease rather than in some protective quality residing in herself, due to the fact of her having borne a syphilitic infant. For my part I think both such factors possibly conduce to the safety of the mother. Is the first part of Colles' law absolute? Has an infant with inherited syphilis never contaminated the mother? In Colles' own practice, and in those of others since his day, cases have from time to time occurred which were apparently exceptions to the law. Some of these cases are so imperfectly recorded that discussion of them is hardly called for. Others, on the contrary, Dr. George Ogilvie writes, "are as conclusive as any recorded clinical facts can be." Fournier, somewhat grudgingly it would seem to me, admits the validity of some such cases, and he would appear to regard the subject of exceptions to Colles' law as of little practical importance on account of the extremely exceptional character of such exceptions. Mr. Hutchinson has lately stated that he not only admits the possibility but the probability of these exceptions. I am the more pleased at this admission in that it places him in accord with Fournier and other authorities in the matter, and that it is also in some sense a further justification for the belief in myself and others that we have actually met with exceptions to Colles' law. Mr. Hutchinson's sole contention is, I believe, that as yet no exceptions have been recorded worthy of trust. I am unwilling to differ from him, but I must state my conviction that Dr. George Ogilvie's admirable paper at the Royal Medical and Chirurgical Society is conclusive on the point. Granted the possibility of exceptions to Colles' law, ought such eminently infrequent occurrences to largely modify our practice in allowing apparently healthy mothers to suckle tainted infants? Personally, I should say decidedly not. In my second lecture I emphasised the importance of maintaining the nutrition of the infant, and for this purpose no factor is more essential than the mother's milk. If ever legislation for the many to the detriment of a limited few is justifiable, the case in question calls for it. Following in the same path as Henoch, the only limitations I would place on suckling by mother or wet nurse would be the presence of excoriations on her nipples

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and that of ulceration or fissures about the mouth of the infected infant.

In conclusion I have to apologise for the disjointed and fragmentary character of these lectures. In reality they deal with only a very limited portion of the subject of infantile syphilis. Important questions, such as diseases of the nervous system, vaccinal syphilis, prognosis, treatment, and many others, I have preferred to altogether omit rather than to attempt to treat in a perfunctory manner. In fact, my selection has been manifestly based on controversial grounds rather than any other.

RHEUMATOID ARTHRITIS: ITS CLINICAL HISTORY, ETIOLOGY, AND PATHOLOGY.

BY GILBERT A. BANNATYNE, M.D. GLASG., M.R.C.P. EDIN.,
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AND
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With a Report on its Bacteriology

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UNTIL quite a few years ago rheumatism, like gout, was almost universally regarded as a disease of "chemical" origin. Lactic acid, as a product of disturbed metabolism, played the part of uric acid in gout, and the possibility of a pathogenic micro-organism scarcely entered into the range of serious discussion. Even three years ago, when first we started on our search for the *materies morbi* of rheumatoid arthritis, the idea of an organism as a causative factor in any one of the group of "rheumatic" diseases seemed somewhat wild and improbable; but since then several suggestive papers, notably that of Newsholme,[1] have thrown fresh light on the subject, and have at least accustomed one to the idea that acute rheumatism may probably prove to be an acute specific disease caused by a definite pathogenic microbe. It was the close analogy of rheumatoid arthritis to tuberculosis that first suggested to our minds the possibility of a micro-organism as the cause of the disease; and, once started on that idea, the clinical symptoms, so difficult to account for on the usual nervous and other theories of causation, readily fell into their place in a natural and explicable sequence until long before we had actually found the organism we were quite convinced of its presence.

But at the very outset we were met by great difficulties in obtaining pathological material. Clinical material we had in abundance, but the opportunity of examining post mortem the joints of a patient suffering from rheumatoid arthritis was an event of such extreme rarity that we were forced to be content with the examination of synovial fluid obtained during life. And here, again, of course, came the difficulty that the number of cases of synovial distension honestly likely to be benefited by tapping was extremely limited, forming a very minute proportion of the hundreds of cases passing through our hands; in consequence there was great delay and we had often to wait months for fresh material. The cases from which our synovial fluid was, as a rule, obtained were those of rheumatoid arthritis in which there was great distension of a joint, generally the knee, occasionally the wrist or fingers, which did not yield to blistering and other medical means. In such a case, the skin over the joint having been made aseptic and a simple form of aspirator carefully sterilised, the needle was plunged into the joint and the fluid withdrawn. Often, although the joint seemed distended with fluid, none could be obtained in the aspirator bottle, but in such cases there would generally be found a drop of fluid or a plug of synovial membrane in the point of the needle which would be sufficient for our purpose. With a sterilised platinum wire various culture tubes were then inoculated on the spot, several coverslip preparations made of the fluid or membrane, and the fluid in the bottle retained for further examination in the laboratory. The limb was placed on a splint for a few days, the needle-wound being dressed with cyanide gauze, and slight pressure kept up with a bandage. The aspiration generally relieved the pain, but often the fluid would return requiring a second and sometimes even a third tapping. In no case was any injurious effect apparent on the joint. In the microscopic preparations so obtained we found in 24 cases out of 25 rheumatoid joints examined: (*a*) a micro-organism; (*b*) always the same organism, so far at least as size, appearance, staining properties, and behaviour in culture media were concerned; and (*c*) the organisms were present in considerable, sometimes in enormous, numbers. To Dr. Blaxall of the British Institute of Preventive Medicine, to whom we are very greatly indebted, we leave the task of describing, with fuller detail and with more practised hand, the appearance, the properties, and the life-history, so far as is at present known, of the microbe as found by him in the specimens of synovial fluid which we have sent him.

Before going on to discuss the etiology of rheumatoid arthritis let us make it perfectly clear of what disease it is that we are speaking. Probably in no department of medicine is there more hopeless confusion of nomenclature than in the group of so-called "rheumatic" diseases. An acute disease with its rapid onset, its definite course, and its tangible and immediate results can hardly fail to impress the observer; it is seized upon, studied, named, and classified. With a chronic disease, on the other hand, the wearisome chain of indefinite symptoms ends by wearing out alike the time, the patience, and the interest of the observer; and hence it is that under the heading of chronic rheumatism or of osteo-arthritis there are probably massed almost as many diseases as formerly there were under "fever" or "paralysis." Provisionally, then, we divide the rheumatic and allied groups as follows: (1) acute rheumatism, (2) chronic rheumatism, (3) gout, (4) rheumatoid arthritis, and (5) osteo-arthritis.

And here let us pause for a moment to point out what we mean by chronic rheumatism and by osteo-arthritis. To the heading of chronic rheumatism we would relegate those cases of stiffened, painful, and often distorted joints left as a sequel of acute or subacute rheumatism, the distortion in this case being apparently due to alterations in ligaments, tendons, and muscles, rather than to bony or cartilaginous changes, these latter, if present, being only secondary and due to superimposed osteo-arthritis. Absolutely indistinguishable clinically is the great group of cases in which there is no history obtainable of acute rheumatism, but which are yet known familiarly to everyone as chronic rheumatism. Whether these cases are really identical with the last is uncertain, but in the present state of our knowledge we must be content to allow them to remain in the same category.

It is when we come to osteo-arthritis that we begin to tread on uncertain ground. In the official nomenclature rheumatoid arthritis and osteo-arthritis are used as interchangeable terms for the same disease, but of late, with the further differentiation of the clinical features, there has been a growing tendency to retain the term rheumatoid arthritis for the specific disease we are about to describe and to keep osteo-arthritis for the more common mechanical condition characterised by lipping of bone, osteophytic growth, and erosion. As it seems a pity to attempt to add fresh words to our nomenclature we have retained the term rheumatoid arthritis for use in this narrower sense. By osteo-arthritis, then, we mean a local joint condition in which we find erosion of cartilage, thickening, eburnation, and lipping of bone, with or without fluid effusion. These changes may arise in a joint injured by accident, by occupation, or by the mere wear and tear of life; in such cases the affection may be a mon-arthritis, or, if multiple, asymmetrical, and picking out the joints in a definite manner and according to well-known physical laws, as shown long ago by Arbuthnot Lane, a summary of whose views will be found in a recent number of the *Clinical Journal*; or they may appear to be merely secondary changes ensuing in a joint already damaged by rheumatism, by gout, or by rheumatoid arthritis. In the latter case the joints involved may be multiple and the disease may appear to exhibit a quasi-symmetry. The condition appears to be purely local, and, except in so far as pain and inactivity hamper the functions, the rest of the

[1] THE LANCET, March 9th and 16th, 1895.

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Showing characteristic spindle-shaped swelling of Phalangeal joints, swelling of wrist and muscular atrophy.

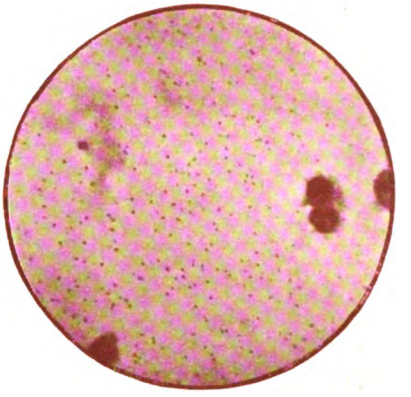

Fig. I.

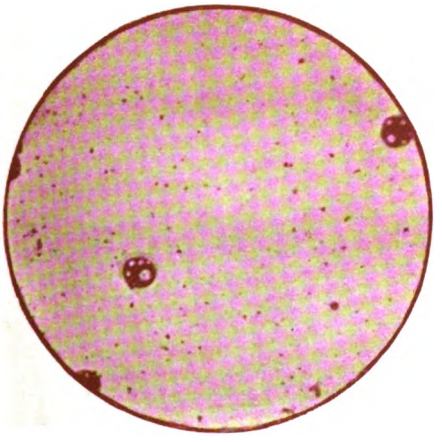

Fig. II.

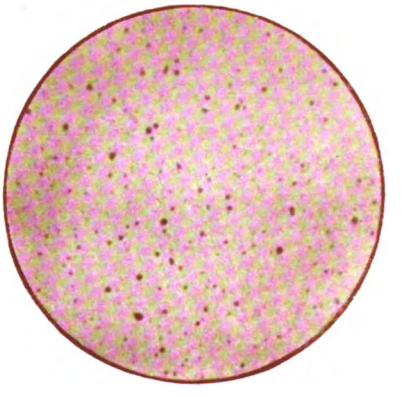

Fig. III.

TO ILLUSTRATE AN ARTICLE ON RHEUMATOID ARTHRITIS BY DR. GILBERT A. BANNATYNE, DR. ARTHUR S. WOHLMANN, AND DR. FRANK R. BLAXALL.

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organism would seem to be absolutely unaffected by the disease.

Turning now to rheumatoid arthritis, we find a very different state of affairs. It is a "constitutional" rather than a local disease; the whole organism is affected; the joint condition is by far the most important *symptom*, but it is only a symptom, and not the whole disease. In contradistinction to osteo-arthritis, rheumatoid arthritis is a disease of women rather than of men (of 100 consecutive cases taken at random 85 were females and 15 were males); of comparative youth rather than of age (the average age of the above series of cases at the commencement of the disease was twenty-eight, the eldest sixty and the youngest four). There would, however, appear, as pointed out by Fortescue Fox and others, to be two periods of greatest frequency of onset: one—and this embraces the larger number of cases—of early adult life, say from eighteen to twenty-five; the other the period of the climacteric. With respect to the family history we are unable to make any very definite statements. Hugh Lane[2] maintained that the disease is caused by the amalgamation of the hereditary taints of gout and tubercle. From our own experience we are unable either to confirm or refute this statement. In the case of a child who died from rheumatoid arthritis we were fortunate enough to secure a family history through four generations on the mother's side and two on the father's. In this case, of eight brothers and sisters, one died in infancy and six were very "delicate"; the mother suffered severely from rheumatism, while her three sisters had acute rheumatism and heart disease; the grandmother had "rheumatism," while the great-grandmother died from phthisis. On the other side, the father was normal; the grandfather had "rheumatism." Anyone, however, who has gone into the subject of family history in hospital patients will admit the extreme unreliability of the statements obtained. Rheumatoid arthritis is predisposed to by any debilitating cause, more especially by anything particularly weakening the resisting power of the joints. Of all predisposing causes acute rheumatism seems to be the most potent (of the above series of 100 cases 38 gave a history of previous acute rheumatism). But here two obvious fallacies have to be taken into account. The onset of the disease if at all acute, as is not unfrequently the case, may be mistaken for a mild attack of acute rheumatism; while, on the other hand, in the rheumatic fever of childhood the joint symptoms are often so little pronounced that the nature of the disease is entirely unsuspected. In a very large proportion of the cases we find a history of menstrual disturbance, amenorrhœa, dysmenorrhœa, or too frequent menstruation; in a still larger proportion the menstrual trouble comes on after the rheumatoid disease has well developed.

Amongst other debilitating causes should be mentioned the chlorosis of puberty, rapid child-bearing, prolonged lactation, worry, over-work, ill-feeding, and such diseases as typhoid fever. As a rule, the first manifestation of the disease is the gradual onset of a painful spindle-shaped swelling of the proximal interphalangeal joints of the ring- and middle-fingers; sometimes the pain precedes the swelling, sometimes the swelling precedes the pain. Usually both hands are affected within a few months of each other. Occasionally the disease commences in the wrists; rarely in other joints—e.g., the knee. Spreading fairly symmetrically from joint to joint the disease involves, in definite order of frequency, the wrists, the rest of the fingers, the articulations of the cervical vertebræ and of the jaw, the knees, elbows, ankles, tarsal-joints, and shoulders. The other joints usually escape, though the hips occasionally suffer, and we have seen the toes spindle-shaped like the fingers, though this is rare. The thumbs and great toes generally escape.

Clinically the joints may be affected in one of two ways. There may be a deceptive appearance of bony nodular enlargement; this is most noticeable about the finger-joints and is usually due to tense distension of small synovial pouches connected with the joint cavity; firm pressure with the finger will show the true nature of these swellings, while unexpected confirmation of this opinion has recently been furnished by the application of the Roentgen rays, but more often there is a soft, doughy-looking swelling blurring the outlines of the articulation. In such a case there appears to be little or no fluid in the joint, but the synovial membrane is greatly thickened and swollen, while the ligaments and fasciæ about the articulation are softened and infiltrated. Bony grating is not obtained in such a joint; it is only later, when secondary osteo-arthritic changes have taken place, that the harsh grating of erosion is obtained. The skin over an affected joint generally feels distinctly hot to the touch, and if the process is at all acute there may be a distinct blush closely resembling that of acute rheumatism. The pain is usually severe, fluctuating considerably, and in some cases apparently largely influenced by changes of weather. The body temperature is generally raised about a degree at night, falling to normal in the morning. In children, in whom the disease is always more acute, the temperature may rise to 101° F. or even more every evening. Another peculiarity of the disease in children, to which Dr. G. F. Still first drew our attention, is the frequency with which the lymphatic glands are enlarged. We have noticed this, too, in acute cases in adults. As the joint trouble becomes pronounced other symptoms appear and advance with it *pari passu;* occasionally they may even *précédé* any manifestation of articular disturbance (Dr. Spender).[3] Anæmia is generally noticeable early in the case and may become profound: it appears to be due rather to deficiency of hæmoglobin than to destruction of corpuscles. Muscular atrophy is a very marked symptom and one always present. Although as a rule there is a general atrophy of fat and muscle distributed over the whole body and contributing to that cachectic facies so universal in this disease, yet there is a distinct selective agency at work. Some muscles suffer more than others, notably the extensor muscles of the forearms, the abductor indicis, the interossei, and the muscles forming the thenar eminence. Muscles, if affected at all, suffer throughout their entire length, and the atrophy is not limited to the portion near or distal to a joint. The reaction of degeneration is not usually marked. In addition to the muscular atrophies there are various other evidences of trophic and vaso-motorial disturbance. Sudden flushing of the skin of the whole body with copious outburst of sweating is common, while a very profuse cold perspiration of the palms of the hands and fingers is present in almost every case, and may be so copious as literally to drip off. The extremities are usually cold and clammy, and a peculiar livid mottling of the hands, especially over affected joints, is common. The fingers have a great tendency to "go dead," and in five cases we have seen this condition so marked as to merit the title of Raynaud's Disease, there being actual gangrene under the nails. In none of these cases was there any hæmoglobinuria. It was Dr. Spender who first drew attention to the pigmentary changes of the skin in this disease. The changes may consist of minute black freckles, most common on the backs of the forearm, of dark washes of colour under the eyes or across the forehead, or of a general darkening of the complexion. The same writer, too, draws attention to the changes in the cardiac rhythm, and lays great stress on the tachycardia often present. We would wish to point out in addition that it is by no means rare to find an apical systolic bruit (? hæmic) in cases of rheumatoid arthritis in which no history can be obtained of a previous attack of acute rheumatism, while it is quite common to find a booming alteration of the first sound. Pericarditis is occasionally found, but how far it is of a rheumatic and how far of a rheumatoid origin is at present uncertain. Ecchymoses in the skin are quite common. Peripheral neuritis may be present, but there is never any marked disturbance of the sensory nerves. The reflexes, as a rule, are normal.

To sum up, then, the points of special significance in the diagnosis of the disease are: (1) the sex and age of the patient; (2) the soft spindle enlargement of the finger-joints and the swelling of the wrists; together these form the most constant symptom, and in nine cases out of ten the disease can be easily and certainly diagnosed from the hands alone; the accompanying illustration shows excellently the typical deformities, together with the atrophy of the interossei; (3) the cold sweating palms; (4) the affection of the jaws and neck; (5) the cachexia and wasting; and of less importance (6) pigment changes and (7) tachycardia. It is hardly within the scope of this paper to enter into the subject of treatment. At best it is but unsatisfactory. Treatment based on the assumption that the disease is a "rheumatic gout," with consequent deprivation of meat and stimulants, may soon bring the patient to an almost moribund condition. The resisting powers of the tissues must be strengthened to the utmost; rich, nourishing

[2] The Rheumatic Diseases (so-called).

[3] Brit. Med. Jour., 1893.

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food, alcohol if necessary, cod-liver oil, iron, arsenic, may all prove useful, but, above all, fresh air and sunshine. The wasting and stiffness may be relieved by massage, the stiffness and the pain, which is usually very severe, by hot baths and mild counter-irritants. The prognosis as regards life is fairly good; as regards complete recovery extremely bad. The disease steadily progresses through years of suffering until, the soft structures of the joints being destroyed, either fibrous ankylosis occurs or ordinary osteo-arthritic changes take place, and the disease, having exhausted its pabulum, wears itself out and becomes quiescent. Just as in fibroid phthisis the fibrous tissue is a protective effort of nature to limit the growth of the bacillus, so in the fibrous and osteo-sclerotic ankylosis of joints in rheumatoid arthritis we have a similar defensive action; in neither case, apparently, do the microbes survive in the new-formed tissues.

Turning, then, to the pathology of the disease, as we understand it, we have a disease due to the presence of micro-organisms found in the joint fluids and tissues, and which must until disproved be regarded as specific. How these micro-organisms gain access to the blood is not at present definitely known, but they probably do so through some chronic catarrh of the gastro-intestinal or genito-urinary systems, and such catarrhs are not far to seek. In not a few cases it has been traced, with almost absolute certainty, to the tonsils. Having gained a footing in the circulation the micro-organisms pass freely to all the organs of the body, thus explaining the symmetry of the disorder and why one joint after another should be involved. They now proceed to select a suitable nidus for their growth, and, like all other pathogenic bacteria, they exercise a selective action in their choice which never varies. What governs this selective action is not known; but it appears curious that out of all the sites to which they gain access they should, so far as we at present know, only choose the joints for their habitat. We may note that joint tissues seem specially liable to bacterial infection, *vide* such diseases as pyæmia and gonorrhœa. It is possible that the endocardium and pericardium are also liable to their attacks, as otherwise it is difficult to account for the symptoms referable to those tissues. This point has not been fully elucidated, and, so far, we have no proof one way or another. Probably, also, the micro-organisms grow and propagate in the lesions through which they gain access to the blood, giving rise to those local catarrhs so common during the course of the disease. Owing to the want of post-mortem material these points must be left for future consideration. In the joints we found proof that the micro-organisms grow and propagate, doing so, not only in the synovial membrane, ligaments, &c., but also in the bone marrow and cartilaginous structures. Their presence gives rise to acute inflammatory changes leading to ulceration, erosion, and destruction of the hard as well as of the soft joint tissues. Our specimens are so few that this is only a provisional statement. This process varies in intensity and, usually as the disease progresses a coincident but varying amount of reparative change is seen, which ends in general hardening and thickening of both bones and ligaments. The presence of micro-organisms can be demonstrated in the joint fluid by staining and also in the tissues on section. The joint and heart symptoms are those only which would appear to be due to the direct action of the micro-organisms, and may therefore be regarded as primary or essential, whilst those which are due to their indirect action, through their products, may be regarded as secondary or symptomatic. These latter may vary in every case, not only in intensity, but in nature, yet they would all appear to have a common origin in toxic action.

During their life cycle these, like all other bacteria, give rise to poisonous products, which, being absorbed, pass to the body generally, and, what is of more importance, to the nervous system locally. Here, again, we see either a peculiar selective action on the part of the products acting on or else a peculiar susceptibility of the parts acted on. In this as in other bacterial diseases, we have no definite proof that it is not the micro-organisms themselves which cause the changes in the nerve system, but all argument, analogy, and proof is against it, and, therefore, we may assume that such is the case. As evidences we have the experiments of MM. Vidal and Bezançon,[4] which show that several micro-organisms have the power of producing central nerve degeneration, and although they have been isolated from the blood, yet they have not been found in the central nerve tissues. They therefore appear to act by the elaboration of a soluble poison. Such would appear to be the case in rheumatoid disease. With regard to the toxic action of bacterial poisons on the nervous system, it is of importance to note that nutritional as well as actual organic change may result. Although these nutritional changes are more common in the peripheral nerves, yet toxic agents exhibit such a remarkable selective action, and as we do not as yet know what are the influences which determine such susceptibility it would not be surprising to find similar changes in the central nerve system. From every side evidence is gathering that what may at first be only a depression of the function of a certain centre or group of centres may end, if the irritation be severe, whether it be applied locally in the shape of a toxine or reflexly, in becoming an organic degeneration, not only of that centre or group of centres, but also of the nerve path or paths descending from them. Erb,[5] speaking of progressive muscular dystrophy, says there is a possibility that the disease, starting in a functional disturbance, might in the long run become associated with a coarse lesion of the spinal centres. He says there are many things about such a condition which agree well with this supposition. From this we may conclude that bacterial poisons act on either the peripheral or central nerve systems, producing in one case an organic lesion and in another only a functional depression. Now let us look at the rheumatoid symptoms due to such a condition of the nerve system. The principal and most difficult to explain is undoubtedly the muscular atrophy which occurs not only early in the disease, but is one of the most constant symptoms. The atrophy extends to the whole of a muscle and not only to that part which is in contact with the joint or distal to it, and it follows so closely on the first appearance of the joint troubles as to preclude the possibility of an extension of the inflammation from the joint to the nerves or muscles. Apart from true rheumatoid atrophy we have atrophy occurring as a consequence of a neuritis distinctly secondary in character and only seen in the later stages. Such a condition has been described by Sabourin,[6] Valtat,[7] Strümpell,[8] Duplay and Cazin,[9] and is of less interest than the true rheumatoidal atrophy, and can be easily distinguished from it as it presents all the characters of ordinary muscular atrophy in the reaction of degeneration and alteration in the muscle structure, &c. This is absent in the true form in which the extensors are principally affected, but not exclusively so. The selective character of the atrophy is sufficient proof that the changes cannot be set down to mere disease. How, then, do we account for it? We think it is due to an abnormal condition of the multipolar nerve cells of the anterior cornua.[10] It is reasonable to suppose that, given a soluble poison circulating in the blood, some areas in the central nerve system should be affected, and these all the more especially as they are in all probability predisposed to it by reflex irritation from the joints. That such an irritation does occur has been stated by many observers and has been even said to be sufficient to cause the atrophy itself (Paget, Vulpian,[11] Charcot,[12] and others). It has been argued that, assuming a derangement of the motor cells of the cord determined by the morbid impulses from the joint nerves, the influences from the motor cells will in all probability determine the alterations in the muscle nutrition. In the light of the discovery of the micro-organisms and of recent observations with regard to the action of toxines on the nerve system we may disregard this reflex irritation, except in so far as only to regard it as a predisposing cause. On turning again to the cells themselves we find, according to Ferrier,[13] that the cell-body, with its nucleus

[4] Annales de l'Institut Pasteur, February, 1896.

[5] Progressive Muscular Dystrophy.

[6] Thèse de Paris, 1873.

[7] Archives Générales, 1877.

[8] Münchener Medicinische Wochenschrift, 1888.

[9] Archives Générales, January, 1891.

[10] The path of motor innervation is composed of two portions: (*a*) the pyramidal cell with its dendritic processes and centrifugal or axis cylinder process, coursing along the pyramidal tract; and (*b*) the spinal multipolar cell with its processes and axis cylinder process, ending in the muscle fibre. It has been shown by Golgi's (Schäfer: Brain, vol. xvi., p. 147) method of staining that the pyramidal axis cylinders end in an arborescence which merely comes into contact with the spinal cell or interlaces with its dendritic processes, there being no actual continuity.

[11] Leçon sur l'Appareil Vaso-moteur, 1875.

[12] Maladies du Vieillard, second edition.

[13] Brit. Med. Jour., vol. ii., 1893.

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is primarily concerned in the nutrition of the motor nerve and its correlated muscular fibre, while the dendritic processes serve to convey incitation and functional activity. He also states that lesion of these processes may cause paralysis with all the symptoms of a spinal paralysis, but with no muscular degeneration. If such a condition can exist might we not consider it possible, nay, probable, that by the action of a toxic body the cell's action might by itself be so lowered or held in abeyance that nutritional changes in the muscles would ensue without much disturbance of the conductive faculty of the processes, and also without any degeneration of the muscle beyond wasting? In progressive muscular atrophy we have a slowly progressive lesion of the ganglion cells, and their prolongations in the axis cylinders of the nerve fibres. Might we not, on a modified scale, have such symptoms if, instead of a complete destruction of these cells, we have only a depression of their function? In fact, such a condition must exist, as we cannot otherwise account for the atrophy either by reflex or direct toxic action. The cells' activity must be lowered. In one class of case, of which those mentioned by Dr. Spender[14] may be taken as typical examples, we must assume that the action on the cells has been so great as actually to give rise to a distinct lesion, and this, spreading upwards in the pyramidal tract, has finally come to affect the bulbar nuclei. Folli's[15] discovery of atrophy of the motor cells goes a long way to confirm this theory. What was probably only at first a depression of function due to the changes set up by the rheumatoid toxine had apparently in the long run become actual organic change. With regard to the selective site of the muscular atrophy, we find Dr. Ferrier[16] saying "It is not unreasonable to suppose that the degree of representation, and therefore the trophic strength, of the extensors in the anterior cornua is less than that of the flexors, while such extensors as have the most numerous connexions with the spinal segments would have a greater vital resistance than those whose segments are fewest." From this we may deduct that those muscles with the lowest trophic representation will be those which are first and most affected in any disease which lowers the vitality of the nerves and nerve centres. Duplay and Cazin[17] have suggested that it is due to the anatomical relationship between the nerves which supply the joints and those which supply the affected muscles. This does not explain it all, however, and Dr. Ferrier's explanations seem the more probable and the more easily intelligible, especially if we add that reflex impulses may possibly help in the selection.

It has been proved that certain toxines have the power of producing changes in the vaso-motor system and also in the trophic condition of the skin. It is thus that we account for the local sweatings and pigmentation. We know that normal pigment arises from a particular product of metabolism of the cutis, being formed both in the ordinary epithelial cells and in the connective tissue cells. These connective tissue pigment cells are the regulators of the metabolic process, as they consume the surplus pigment-forming substances. The abnormal pigmentation of rheumatoid arthritis is probably due to a local increase in the formation of the normal pigment consequent upon some abnormal trophic innervation and to a deficient consumption of the surplus by the connective tissue cells. The vaso-motor changes are in all probability due to the centre situated in the cells, in the intermedio-lateral tract being affected in a similar fashion to those in the anterior cornua. One of the chief points of interest is the tachycardia. Bezançon[18] states that tachycardia may in some cases be due to pressure on the vagus, but he suggests that more often it is due to the absorption of certain toxines. He cites the case of the bacillus tuberculosis and also of certain staphylococci, streptococci, &c., of the secondary purulent infection so common in phthisis. Bouchard obtained from tuberculin a substance to which he gave the name ectasine, which had the property of producing dilatation of the vessels. Toxines with similar powers have been obtained from the product of the bacillus pyocyaneus by Charrin and Gley, and from those of the staphylococcus aureus by Arloing. By acting as vaso-dilators these substances would tend to produce tachycardia, since the heart's action becomes more rapid as the peripheral friction diminishes. In other cases the toxines, by giving rise to a neuritis of the vagus, may cause it. Vierordt in a case of phthisis found such a neuritis as was evidenced by a great number of vagus fibres having undergone degeneration and atrophy. With regard to the local sweating, it is probably due to paresis caused by the toxines acting on the sudoriparous and vaso-motor centres of the bulb. Similar action is seen in influenza (Semmola[19]). It has been found by Hunter[20] that in all probability pernicious anæmia is caused by the presence of bacterial poisons, just as it has been found to occur from the presence of cadaveric poisons and analogous ferments. Such being the case, it requires little imagination to conceive that a similar process may occur in rheumatoid arthritis. These bacterial poisons would seem to act by a hæmolytic process which is specially limited in its actions to the portal blood.

[14] Brit. Med. Jour., 1893.
[15] Il Policlinico, December, 1894.
[16] Loc. cit. [17] Loc. cit.
[18] Revue de Médecine, January, 1894.

DR. BLAXALL'S BACTERIOLOGICAL REPORT.

(From the Laboratories of the British Institute of Preventive Medicine.)

This investigation was undertaken at the request of Dr. Bannatyne of Bath, who stated that he with Dr. Wohlmann had arrived at the conclusion from the clinical aspect of cases suffering from rheumatoid arthritis that the disease was due to a micro-organism; and, further, that by microscopic examination of the synovial fluid from affected joints they had found an organism constant and distinct. This micro-organism they considered to be specific. Synovial fluid from affected joints was sent me from Bath. The fluid was aspirated with antiseptic and aseptic precautions, with such success that out of eighteen cases which have been submitted to me, only twice have I found it contaminated. My first attempts to stain organisms in the synovia and to obtain cultivations from it resulted in failure. I adopted the ordinary methods of bacteriological procedure, staining films of the synovial fluid for a few minutes with aniline dyes and inoculating serum tubes and all ordinary culture media, as well as making plate cultivations of nutrient agar-agar and gelatin, after Koch's method. But I was unable to observe any organisms in the microscopic specimens or to recognise any appearance of growth upon any of the culture media. I then varied the staining methods, leaving the specimens in the dyes for a prolonged time in the cold, applying heat, and using concentrated solutions. By these means organisms could be perceived in the specimens corresponding exactly to those described by Dr. Bannatyne and Dr. Wohlmann, and morphologically identical with those seen in their microscopic specimens. But their recognition was unsatisfactory owing to several causes. In the first place, it was evident that the organisms took up the stains with great difficulty and only by their prolonged action or by the application of heat, but these means resulted in a very dense colouration of the synovial film; secondly, they were decolourised with great ease, for attempts to decolourise the substratum left the organisms unstained. Again, the microbe being very minute, it was exceedingly difficult in heavily stained specimens to discriminate it from débris or from precipitate of the dye used. It was necessary then to find a method by which the organisms should be well stained, should retain the stain and yet allow the synovial film to be sufficiently decolourised, and one that should obviate all precipitation of the dye. I cannot claim to have attained this result, but after many trials I have adopted the following procedure as being most satisfactory. A thin film of synovial fluid drawn out between two cover-glasses is dried over the flame and fixed in the usual way by passing through the flame five or six times, as otherwise the organisms are apt to be washed out. The cover-glass is then immersed in dilute acetic acid for about two minutes, well washed with water and dried again, this second drying being to prevent the cover-glass sinking in the staining fluid. The stain which I have found most useful is aniline methylene blue. The cover-glass is placed specimen-side down on a watch-glassful of the stain and the whole placed in a moist chamber in the dark for from three to five days. It is then washed in gently running water for some hours, rinsed in distilled water, dried, and mounted in the usual way. More expeditious, though not giving such clear and well-defined specimens, are aniline gentian violet and carbolic fuchsine. This latter stain I have found it advantageous to dilute one-third with distilled water. From twelve to thirty-six hours is sufficient for these in a moist chamber. The cover-glasses are washed in running water in

[19] Trans. of the Académie de Médecine, 1891-92.
[20] Practitioner, 1890 and 1889, and Brit. Med. Jour., vol. ii., 1892.

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the same way, then well rinsed with 30 per cent. alcohol, washed in distilled water, dried, and mounted. The acetic acid clears the synovial film, and allows the dye to penetrate more readily, the prolonged staining deeply colours the organisms, so that the washing process leaves them well stained, though the film is decolourised, and the moist chamber, by preventing evaporation of the dye, obviates the precipitate. Microscopic examination of the specimens reveals an organism possessing peculiar characteristics. At first sight it appears to be a diplococcus, the two cocci being distinctly stained, but separated by a clear unstained interval about equal in length to the diameter of either stained end. This interval I have never succeeded in staining. But careful observation will show, especially where the substratum is faintly coloured, that the intervening portion is nearly as broad as the diameter of either stained extremity, and that it has parallel contours. I therefore consider the organism to be a bacillus which exhibits very marked polar staining. The average length is 2 μ and the average breadth 0·6 μ, but this latter measurement varies greatly with the intensity of the staining. But the organism, as seen under the microscope, appears much smaller than these measurements would indicate, owing to the limited portions stained. The number of organisms met with in a cover-glass specimen of synovial fluid from a joint affected with rheumatoid arthritis varies greatly. Sometimes the field is crowded with them; at other times they are scattered and hard to find. These differences appear to follow very closely the acuteness or chronicity of the disease. The organisms are generally evenly distributed through the film, showing, however, a tendency to congregate around leucocytes. Their arrangement is always discrete. I have never seen chains or masses formed.

Though the staining methods mentioned above have given me the most satisfactory specimens, yet the organisms can be seen when stained for a much shorter time, especially with gentian violet, methyl violet, or carbolic fuchsine. But it is found that these stains if allowed to evaporate deposit upon the cover-glass a precipitate of dye which so closely resembles the organism that it is by no means easy to recognise them when but few are present in a preparation so obscured. For this reason I have quite discarded heating the stains, because after such a brief staining attempts to remove the precipitate by washing and the use of reagents bring about more or less completely the decolourisation of the organism, whereas after a longer contact with the stain the microbes are coloured more firmly and are less easily decolourised. But there is one exception to this statement in a method which I have devised and found useful. Impressed with the small size of the organism and the minute portion stained, it occurred to me that the protoplasm might take up dyes more readily if it came into contact with them while moist. With this in view I mixed a drop of synovial fluid with a few drops of the stain (aniline methylene blue being best) on a cover-glass and rubbed out with a platinum needle. The cover-glass, with the stain and synovial fluid together, was then dried slowly over a burner and when quite dry fixed by passing several times through the flame, then freely washed with water, dried, and mounted. In this way I obtained very fair results, the greater part of the stain being washed off, leaving the organisms well coloured. For rapid diagnosis this method is very useful. Treated by Gram's method the organism is almost completely decolourised. I have been able also to detect the organisms in the synovial fluid in the hanging-drop specimen, but this is far from easy unless they are present in large numbers. I have now stained and examined the synovial fluid from various joints from eighteen cases affected with rheumatoid arthritis, and in every one have observed the organism which I have described above, but in fluids from distended joints due to other causes, as chronic synovitis, gonorrhœal and tubercular affections, I have entirely failed to find them. (Fig. 1. Synovial fluid, stained gentian violet. × 900.)

Cultivation.—At first all attempts at cultivation, both aerobic and anaerobic, yielded apparently no result; but I imagined that this might be due in part to the small size of the organism—so that if it formed colonies they might be scarcely perceptible, and, judging from the scattered distribution in synovia, that the tendency to a free growth might be small—and in part to a slow development. Keeping these points in view I resolved to try it upon a large scale and in such a manner that any change in the medium might be easily detected. Into litre or half-litre flasks were put 250 c.c. of peptone beef-broth, filtered repeatedly until it presented a perfectly clear and bright appearance. Great care was taken over this to avoid the slightest obscuration. The flasks were sterilised and placed in an incubator kept at blood heat for several days, to prove their sterility and also to be sure that the fluid remained perfectly clear. If these conditions were fulfilled the flasks were carefully opened and a drop or two of synovial fluid from an affected joint allowed to enter. The flasks were then incubated at blood heat. Similar flasks, but *uninoculated*, were also incubated at the same time to serve as controls. I was fortunate enough to attain success with the first experiment. The first point noticed was that for three days the beef-broth remained perfectly clear, pointing strongly to the conclusion that the synovial fluid contained no ordinary organism. But from the fourth day and onward there could be seen floating in the clear fluid very minute particles, and these increasing gave rise to an appearance resembling "gold dust." This effect was enhanced by lightly shaking the flask. Sometimes the growth seems to stop at this "gold dust" stage, but at other times it may become slightly flocculent, recalling to mind the appearance of a commencing growth of tubercle bacilli in glycerine beef-broth. The beef-broth never becomes turbid, but always retains its bright appearance. The control flasks showed no such development. Microscopic examination of such a culture, stained as before, displays the organisms in considerable number; but it can be readily understood, from the delicate nature of the cultures and the imperfections of staining methods, that a too great reliance on stained specimens was not advisable, and that additional evidence would be helpful. Verification was obtained by making hanging-drop specimens, and this is the easiest method of demonstrating the presence of the organism. In the hanging-drop the microbe appears precisely as in the stained specimens, with two bright refractile ends and an intermediate part much less obvious. They may occur in zooglœa masses, or as discreet individuals hugging the edge of the drop. They are non-motile but have a marked oscillatory movement. I have been fortunate enough to see them undergo division in the hanging-drop specimen. The intervening portion lengthens out, the ends appearing to pull against one another energetically, the whole organism oscillating the while uneasily. The middle part lengthens out more and more, so that the organism appears to be almost twice its ordinary length, then suddenly the link snaps and the freed ends fly off in contrary directions and are lost amidst their fellows. This phenomenon helps, I think, to explain some variations in length frequently noticed in stained specimens from cultures. In these, some bacilli will be seen very short, the stained ends quite close together, with a minute unstained connecting link, very suggestive of a diplococcus. These I take to be quite young organisms. Some, however, are much longer, attaining a length of 3μ or possibly 4μ, the stained ends widely separated, and a clear, unstained sheath faintly visible with the highest powers. These I imagine to be the older forms soon about to divide. In these older forms, too, the staining is sometimes somewhat different. Instead of the stained portion being more or less spherical at the ends of the organism the coloured part is in the form of a conical cap, the base towards the centre of the bacillus, and spreading faintly down the edges of the sheath. These forms show best the claim of the organism to be considered a bacillus. It will be obvious, however, that it is very difficult to bring out these subtle differences in a photograph, and, indeed, the limited staining of the organism and its minuteness render the production of good photographs by no means easy. (Figs. 2 and 3. Fig. 2 shows a beef-broth culture, stained fuschin. × 1200.) If beef-broth cultures are inoculated on tubes of sloping nutrient agar-agar and incubated at blood heat, growth takes place in about three days and in a very characteristic manner. This growth is exceedingly delicate. It appears no more than as a fine transparent film, which under a lens can be seen to consist of minute colonies no larger than a pin point and perfectly transparent. To the naked eye it bears a very close resemblance to condensation water, though control tubes and the obvious tests show that this is not the case. It grows also on Löffler's serum, but here the growth is even more difficult to recognise owing perhaps to the opalescence of the medium. It occurs as minute points, least difficult to observe at the lower part of the tube, where the condensation water has washed off the cholesterin. Stained cover-glass specimens and hanging-drop specimens made from such cultures reveal

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an organism identical morphologically with that described as present in the beef-broth cultures and synovial fluid. I have also grown the organism in milk, where it appears to flourish, but without causing curdling or precipitation of the casein. On nutrient gelatin, however, at 22° C. I have never succeeded in getting a growth, and in liquid gelatin, incubated at 37° C., there is no visible growth. Examination of the blood in cases affected with rheumatoid arthritis has also afforded me positive results of the presence of the organism. I have examined the blood taken near to an affected joint and also that from a distance, and in both have been able to detect the organism in microscopic specimens. Out of five specimens of blood submitted to me I have been successful in three, and these were the most severe cases. But further proof of the presence of the organism in the blood is the fact that twice I have been able to obtain cultures from it. The method was the same as previously described. The blood was inoculated into flasks of clear sterilised beef-broth and incubated at blood-heat temperature. Sub-cultures were also made from these flasks on to agar-agar and blood serum. The organism found was identical in every respect with that which grew from the synovial fluid and with that which was observed in the stained specimens. Some animal experiments have been made for which I am indebted to the Council of the Royal College of Surgeons of England and to Dr. G. Sims Woodhead. Two cubic centimetres of a beef-broth culture were injected subcutaneously into mice, guinea-pigs, and rabbits, but without a fatal result. There is some reason to think, however, that the cultures set up a disease in rabbits which affected the joints, but further experiments are necessary to arrive at the truth with regard to this matter.

As far as I am aware, only one organism has been previously associated with rheumatoid arthritis which it is necessary to discuss. This was described by Schüller.[21] He writes of a bacillus 2·6 μ long and 0·75–0·995 μ broad which exhibits polar staining. It is easily coloured by ordinary stains, especially carbolic fuchsin, but very easily decolourised. It is noteworthy that Schüller thinks it incumbent on him to point out the distinction between his organism and tubercle bacilli. It grows readily upon gelatin at 25° C. In 2–3–6 days small white grains or knobs appear. The gelatin is liquefied, and eventually the organism grows to such an extent that the whole mass becomes an opaque white. On agar-agar it grows as greyish-white flecks or films. It is obvious that the organism described by Schüller differs markedly from the one under discussion; in fact, the only points of resemblance are the polar staining and the easy decolourisation. It therefore appears to me to be indisputable that the organism of Schüller is not that which was discovered by Dr. Bannatyne and Dr. Wohlmann.

To sum up. 1. In the synovial fluid of eighteen cases of rheumatoid arthritis an organism has been demonstrated which is constant in its characteristics. 2. The organism is a minute bacillus exhibiting marked polar staining. It is difficult to stain and easily decolourised. 3. The organism can be grown in culture media and presents striking characteristics. In beef broth it gives the appearance of gold dust and on agar-agar and serum its growth is almost invisible. It does not grow on nutrient gelatin at ordinary temperature. 4. It is present in the blood in severe cases. 5. It has not been found in the synovial fluid from distended joints due to other causes. It should be added that it has been impossible to examine sections of the synovial membrane owing to the want of pathological specimens. In conclusion, I should like to record my thanks to Mr. Barnard for the care and skill he has expended on the photographs.

[21] Max Schüller: Untersuchungen über die Aetiologie der sogen chronisch Rheumatischen Gelenkentzündungen (Berliner Klinische Wochenschrift, Sept. 4th, 1893).

MEDICO-PSYCHOLOGICAL ASSOCIATION. — The spring meeting of the South-Western Division was held at Bailbrook House, Bath, on the 14th inst., the President being in the chair. There was a large attendance of members and several important resolutions were passed. The report of the Committee on Criminal Responsibility was ordered to lie on the table. The discussion on the "nursing staff" was taken part in by several members. Dr. Stewart contributed a useful note on Section 38 of the Lunacy Act, 1890. The members afterwards dined together at the Grand Pump Room Hotel.

COLOUR VISION.[1]

BY W. G. LAWS, M.B. EDIN., F.R.C.S. ENG.,
SURGEON TO THE NOTTINGHAM AND MIDLAND EYE INFIRMARY.

THE speaker pointed out that the subject lay in the debatable region between mental states and physical processes, where so many interesting problems remained unsolved. The eye was the end organ which brought us into direct relation with the ether, that ultimate form of matter as to which it became possible to doubt whether it was material at all, and which probably entered closely into the processes of thought itself. Before speaking of the theories of colour vision it might be asked what was there in colour vision that so many scientific minds had felt required explanation. It would be noticed that every theory contained the same fundamental idea that there must be a certain number of colours, varying with different observers, but always few, which were to be regarded as pure or simple colours, all others being considered as compounds or mixtures of these. On looking at the perfectly continuous series of colours which we see in the spectrum there seemed to be no obvious physical reason for this distinction. It was, indeed, a psychological rather than a physical one. We had an innate disinclination to conceive of an infinite number of different causes for the infinite number of different sensations of which we were conscious; it was a principle deeply rooted in our reason, expressed long ago by William of Occam, whose famous Razor, "*Entia non sunt multiplicanda*," was employed by us nowadays as constantly in the solution of physical problems as it was by the Invincible Doctor in the division of the sophistries of Rationalism. Mr. Laws hoped to show, however, in relation to one at least of the theories that it was possible to cut too close with it. Many theories of colour vision had been proposed during the last 200 years, some of them interesting and original, but two only had gained any general acceptance and to these the discussion would be confined. He then described the theory of Young as it was published in 1801, its modification by Helmholtz more than half a century later, with his proof of the mathematical possibility of reducing all our colour sensations to three. Hering's theory was next described, mainly in extracts from his original papers, Mr. Laws considering that none of the published accounts of it in this country did justice to the simple conception, the logical development, and lucid expression of the theory as stated by Hering himself. What we might fairly demand of a theory of colour vision was that it should give a reasonable explanation of our everyday experience with regard to our sensations, and also should furnish us with a trustworthy guide when the conditions were modified by pathological processes. As it was impossible for him to discuss all the phenomena in the light of these theories he would make the appeal only to an experiment made for us by nature, namely, the condition of congenital colour-blindness. Of this Mr. Laws considered that practically only one type existed, admirably described in Dr. Pole's account of his own case; that other types had been described was due to the attempt to make the facts of observation fit with an erroneous theory; the rare cases of monocular colour-blindness were quoted as highly conclusive on this point; finally, the verification was at the hand of each one in the colour-blind zone of his own retina. He summed up the evidence from colour-blindness as showing that whenever there is a diminution of the number of our colour-perceptions it is not *one* that disappears, but always a *pair* of complementary colours. Here was the reason that the trichromic theory of Young failed—it was not in harmony with the essentially paired character of our colour sensations. Further examples of this character were given in the phenomena of successive and simultaneous contrast, and it was pointed out that we have only to look at a colour in order to call up the sensation of another as definite and (under proper conditions) as brilliant as the former, and having the constant psychical character that it is the greatest possible contrast to the former that our minds can conceive. The physical relationship of the two was such that if the spectrum be divided into two halves, and the more refrangible be superposed on the less refrangible half, then colour by colour and shade by shade the one will neutralise the other and a colourless band result. The

[1] Abstract of a paper read before the Nottingham Medico-Chirurgical Society on April 15th, 1896.

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dividing line between the two halves corresponds to the neutral point of the spectrum of the colour-blind, and thus the same relation holds for their spectrum as for ours. This very remarkable relationship had, he thought, had less importance attached to it than it deserved. The three pairs of antagonistic chemical processes of Hering seemed to him but crudely to account for the facts. Might there not be a deeper cause for it? Much light had been thrown of late years on the relations of light and electricity, originally by Clerk Maxwell's mathematical development of the relations of certain physical constants into an electromagnetic theory of light, and, perhaps more strikingly, by Hertz's demonstration of the possibility of producing electromagnetic waves which had all the essential characters of those of light. We know as little of the real nature of electricity as of that of the ether; perhaps, indeed, they were one and the same thing; but one of the most characteristic properties of the former was its power of producing a condition of polarity, or the separation of equal and opposite energies, in matter under its influence. Might not this furnish a clue to the intimate nature of the action of light on the retina and so lead to a completer theory of colour vision than we yet possess?

LITHOTRITY IN CASES OF STONE: SIMPLE AND COMPLICATED.

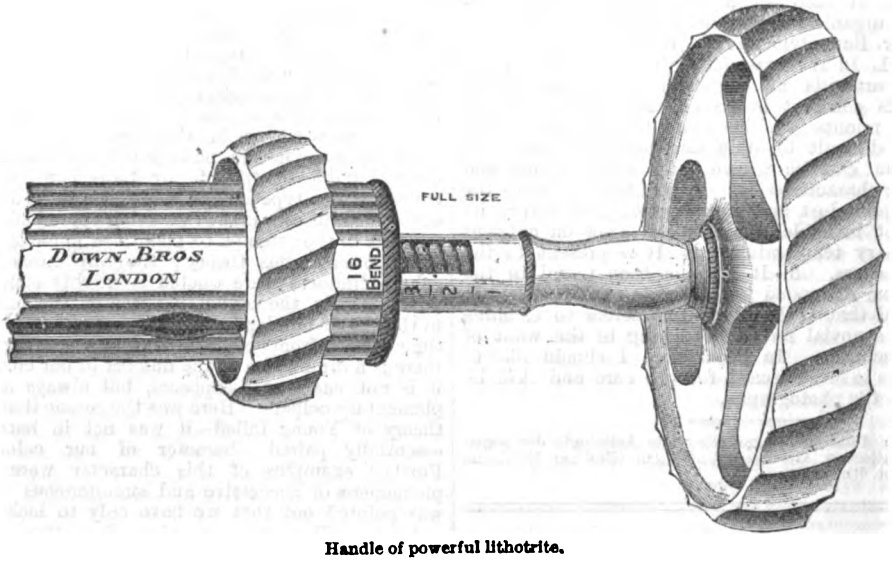
BY HERBERT MILTON, M.R.C.S. ENG.,
PRINCIPAL MEDICAL OFFICER, KASR-EL-AINI HOSPITAL, CAIRO.

(Continued from page 1066.)

THE result of Bigelow's operation for large stones has been excellent, fifteen cases over two ounces without a death, but at the same time it must be admitted that the execution of such operations is not facile. First as to the instruments required. The lithotrite to deal with large stones must be very powerful and at the same time such that the power can be discriminately and delicately applied. It must also be so constructed as to cause the least possible toil to the operator—a matter of great consideration in an operation lasting between one and two hours. I have always employed a modified Thompson's lithotrite. The modifications have been carried out for me by Messrs. Down Brothers, who have kindly expended great time and trouble in the work. They have produced for me instruments of the most excellent make and finish. I have seen and used lithotrites by many makers, English, American, German, French, and Italian, but have never come across any to compare with the ones they have lately made for me. The instruments I use for large stones are two. The first has a gape of two and a half inches; it measures fourteen English in the shaft and fifteen and a half at the shoulder. It is fully fenestrated and has a comparatively short beak. It has two modifications in the handle (Fig. 6). The wheel is much larger than usual; its diameter is two and a half inches and is made of aluminium for lightness. This increased size of the wheel adds very considerably to the pressure which can be exerted on the stone and also greatly increases the delicacy with which the pressure can be applied. The button which is generally employed to bring the screw action into play is replaced by a ring surrounding the handle. This ring runs very easily and it can be pressed on by the forefinger or thumb without altering the grasp on the handle, which is made a little longer than usual. I have never yet met the stone which this instrument has not been powerful enough to crush and I doubt very much whether such stones ever occur. I have had stones, however, too large to be seized in its grasp. I have therefore had made another lithotrite exactly similar in construction except that its gape (Fig. 7) is five inches—a gape sufficient for any stone ever yet met with. It was with this instrument that I crushed the stone of twelve ounces.

The evacuating tubes for operations on large stones should be straight and as large as possible. Egyptian patients have, I think, exceptionally large urethras, and I have frequently been able to introduce a No. 22 English, and I usually work with a No. 18 or 20. Of course, no force must be used in introducing a tube, but the largest should be used that can be introduced without violence. Secondly, as to the operator. There is no question that in order to crush a large stone well the operator must be in thorough condition and in constant practice, or, to use a sporting term, be in "training." During the first twenty minutes of a long crushing most men can maintain the necessary delicacy of manipulation combined with the exercise of considerable force; but when it comes to working at the same strain for a second, third, fourth, or even fifth, sixth, or seventh period condition begins to tell. The force required to be exerted is often the full power of a strong wrist and arm even when using the powerful instruments I have described, and this force has to be exerted with great discrimination and great patience. Nothing, I think, can be sounder than the advice given by most experienced lithotritists to beginners not to crush big stones. I would, however, modify this advice to beginners thus: not to crush big stones except through a perineal incision. Given powerful instruments and an experienced operator the difficulties likely to be met with in crushing big stones are two. The first difficulty is in the seizure of the stone. This difficulty may arise from one of two causes—the size of the stone or the contraction on it of the bladder wall; very frequently the two are co-existent. With ordinary lithotrites the mere size of the stone may render it impossible to bring the screw power into action. Reference has been made in THE LANCET to a lithotrite built for an Indian surgeon to cope with such enormous stones. He had found on one occasion when grasping a

FIG. 6.



Handle of powerful lithotrite.

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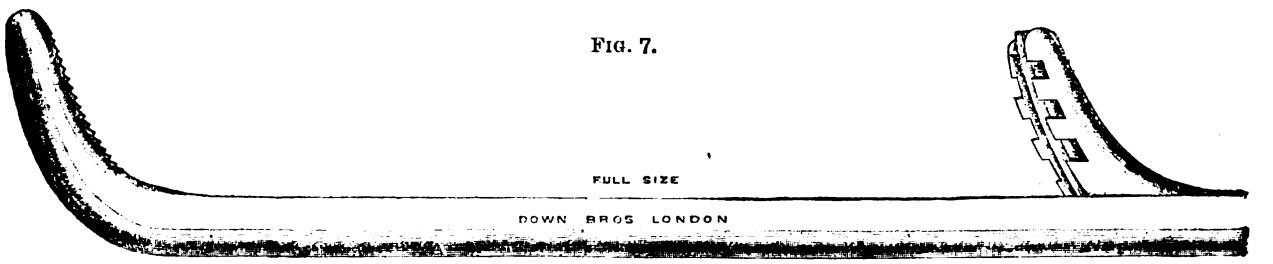
large stone that the whole of the male screw projected beyond the handle of the lithotrite and that in consequence the screw action was completely out of gear. His remedy, devised on the spur of the moment, was excellent and was as forcible in execution as it was ancient in conception. He hammered the projecting extremity of the male blade until, after suffering considerable damage, it returned within the limits of the screw action. To meet an emergency the remedy was excellent, and to judge from the description the operator exhibited a perseverance which fell but little short of that of the French surgeon who early in this century only abandoned the attempt to fracture a stone by the same method after delivering a thousand blows. To construct a new instrument, however, to carry out this treatment was but to return to the percuteur of Baron Heurteloup, which was entirely superseded half a century ago by Weiss's screw action. The new instrument apparently embodies a percuteur as an addition to the screw action; it would seem to be much simpler to extend the screw, as has been done in my larger lithotrite, to the required dimensions. With this instrument any stone can be seized. The largest stone in my collection, weighing 34½ oz., comes easily within its grasp. It is hardly likely to come in contact with a larger one. The other cause of difficulty in seizing a large stone, the contraction on it of the bladder walls, is much more important. In my earlier operations I have on various occasions abandoned a lithotrity on this account. I have found that large stones are very frequently accompanied by extreme irritability of the bladder and partly from this cause and partly from the stone in some cases being large enough to occupy the whole bladder cavity the muscular walls are so contracted on it as to offer a very great resistance to the insinuation of the blades of the lithotrite. The force required for this insinuation is often such as to raise great apprehension in the mind of the operator as to with a very large one I prefer to introduce, if possible, from 400 to 500 grammes. If necessary I maintain the pressure of 75 centimetres for five minutes, and then if the resistance is not yet overcome I raise the recipient one metre above the bladder level. This is nearly always sufficient after from three to five minutes, but in some rare cases I have had to increase the pressure to one metre and a quarter, which I consider, when all due precautions are taken, to be within the limits of safety, and at this level I have never met with failure. The presence of this considerable quantity of water in the bladder renders the seizure of the stone not only possible but with ordinary skill and patience easy. It must be remembered, also, that a stone has a smallest as well as a largest diameter. It often happens that a stone which when first seized is too big for the gape of the instrument may when grasped at another point come easily within the range of the screw action. It has been proposed by some operators to deal with such stones by gradually picking off fragments with the lithotrite until the mass is sufficiently diminished to allow of its being seized. This process is, however, of necessity slow, and I prefer to use an instrument with a sufficiently large gape. The second difficulty arises in the crushing. The resistance of the stone to the action of the instrument may be very great. It is due much more to the hardness of the stone than to its size, very large stones being frequently phosphatic in nature, soft, and friable. The most difficult stones to crack that I have come across have been between two or three ounces in weight. The oxalate of lime stone is, I think, the hardest of all, but I have met with stones composed chiefly of urates with a slight admixture of phosphates, which have been almost if not quite as resistant. For such stones the lithotrite must be strong and heavy and absolutely trustworthy, but with an instrument such as I use and have described above every stone may be crushed. They are not, however, to be crushed by simple force. The amount

FIG. 7.



Gape of powerful lithotrite.

the possible effects on the walls of the bladder. The danger of any serious injury is, however, in reality very slight, the bladder walls being often much thickened, and being in all cases very resistant to, and probably proof against, all steady movements of a blunt instrument within anything like reasonable limits. In such cases the distension of the bladder with fluid may be a great assistance, though it is often difficult of execution and, unless properly carried out, not devoid of danger.

Bladders have been ruptured by forcible injections during lithotrity and such cases have been recorded. In the overcoming of bladder resistance, however, time as well as force is an important element, and a long-continued slight pressure is as effectual as it is free from danger. In cases where there is considerable resistance and where distension is necessary I attach great importance to the use of continuous hydrostatic pressure. I pass into the bladder the largest size evacuating catheter that will easily enter, and after emptying and washing out the bladder I insert into the catheter the nozzle of an indiarubber tube one metre in length, terminating in a glass recipient, graduated in grammes and holding 1 kilo of boracic acid solution. The bore of the nozzle is 1 millimetre in diameter, so that the current can only enter the bladder very slowly, and every precaution is used to prevent the introduction of any large quantity of air. The recipient is now elevated 50 or 75 centimetres (20 to 30 inches) above the bladder level. In most cases 50 grammes or so of fluid enter the bladder at once, and the flow then either ceases or owing to the rejection by the bladder of the fluid introduced the level in the recipient rises again. Usually after a minute or two, and after various oscillations of level, 200 or 300 grammes of fluid, equal to about 8 to 12 ounces, enter the bladder. For an ordinary large stone this quantity is sufficient, but where dealing of pressure exerted by the jaws of the lithotrite is, of course, the principal factor, but, as in the dilatation of the bladder so here also, time has a very important influence. The experienced operator generally knows when he has before him a really hard stone. It has probably existed for some time and has grown very slowly. The urine is generally acid and contains little or no mucus or pus; there is, in fact, no considerable cystitis. The sound gives out a ringing note and the stone usually moves freely about in the bladder. In the presence of such a case let him choose his strongest lithotrite. Having seized his stone, which is often a matter of difficulty, as many very hard stones are round and smooth, he will probably find that the male blade is sharply arrested with something like two inches of screw projecting from the handle. Directly he applies the screw force he will experience an abrupt resistance which all the strain he can or dare apply is unable to overcome. Let him wait half a minute and then put on an extra half or quarter turn; if necessary let him repeat this wait and this extra pressure two or even three times, and the reward of his patience will almost certainly be the same as has always happened to myself. During one of these periods of waiting a sharp explosive crack will be heard and the difficulty of the case be over. A third difficulty in crushing a large stone arises from the amount of débris. I am convinced that in dealing with small stones the method adopted by Guyon is most excellent. He generally submits the stone to a very prolonged crushing before removing the lithotrite, occupying as much as twenty minutes in reducing the stone to the smallest possible fragments, and in many cases he continues the crushing until he has satisfied himself that all the fragments are small enough to pass through the evacuator. In this way the operation is completed with one or at most two introductions each of the lithotrite and of the evacuator,

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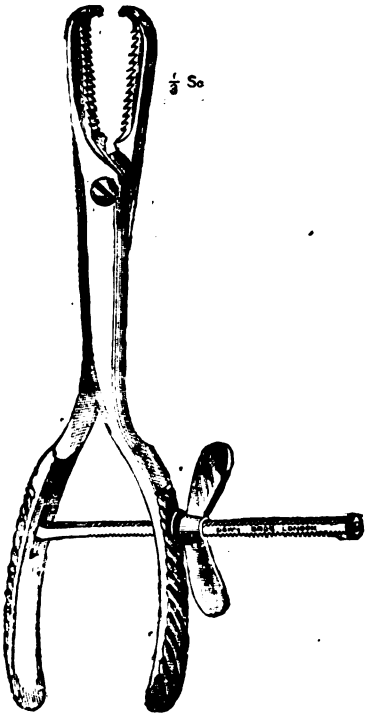
and much bruising and injury is spared to the urethra and prostate. In dealing with large stones I consider, however, that it is better to evacuate fragments frequently, and in such cases I stop crushing so soon as I feel my lithotrite impeded by the collection of many fragments and evacuate. In the early part of a prolonged operation I may remove my lithotrite after fifteen or sixteen crushes and evacuate, and I generally find that the procedure is thereby greatly facilitated. In removing, for instance, the twelve-ounce stone I must have introduced the evacuator at least six times before removing two ounces of débris; on the other hand, five or six evacuations sufficed to remove the other ten. I would give, then, a general rule as follows. When dealing with small stones endeavour to complete the fragmentation without removing the lithotrite, but in the case of large stones evacuate as soon as there is so much débris as to interfere with the free use of the lithotrite.

It will be gathered from the above remarks with regard to the suitability of Bigelow's operation as a treatment for large stones, that although the results obtainable may be excellent considerable practice is necessary before such results can be obtained. For the surgeon who only occasionally meets with stone cases I consider that there are other methods of operation more likely to meet with success, and of these other methods I should certainly give preference to that to which I have referred under the name of perineal lithotrity. There are various methods of performing this operation, but they all may be classified under three heads: (1) an incision is made into the urethra from the perineum and a strong lithotrite passed from this incision through the remainder of the urethra into the bladder; (2) an incision is made into the urethra from the perineum, the remainder of the urethra is stretched by some dilating instrument, and passage into the bladder thus given to a large stone crusher; and (3) an incision is made from the perineum into the bladder as in any one of the various classical operations for perineal lithotomy, and through this wound a stone crusher is introduced into the bladder. The first method has been recently practised and advocated by Keith.[1] He gives an excellent description of the operation and refers to very good results. I fail to see, however, what is gained by the procedure. The method is just as difficult as urethral lithotrity, if not more so, and it in no way increases the scope of the latter operation, which has been shown to be capable of removing stones much larger than any removed by Keith. I would limit its application to cases in which it is impossible to pass the lithotrite down the penile portion of the urethra. The second method was strongly advocated by Dolbeau, but in his hands and in those of other surgeons the results yielded have not been favourable. The method is very fully described in the French Medical Encyclopædias. The third method is the one I have chiefly practised myself and which I consider to be the best operation for large stones in the hands of the general surgeon. The method is referred to in most textbooks on surgery and is most generally condemned. As therein described, the perineal incision has been single, double, or multiple. Many forms of crushing instruments have been devised and unfortunately used. They have generally been most ingenious and more cumbersome. I have myself employed but one form for this operation, making a left lateral incision into the bladder and using a simple straight strong pair of forceps as a crusher (Fig. 8).

I will describe one of my operations, which will serve as a type for them all. The patient was an Egyptian fellah, male, aged fifty-four years, suffering from a large vesical calculus. The bladder was washed out with boracic acid solution and a laterally grooved staff introduced. The usual incision for lateral lithotomy was made into the bladder, the skin being freely divided, the prostate and neck of the bladder but slightly. The forefinger of the left hand was then inserted into the wound as the knife was withdrawn, and guided by the staff was insinuated in the bladder, dilating the wound in its progress. This method is in opposition to the directions usually given in text-books; I have, however, uniformly adopted it in all lateral lithotomies, of which, as shown in Table I.,[2] I have performed twenty-eight without a single death. My reasons for advocating this method are: (1) the diminution of the risk of hæmorrhage; (2) the exact limit thereby given to the wound in the neck of the bladder; and (3) the facility of the procedure. It must be observed, however, that all forefingers are not suitable for this purpose and that it is more difficult of execution and less advisable in the case of small children. Care must also be taken to insinuate the finger and not to use any violence to the neck of the bladder. In perineal lithotrity I have found this method particularly useful, as my crushing forceps coincide in diameter with my forefinger, and where the latter has been introduced they can easily follow. Having passed my finger fully into the bladder the staff was first withdrawn and then my finger. A careful examination of the incision having shown that there was no considerable hæmorrhage the crushing forceps, carefully oiled, were introduced through the wound on to the stone. Each handle of the forceps being held in one hand, the jaws were carefully opened, and, at the same time, their extremities were kept in careful apposition to the stone. There was, as is usually the case, some resistance to the opening of the forceps due to the stone being driven down to the neck of the bladder by muscular contraction. Graduated pressure on the forceps was sufficient to push the stone upwards and to thus free the jaws of the forceps from the constriction. The jaws, still in apposition with the stone, were then cautiously and easily opened until a large portion of the circumference of the stone was included in their grasp. The stone thus held was moved about in all directions and twisted through a quarter circle to ensure that no bladder wall was included. With ordinary care such an accident is almost impossible, and the difference in sensation as conducted by the forceps gives immediate and easily recognisable evidence should it occur. An endeavour was then made to crush the stone with the hand power only; but as this failed the screw action was applied with immediate success, the stone breaking with an audible report. One or two slight movements of the forceps sufficed to free the jaws of the crusher from fragments. The bladder was then carefully sounded with the closed forceps and a large fragment fixed upon. The forceps were again opened in the same cautious manner as before and this fragment crushed. This manœuvre was repeated three or four times until the amount of débris was such as to impede the crusher. This was then removed from the bladder, great care being taken to free its jaws from all fragments which might injure the wound during its extraction. These fragments might be detached either by movements of the forceps or with a thick

FIG. 8.



Lithoclast for perineal lithotrity.

[1] Indian Medical Record, Calcutta, 1891, p. 521; also THE LANCET, June 4th and 11th, 1892.

[2] THE LANCET April 18th, 1896.

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blunt probe. The crusher being removed, the finger, carefully oiled, was introduced into the bladder, partly in order to recognise the existence of fragments small enough and partly to place them in the most favourable position for extraction. A very small pair of lithotomy forceps was then introduced into the bladder and fragment after fragment removed. Great care was taken to attempt the removal of no fragments so large as to be difficult of passage. A repetition of these manœuvres of crushing and removal was sufficient to eventually entirely evacuate from the bladder a stone weighing 102 grammes or nearly 4 ounces. The bladder was then carefully washed out with a strong stream of water through the largest sized evacuating catheter. The whole of its walls were thoroughly explored by the finger and every fragment of stone removed. The operation lasted nearly thirty-five minutes. The patient left the hospital completely cured three weeks later. I have performed this operation on twenty occasions for large stones; of these, five weighed between 2 and 3 ounces, seven between 3 and 4 ounces, four between 4 and 6 ounces, and four between 6 and 8 ounces. Every one of these twenty operations was successful. The operation, therefore, has given me the most successful results. I consider it to be much easier of execution in such cases than ordinary lithotrity and to be much safer than suprapubic or other form of lithotomy. I would recommend it to the general operator as the best method of coping with large stones. The reproach has been made to this operation that it is likely to be followed by a perineal fistula. In my own practice this has so far not occurred, and if great care be taken to remove all fragments there is but little chance of its occurrence. I would at the same time recommend great attention to the following points:—(1) The crusher should be a simple, powerful straight forceps, a little less in diameter when closed than the operator's forefinger, and should have a simple screw attachment; (2) the wound into the bladder should be only of such size as to admit the forefinger; (3) everything introduced into the bladder should be freely lubricated; (4) the extremities of the jaws of the forceps should be kept touching the fragment about to be seized, and every care taken to avoid seizure of the mucous membrane; (5) the greatest gentleness should be exercised in all movements; (6) no fragments should be removed by means of the crusher; (7) no attempt should be made to remove any fragments except such as can pass with complete ease; (8) the forefinger should be continually used to explore the condition of the bladder and the position of the fragments; (9) the greatest care should be taken to leave no fragments behind; and (10) complete cleanliness is absolutely essential.

I formulate the above axioms only after great consideration, inasmuch as they differ somewhat from the teaching of Reginald Harrison, who has done more than anyone to establish perineal lithotrity. He first brought his method before the profession in 1888, and up to May, 1895, had performed 150 operations all successfully.[2] He prefers to make an incision into the urethra only, and to introduce through this opening a crushing forceps into the bladder, the crusher having about the diameter of a forefinger. My experience has been that a forefinger cannot be introduced without laceration of the tissues about the neck of the bladder, and I prefer to determine the direction of this laceration downwards and outwards by a small incision rather than to leave it to chance. He utilises also the crusher to remove fragments, supplementing this instrument by washing out the bladder with an evacuating syringe. For myself I am convinced that the removal of fragments by an instrument which when closed equals in size the original opening cannot but be attended with laceration or bruising of that opening, and I think greater safety is obtained by using the crusher for crushing only and by removing fragments with a fine pair of forceps or with a spoon. I consider also that the difficulty which certainly exists in this operation of entirely removing every fragment necessitates a thorough digital exploration of the bladder. This cannot, I think, be effectually done through an incision into the urethra only. In principle, however, the operation recommended by Harrison in 1888 is identical with that which I have, following his indications, found so useful. His results also have been more favourable than mine, he having performed fifteen cases without a death, whereas I out of twenty-seven have lost one. With regard, therefore, to the treatment of the first complication of cases of stone, I am of opinion that the results obtainable by lithotrity are better than those which have been obtained by any other form of operation on stones exceptional for their size and hardness. I consider that practically every bladder stone uncomplicated, except with regard to its size and its hardness, can be removed by one of the two forms of lithotrity above described. The proportion of such cases suitable for the one operation or the other will depend on the experience of the operator. Bigelow's operation I consider to be the more brilliant, perineal lithotrity the more generally useful. The indication for the latter operation increases with the size of the stone and diminishes with the experience of the operator.

The next complications to which I have to refer are those arising from the position of the stone. Leaving out of consideration stones entirely outside the bladder cavity, the abnormal positions that I have had to deal with are four: (1) the stone has been partly in the bladder and partly in the ureter; (2) the stone has been lodged entirely or partly in a diverticulum of the bladder; (3) the stone has been lodged in a deep pouch behind the prostate; and (4) the stone has been partly in the bladder and partly in the urethra.

1. *Where the stone has been partly in the bladder and partly in the ureter.*—I have met with and diagnosed during operation three cases of this somewhat rare condition. In all of them there was in addition a stone entirely in the bladder cavity, and it was only on the removal of the bladder stone that the one impacted in the ureter was detected. Quite lately I have met with a case in which the only stone present was impacted at the opening of the right ureter. This case was diagnosed before operation, and supra-pubic cystotomy was performed for the removal of the stone. The first case I met with is worth recording. The patient was a healthy Egyptian fellah aged about fifty years. A largish stone had been diagnosed and I performed lithotrity. After removing some 60 grammes of débris, and after the evacuator had long ceased to remove any fragments, I could still feel and hear a stone on sounding. Repeated attempts to seize this with the lithotrite failed entirely. The stone, as felt by the sound, always occupied the same position on the right side of the base of the bladder. My suspicions being aroused I examined per rectum and felt a distinct, immovable, hard mass which I could balance between my finger and the sound. The position corresponded exactly to the point of entry of the right ureter into the bladder and the diagnosis was thus established. After much consideration I decided to attempt its removal and proceeded to open the bladder by a perineal incision. A supra-pubic opening would probably have been wiser, but the stone as felt per rectum seemed quite close at hand to the perineum. A finger introduced into the bladder easily recognised the stone, which after some difficulty I managed to seize with a lithotomy forceps. All traction, however, failed to move it. I proceeded to incise the opening of the ureter into the bladder, passing a long knife with a rounded cutting extremity along my forefinger on to the stone. After much difficulty I sufficiently liberated the stone to allow of its removal. The stone was an inch and two lines in length and nearly two inches in circumference. There was a very marked neck or construction corresponding to the orifice of the ureter; the part beyond this, about a sixth of the whole stone, had projected into the bladder; the other five-sixths had been retained in the ureter. The result of this operation was unsatisfactory, the patient dying some twenty days after the operation. Post mortem there were found very marked old kidney degenerations and a sub-peritoneal abscess around the right ureteral opening. This case is mentioned in the tables under the heading "Other." In my second case the diagnosis was made in exactly the same way as in the one above described. I decided, however, that if I could not seize the stone with my lithotrite I would let it be. After many fruitless essays I at last grasped it by pushing the stone up to the lithotrite with a finger introduced into the rectum. The stone remained at first immovable from its position, and during an extra strong effort the grasp of the lithotrite slipped. I was able, however, to grasp the stone again and after several trials succeeded in drawing it out of the ureter. Its subsequent crushing presented no difficulty and the case recovered perfectly. In my third case the diagnosis, treatment, and result were the same as in No. 2. In this case,

[2] Vide reprint of a lecture on Some Points in the Practice of Lithotrity and Litholapaxy, John Bale and Sons, London, 1895.

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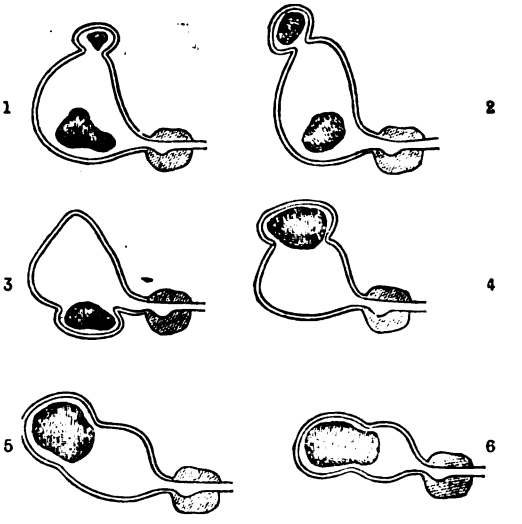
however, I kept the débris of the two stones quite separate. The bladder stone weighed 19 grammes and consisted of urates and oxalates; the ureter stone weighed 3 grammes and consisted of oxalates, urates, and carbonates. This condition is more common than is usually recognised, many cases having perhaps been diagnosed as stone in a diverticulum of the bladder. A most interesting case is recorded by E. H. Fenwick[4] of a double stone, one part of which is described as being in the bladder and the other in a diverticulum outside the base and back of the bladder. The very difficult operation for its removal was successful, and no more exact determination was therefore possible, but the condition so closely resembles that of my first case, in which the diagnosis was unfortunately confirmed by a necropsy, that I strongly suspect that in Fenwick's case also the stone was lodged in the dilated ureter. The same remark applies to a case reported by McArdle,[5] to one reported by T. V. Jackson to the Pathological Society of London, and to one at least of the cases described by Bruce Clarke in his paper on Latent Calculi.[6] Thomas Smith records a case.[7] Buckston Browne records a probable and Pitts a certain case in the Transactions of the Clinical Society of London, 1890, p. 89. At the same meeting Freyer described a stone partly in the bladder and partly in the ureter which was successfully removed at the second operation. Buckston Browne refers to another case in the Transactions of the Clinical Society of London, 1889, p. 36. The above records show that the condition is sufficiently frequent to be of a real importance, and I consider that in all operations for bladder stone the orifices of the two ureters should be carefully examined. Further, I think it of special importance to thoroughly examine this region in cases in which stone has been suspected and not found. The examination, to be effectual, must be bimanual. The forefinger of the left hand should be introduced into the rectum and should thoroughly explore the base of the bladder. The same region should at the same time be explored by a sound introduced into the bladder per urethram. Frequently this examination cannot be satisfactorily carried out except under chloroform, but if properly performed the presence of a stone partly in the ureter may be rendered either certain or very probable. Having detected a stone in this condition how should it be treated? In my opinion a through trial should be given to lithotrity. A small, light lithotrite should be used, the position of the protruding part of the stone carefully determined, and an attempt (to be repeated many times if necessary) made to seize it. The stone having been grasped by the lithotrite, half a turn of the screw should be given to tighten the grip and attempts be made to pull the stone into the general bladder cavity. Great assistance, both in seizing and dislodging the stone, may be given by a finger in the rectum. Should it be possible to grasp the stone but not to dislodge it I should not attempt to crush it *in situ*, there being too great a risk of crushing surrounding tissue at the same time. Having given a fair trial to lithotrity, and having failed, I should at once perform suprapubic cystotomy, enlarge the orifice of the ureter by careful dilatation or by several small incisions, and, if necessary, break up the stone with a small pair of necrosis forceps. The result of my operations for this condition has not been good. I have operated in all four times (once since commencing this paper), with a mortality of 2, or 50 per cent. The two successful cases were lithotrities. In the two fatal cases lithotrity failed, in the one I did lateral and in the other supra-pubic cystotomy.

2. *Where the stone has been lodged in a diverticulum of the bladder.*—I have met with six cases in which I have been able to diagnose the position of the stone in a sac communicating by a large or small opening with the bladder cavity. I have met with two others in which the condition, though certain, had not yet reached an advanced stage, and several cases in which the stone, though not encysted, always occupied a special portion of the general cavity. Of the six cases of complete sacculation (Fig. 9) Nos. 1, 3, and 4 were operated on successfully by urethral lithotrity and Nos. 2, 5, and 6 by perineal lithotrity—two successfully and one, No. 2, with a fatal result. The first case caused me for a time great anxiety. The condition had not been recognised before operation and the stone had been easily seized and crushed. The débris was passing freely through the evacuator, where I noticed a curious gurgling sound, and on inspecting the abdomen perceived that each injection of water into the bladder produced a swelling evidently outside the bladder cavity. I suspected at once that I had during my manipulations perforated the bladder wall. The extravasation of water seemed, however, so limited that I determined to thoroughly explore with a sound before proceeding to cut down on to the perforation. I managed to introduce the sound into the extravasation, and after careful exploration convinced myself, to my intense relief, that I had to deal with a diverticulum of the bladder. I recognised a stone in the diverticulum, but cannot say whether it was originally there or was a fragment which had been washed up. I introduced a small lithotrite into the sac and crushed the stone, the fragments falling into the general bladder cavity. The patient recovered perfectly. The second case is of importance from many points: (1) the almost complete closure of the sac; (2) the erroneous diagnosis; and (3) the fatal result. The patient was an Egyptian fellah aged about eighty-five years, suffering from a stone in the bladder with very fœtid cystitis, and his general condition was unsatisfactory. I tried to perform urethral lithotrity, but failed to

FIG. 9.



Examples of encysted stones. (Semi-diagrammatic.)

grasp the stone, the movements of the lithotrite being impeded by a tumour which could easily be balanced between the lithotrite in the bladder and a hand on the abdominal wall. Considering the age of the patient, the fœtid cystitis, and general debility I surmised the existence of a bladder growth, probably malignant. I made a perineal incision, crushed the stone, and removed it. I then introduced my finger into the bladder and thoroughly examined the tumour. Its surface was rough and fragments were easily detachable, and I therefore considered my diagnosis of malignant tumour fully confirmed. The patient died a few days later, partly from exhaustion and partly from septicæmia. On post-mortem examination the tumour situated at the summit of the bladder turned out to be a stone enclosed in a sac communicating with the general bladder cavity by a tiny passage through which a probe could only be passed with great difficulty. The whole cavity of the bladder was lined with pendulous granulations due to the presence of innumerable bilharzia embryos. In this case the communication between the sac and the bladder was so minute that the stone could not have been reached by any operation from the bladder cavity. Had an exact diagnosis been possible a supra-pubic operation with incision through the peritoneum into the cyst might have been attempted. Under the circumstances, however, it is doubtful whether the ultimate result would have been different. The third case was diagnosed before the lithotrite was introduced. I am, however, in doubt as to whether this was not a case of stone in the right ureter. On introducing the lithotrite I found, as I had found when sounding, that the stone could not be felt until I had reversed the lithotrite and insinuated its extremities into a cavity situated behind the prostate and to the right of the

[4] Brit. Med. Jour., Nov. 17th, 1888.
[5] Transactions of the Royal Academy of Medicine, Dublin, 1890, p. 170.
[6] St. Bartholomew's Hospital Reports, 1891, p. 117.
[7] Transactions of the Pathological Society, vol. xiv., p. 185.

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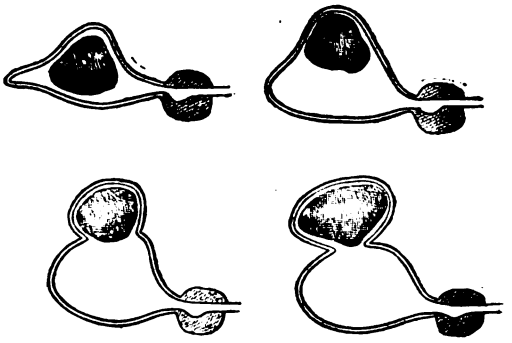
middle line. A finger in the rectum was sufficient to clearly differentiate the limits of the sac and to distinguish it by its position from a post-prostatic pouch. Having guided the jaws of the lithotrite into the cavity of the sac, and carefully controlling every movement by a finger in the rectum, I was able to seize and crush the stone, and after a somewhat prolonged and difficult operation I succeeded in removing all the débris through a curved evacuator. The fourth case was easily treated by urethral lithotrity, the communication being very free between the two cavities. The condition was easily recognised (1) by the position of the stone, (2) by the result of bimanual examination, (3) by the contour of the bladder when distended with water, and (4) by a careful examination of the cavity of the bladder with a sound after operation. The fifth and sixth cases were treated by perineal lithotrity and the condition easily recognised by the finger introduced into the bladder. In both I had tried urethral lithotrity and had failed. The sixth case was particularly interesting. The patient was a boy aged about fourteen years in whom a large stone had been diagnosed. Repeated attempts to grasp the stone with a lithotrite were in vain and I opened the bladder by a lateral perineal incision. The forefinger introduced into the wound entered a large cavity distended with urine. Behind this could be recognised the stone tightly grasped by the bladder. After great difficulty this was seized and crushed and the débris removed. Digital examination then showed that the bladder was divided by an annular constriction into two cavities, anterior and posterior, of nearly equal size. The lower part of this annular constriction stretched from the opening of one ureter to that of the other. The front cavity, therefore, coincided with the trigonal pouch largely dilated; the hinder cavity represented the rest of the bladder. The origin, or rather one possible mode of origin of these diverticula, suggested itself to me in meeting with some of their earlier manifestations. I have seen, as above stated, cases of what I consider to be the first stage of the encapsulating process. This condition is indicated by the stone always occupying a special portion of the bladder cavity. It has frequently happened to me in performing lithotrity to find the position occupied by the stone evidently not depending on gravity. I know of no stone lighter than urine, yet I have often found that a stone was to be felt only at the summit of the bladder, perhaps at the very highest point of that viscus, perhaps a little to one side or the other. In all these cases the stone has always retained the same position, and in most of them I have met with difficulty in grasping the stone with a lithotrite. For some time I failed to see the explanation of this condition until a case occurred in which, having after many attempts failed to grasp the stone, I proceeded to a perineal section. On introducing the forefinger I found that the stone was fixed in its abnormal position by the grasp on it of the muscular walls of the bladder, and it was only with great difficulty that I succeeded in displacing it. Once displaced it fell to the base of the bladder and I crushed and removed it easily. After the removal of the débris I thoroughly examined the bladder bimanually and could find no trace of any cystic formation; the walls presented, moreover, no irregularity or constriction of any kind. Some months later I came across a case (No. 136 on my list) in which a very similar condition existed, with this difference, however, that after the removal of the stone there still remained an evident, though apparently muscular, constriction producing a distinct irregularity in the shape of the bladder cavity. This I consider to have been a slightly later stage of the same condition as existed in the previous case. I consider, also, the sixth case of sacculated bladder to have been a still further development of the same condition, and so on through the other cases up to No. 2, in which the sac had been almost entirely closed off. I attach the principal importance in the production of encysted stone to the contraction on it of the muscular walls of the bladder. I would sketch the history of such a case as follows. The beginning of the story is probably the descent of the stone into the bladder. There it gradually increases in size, producing more or less of the usual symptoms attendant on stone. The bladder becomes irritated and its contractions excessive. For some reason, perhaps during sleep, when the stone probably rests in one place, the muscular contraction becomes such as to grasp the stone. This contraction may be spasmodic or continuous. In the latter case, after a certain time the continuous contraction will gradually tend not only to grasp but to envelop the stone. Those portions of the bladder walls which lie immediately beyond the stone, finding no resistance except their own rigidity, will gradually form an annular constriction, dividing the bladder into two cavities, one of which is occupied by the stone. (Fig. 10.) This muscular action, if continued long enough, and especially when assisted by inflammatory deposits and their secondary contraction, is, I consider, quite sufficient to convert the cavity into a sac communicating by only a small or very small opening with the bladder cavity. It is quite comprehensible even that this opening might become completely closed. I think that there are certainly, therefore,

FIG. 10.



Showing process of encapsulation from muscular contraction. (Diagrammatic.)

two methods at least by which an encysted stone may be produced—the first is by retention of the stone in the ureter and the second by muscular and cicatricial contraction on it of the bladder walls. The first method has been certainly demonstrated by the discovery of stones in the ureter as it pierces the bladder walls. The second method is rendered very probable (1) by its physiological possibility; (2) by the various stages observed in the cases quoted above; (3) by the fact that nearly all encysted stones fill the cyst they occupy; and (4) by the fact that while sacculated bladders from distension are common, cysts are very uncommon except in connexion with stone. The sixth case of encysted stone is particularly interesting on account of the position of the constriction. The lower part of the ring coincided exactly with the strong transverse band of muscular fibres stretching across the base of the trigone from one ureter to the other. The contraction of this band was in all probability the commencement of the encysting process, which extended later so as to completely surround the stone and to produce a double bladder cavity. I have examined many large stones, two in my collection, one of 36¼ oz. and one of 14 oz., one in the collection of Norwich Hospital (a cast), and several in the collection of the Royal College of Surgeons of England, and I have found on the under surface of nearly all of them a groove produced, I think, by the contraction of this transverse muscular band. I think that in many cases the portion of the bladder cavity behind this band contains the greater part of the stone, the portion in front of it forming the imperfectly acting urinary reservoir. This contraction of the muscular coat of the bladder on the stone is, I think, therefore, a great agent in producing a condition of encystment. It is at the same time the means of producing considerable alleviation in the symptoms due to the stone, inasmuch as it largely limits its movements. It has therefore the appearance of being an attempted cure, or rather alleviation, on the part of nature, and helps to explain the prolonged periods for which large stones have been patiently carried by their unfortunate possessors.

3. *Where the stone has been lodged in a retro-prostatic pouch.*—In Egypt prostatic disease is of very rare occurrence, and the number of cases of stone complicated in this way has not in my experience been great. The condition when met with also has been due much more to pouching of the bladder than to an enlargement of the prostate. The pouch in consequence is always largely open and the difficulties presented by it comparatively slight. In fact, I consider that a post-prostatic pouch when largely open is rather a help than a hinderance to the detection of the stone and to the performance both of lithotrity and

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lithotomy. With regard to detection, if it is made a routine practice to search the post-prostatic pouch it becomes the easiest place to find a stone. In lithotrity the pouch lies open in the most favourable condition for receiving fragments and forms a happy hunting ground for the reversed beak of the lithotrite. In lithotomy the pouch forms a swelling which the knife of the veriest tyro cannot miss. A pouch of this description presents, however, a complication under two conditions. Firstly, it is apt to retain tiny fragments even after very careful washing out. I have found that this may usually be avoided by using a slightly curved evacuator the beak of which is reversed into the sac. Careful washing out, injecting only very small quantities of water very slowly so as not to displace the fragments, is, when combined with equally careful searchings with the reversed sound, almost certainly successful. Secondly, it is apt to retain residual urine during convalescence. For this the simplest treatment is to make the patient pass urine while lying on his abdomen. Should cystitis ensue the bladder must be carefully washed out.

4. *Where the stone has been lodged partly in the urethra and partly in the bladder.*—This condition is uncommon and as a rule presents but little extra difficulty as regards treatment. The symptoms which may lead to a suspicion of the existence of this condition are two: (1) great increase of pain after micturition from contraction of the neck of the bladder on the stone, and (2) complete mechanical obstruction to the passage of any urine. The diagnosis is easily made on passing the sound; the only condition likely to be mistaken for it is the existence of a stone in the prostatic urethra. The treatment in both cases is the same. An attempt should be made to push back the stone into the bladder cavity. This is usually best accomplished by means of a large, straight evacuating tube which, guided and assisted by a finger in the rectum, is made to displace the stone from the depression or dilatation in which it is buried and to push it onwards. No great force must be used in these manœuvres, and should they fail a perineal incision should be immediately practised on to the stone.

There are of course various other positions which may be taken up by urinary calculus. In addition to the usual situations occupied by stones in the kidneys, ureters, prostate, urethra, prepuce, and scrotum, they have occasionally been met with partly or entirely outside the urinary organs. Such cases, however, do not come under the category of bladder stones, to which alone my observations refer, and I shall leave them out of consideration. The question to be decided, therefore, is, given that a stone has been recognised as encysted either by partial retention in the ureter, by sacculation of the bladder, or by a post-prostatic cyst, which is the best method of treatment? With regard to a stone partially retained by the ureter I have already expressed my opinion. When the stone is situated in a sacculus or diverticulum of the bladder the method of treatment should depend chiefly on the relative or actual size of the mouth of the sac. Or assuming the sac to be produced by muscular action, I would state my opinion in this way, that the method of treatment should depend on the stage of development of the sac. In the very earliest stages—viz., in those in which the stone is simply grasped by the contraction of a portion of the muscular walls—urethral lithotrity is plainly indicated. The only difficulty is in getting the first grasp of the stone. This difficulty may as a rule be easily overcome by distending the bladder with water. I have already referred to the methods I employ when crushing a large stone on which the whole bladder is firmly contracted. The conditions existing in the first stage of encystment of a stone are very much the same and the graduated pressure of the hydrostatic douche is equally efficient. After the introduction of a few hundred grammes of water the muscular contraction gives way and the stone drops to the bottom of the bladder either by itself or with slight help from the sound. When the process has arrived at a later stage and there is a definite permanent constriction of the bladder cavity, distension with water is of little avail. If the opening into the sac be large—say, equal in diameter to two-thirds of the diameter of the stone—and if the stone moves freely in the sac, an attempt may be made to perform urethral lithotrity. Such an operation must, however, be conducted with the greatest care and patience. That it is possible is shown by the success of the three cases (Nos. 1, 3, and 4) in which it was performed. It is, however, an operation which should only be attempted by a lithotritist in constant practice. Failing urethral lithotrity, the selection seems to be between perineal lithotrity and suprapubic lithotomy, and I think that each operation is fitted for a separate class of case. Those cases which seem suitable for urethral lithotrity from the largeness of the mouth of the sac, but in which this operation cannot be carried out, may, I think, be treated with a good prospect of success by perineal lithotrity. Those cases which, from the smallness of the opening, are evidently unfitted for urethral lithotrity are equally unfitted for the perineal operation and should, if they are interfered with at all, be treated by suprapubic cystotomy.

(To be continued.)

ON THE CLINICAL VALUE OF DIURETIN.

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WITH special drugs of this description the difficulty the practitioner meets with is to determine the particular class of cases in which they may be of value. When first introduced these therapeutical agents are given somewhat at random, and most often only isolated cases are reported or the results merely tabulated under a symptomatic heading without any differentiation of the real pathological conditions: hence arises much of the praise which is lavished on indifferent drugs, while others which have a real clinical value are allowed to fall into disrepute, especially so in the case of a drug such as diuretin, which is meant for the relief of a symptom under certain conditions which can only be determined after a long period of probation. Having seen this particular diuretic used in a certain number of cases, I have chosen a few typical cases in which it was given with varied results as the means of furnishing the best indications for further investigations.

CASE 1.—A man aged fifty-seven years was admitted to the French Hospital in September, 1893, with œdema of the lower extremities, marked cyanosis, difficulty of breathing, and scanty secretion of urine. He had been ill for several months and the disease had made rapid progress within the last three weeks. There was a well-developed murmur accompanying the first sound, the pulse was irregular and hard, the superficial veins were congested, and the patient was unable to remain for any length of time in bed. He was ordered digitalis and nux vomica, and improved gradually at first. At the beginning of October the secretion of urine became again much diminished and diuretin was ordered in two-grain doses every hour with good results. The urine, which had been smoky, dark-coloured, and thick, became rapidly clear and increased in quantity. Three days after the beginning of this treatment the patient was passing four pints in the twenty-four hours; he could remain in bed with comfort and slept comparatively well. After five days the diuretin was stopped and larger doses of digitalis substituted. The œdema of the lower extremities, however, continued and punctures were made. The patient rapidly improved, the cyanosis disappeared, the breathing was free, and by the beginning of December he was able to leave the hospital and resume his work.

CASE 2.—A man aged forty-four years was admitted to the French Hospital towards the end of 1893. He was a sturdily built individual, but had been suffering from shortness of breath and pain in the left side over the region of the heart for several years. For the last three months he had been obliged to relinquish his occupation, complaining mostly of a hard, hacking, dry cough, a sense of oppression over the chest, and sleeplessness. He could not keep the horizontal position and passed most of his time in an arm-chair, bent forwards, with his head reclining on the side of the bed. The physical signs consisted in a loud murmur accompanying the second sound and a jerky, hard pulse with occasional intermittency. The urine was thick and coffee-coloured, with a heavy deposit, and contained a small amount of albumin, while the quantity of urine varied greatly, but was at times very scanty. The case was one of aortic regurgitation. He was put on digitalis and nux vomica, with a mixture containing codeia and oxymel scillæ to relieve the cough. The digitalis had only a transient action; at the end of ten days it failed to give any relief

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and was abandoned. When resumed a fortnight later the patient seemed to improve, but about a month after his admission he became much worse and the quantity of urine rapidly diminished. He passed only a few ounces at a time and sometimes not half a pint in all in twelve hours. The œdema of the lower extremities also rapidly increased. He was then ordered two grains of diuretin every hour. The drug acted well. In the first twenty-four hours the patient passed over two pints of urine. It was still thick, but improved on the second day; on the third day it amounted to between three and four pints. After four days the œdema had almost entirely disappeared. Tincture of strophanthus was then substituted. The general condition had also greatly improved; the patient slept well and was able to remain in bed without inconvenience. He felt so much better that a fortnight later he asked to leave the hospital. The amelioration, however, could only be temporary, and I heard that he died about three months later.

CASE 3.—A man aged thirty-seven years had been suffering for nearly two years with disease of the liver—hypertrophic cirrhosis. He had been able to work until a fortnight before admission to hospital, when he was seized with pains in the loins, a general sense of malaise, and nausea; he noticed that his eyelids were puffy and his ankles swollen. He rapidly grew worse and had to keep to his bed. On his admission he had marked symptoms of uræmia and had scarcely passed any urine for the previous two days. There were œdema of both legs and pitting on pressure, the abdomen was distended with fluid, and there were twitching of the muscles of the face and hands and low muttering delirium with lucid intervals. The urine contained albumin, but not in large quantities. He was given two grains of diuretin every hour combined with a mixture of nitrate of potash and acetate of ammonia. Six hours after admission he passed eight ounces of urine and a few hours later ten ounces. The case was hopeless from the beginning, and the symptoms were such that he never rallied but died the next morning.

CASE 4.—This patient was a man aged thirty-nine years who had not felt well for several months previously to his admission to hospital. Three weeks before he had an attack of influenza, and a few days later had felt pains in his shoulders, left side, and over the loins. After a week his abdomen began to swell, and a day or so later his legs and scrotum. He noticed that his urine was thick and that the quantity passed was diminishing. On admission the abdomen was found to be enormously distended, there was anasarca of the lower extremities extending up to the groin, and œdema of the scrotum and penis. The tongue was furred and dry, the temperature was normal, and the heart was sound. The right lung was healthy. On the left side there was slight pain along the left axillary line and slight dulness over the same region. The urine was coffee-coloured, with a thick deposit of phosphates, and contained one-fifth albumin. Under the microscope large hyaline and epithelial casts were seen. After eight days, as there was no improvement, diuretin was given in the same way as above, but after five days it had produced no appreciable result and was abandoned.

CASE 5.—The patient was a young girl who had been suffering from disease of the kidneys for over four months and who on admission to hospital had all the signs of large white kidney following an acute attack of parenchymatous nephritis. The face was puffy and fatty, and she was suffering from advanced dropsy. The urine contained large irregular hyaline casts, blood corpuscles, and pus cells, and was almost solid with albumin. In this case diuretin was given without producing any effect whatever.

As stated above, in considering the value of a therapeutical agent of this kind it is not the ultimate termination of the case which should form the basis of judgment, but its effect on an individual symptom. Such a drug as diuretin cannot pretend to be a specific treatment in any disease, and its action can only be exerted for the relief of a distressing complication. Reviewing, then, the results of these cases it appears that when the kidney affection is primary and well established—that is, when the deep parts of the organ are affected, as in the parenchymatous form of acute nephritis—and when there is much albumin present, diuretin is of little or no value, while in those cases in which the kidney trouble is secondary to morbid lesions in other organs and the epithelial layer of the urinary tubules in the seat of disease, this diuretic is a valuable therapeutical agent.

Hanover-square, W.

CANCER OF THE RECTUM: TREATMENT, OPERATIVE OR PALLIATIVE.

BY HERBERT W. ALLINGHAM, F.R.C.S. ENG.,
SURGEON TO THE GREAT NORTHERN CENTRAL HOSPITAL; ASSISTANT SURGEON TO ST. GEORGE'S HOSPITAL.

AFTER a considerable experience of cases of cancer of the rectum I think that it may be useful to discuss the question of the treatment, operative or palliative, of malignant disease affecting this part of the body. One reason for making this review is the fact that some authorities appear to hold that all cases of cancer of the rectum demand either excision or colotomy quite irrespective of many points which require careful attention. Thus cases sometimes come to one in which excision is requested when colotomy should really be done, or *vice versâ*, or, again, when neither operation is needed. It must not be inferred that I am in any way opposed to excision of the rectum or inguinal colotomy, for they are excellent operations, and when employed in suitable cases afford great relief to the sufferer and are highly satisfactory from every point of view. My intention is merely to show that, useful as they are, they should not be used or brought into disrepute by being employed in all cases of cancer of the rectum. During the last eight years I have seen about 720 cases of this malady, having performed excision 62 times and colotomy 138 times. I have thus been led to make a mental classification of the cases according to the various lines of action which should be pursued. In arriving at this classification the following points must be kept prominently in view: (*a*) the age of the patient; (*b*) the position and extent of the growth; and (*c*) the nature of the symptoms—viz., obstruction of the bowels, constant diarrhœa, hæmorrhage, or pain. By this classification cases of cancer of the rectum may be divided into those which are fitted for excision, for colotomy, or for palliative treatment.

The question of age is a most important matter. If the patient's age does not exceed forty-five years I make bold to say that very little is to be gained by excision, even if the growth is within a reasonable distance from the anus. It appears that after excision in such cases the malignant disease returns, often before the wounds resulting from the operation have healed. In two or three instances, however, I have excised both the growth and the recurrence, and in one case after repeated excision of the recurrence the malady ceased to return; but this case must be taken as an exception to what may be called the rule. Again, colotomy seems to prolong the patient's life for an extremely short period. Indeed, unless the surgeon is absolutely driven to perform colotomy palliative treatment is the right course to pursue. In patients between forty-five and sixty years the prognosis as regards excision is more favourable, and this operation should be attempted when the growth is well to the lower part of the rectum. In this class colotomy for disease high up the rectum should be performed only when the symptoms presently to be described are well marked and when palliative treatment has failed to afford relief. For patients above sixty years excision is extremely favourable in suitable cases, and should always be attempted when there is a fair chance of a thorough removal of the growth. The remarks with regard to colotomy are the same as those applied to patients between forty-five and sixty years. It will be readily seen from the above classification that the older the patient becomes the less rapidly does the malignant disease grow and the less likely is it to recur.

The next points for consideration are the position and extent of the growth. For practical purposes the question of position may be sub-divided as follows: (*a*) When the disease is near the anus and healthy mucous membrane can be felt above the growth; (*b*) when the growth is higher up the bowel, but can be easily felt and is freely movable, although its upper limits may not be readily definable; and (*c*) when the growth is quite high up the rectum—i.e., at the junction with the sigmoid flexure—and can only just be felt by the finger. In the first class the growth, if movable, should be freely excised. In the second class Kraske's

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operation may be performed if the patient consents to undergo it on learning of its serious nature and the danger he may incur. In cases falling under the third sub-division colotomy is certainly a justifiable proceeding if the symptoms warrant the necessity.

To return to the symptoms. With regard to obstruction, if the case is one fitted for excision the constipation may be relieved by free excision of the growth. If, however, the tumour is so high up as to negative excision, and if it has been found impossible to remedy this obstructed condition by the use of mild laxatives, colotomy should not be delayed for one moment. To postpone colotomy when the case is in such a state only entails much suffering; further, the delay may prove a great source of danger, for the gut may give way above the seat of obstruction or the patient may, so to speak, be poisoned by fæcal accumulations. Moreover, when the colotomy has eventually to be performed it is rendered much more difficult to do, and thus an operation which really is extremely easy may by tardiness be converted into a grave and dangerous proceeding. Constant spurious diarrhœa is another symptom frequently complained of by patients suffering from cancer of the rectum. When it is due to a growth within the excisable region it may be cured by an excision. But if that operation is out of the question, and if one has failed to remedy this wretched and distressing condition by treatment with various forms of opiates, laxatives, and so forth, then and then only is it justifiable to perform colotomy in order to give the patient relief. The same remarks apply to the other symptoms—viz., to frequent hæmorrhage or to constant pain.

As was stated at the outset, I do not consider that all cases of cancer of the rectum should be treated either by excision or colotomy. I have met with many patients who have been advised to undergo colotomy, but who by careful and judicious treatment have been enabled to continue at their respective occupations without this operation being necessary for some considerable time. There are some who advise colotomy in nearly all cases of cancer of the rectum which come before them, imagining that by diverting the fæces they may succeed in arresting the rapidity of the growth. This I do not believe to be in the slightest degree the case. The patients referred to above, when their malady has been judiciously treated, lived quite as long as they would have done if colotomy had been performed in the early stages of the disease. One last remark must be made. In cases of cancer high up the bowel it may be necessary to starve a patient or at least subject him to what is practically starvation in order to keep him comfortable. In consequence of this starving the patient may become exceedingly emaciated and may perhaps express the opinion that the treatment is worse than the disease. In such a case I should without any hesitation perform colotomy so that the local symptoms—viz., obstruction—may be obviated. When this has been done the patient can eat and drink as he chooses and, as a rule, rapidly puts on flesh and recovers his general health for a time—that is to say, until the malignant disease begins to attack other important organs.

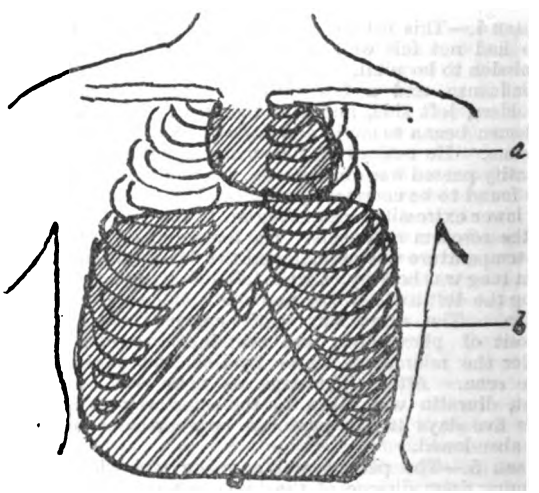
Grosvenor-street, W.

LARGE HYDATID TUMOUR OF THE LEFT PLEURAL CAVITY SIMULATING HYDATID DISEASE OF THE LIVER; OPERATION; RECOVERY.

BY ARTHUR P. LUFF, M.D. LOND.,
PHYSICIAN IN CHARGE OF OUT-PATIENTS AT ST. MARY'S HOSPITAL.

THE patient, a married woman aged thirty years, was admitted into St. Mary's Hospital under my care on Jan. 8th, 1895, complaining of shortness of breath and severe pain in the left side of the chest. She stated that in 1875, when she was ten years of age, she was tapped, and in 1884, when she was nineteen years of age, she was tapped in the epigastrium, after which she remained well for several years. Unfortunately no medical account of these tappings is obtainable, but as the patient stated that at the time of the second tapping she was questioned on the subject of contact with dogs, the presumption is that she was then suffering from hydatid disease. She lived at the time with her uncle, who in 1873 was tapped three times in St. George's Hospital; in 1884 her uncle "brought up" a quantity of fluid and died whilst being conveyed to the same hospital. This would suggest a common origin of the disease. Seven months previously to admission she noticed that she was increasing in size above the waist, and about the same time she experienced tenderness on the left side and front of the chest. Two months before admission she began to suffer from shortness of breath, and the pain on the left side of the chest gradually assumed a shooting character and became very severe, shooting up to the left shoulder and down the left arm. During the three or four weeks preceding admission she fainted a few times and had occasional shivering fits. Seven days before admission she had a slight attack of jaundice, which, however, soon passed away. Five days before admission she was seized with severe shivering fits, great pain in the left side of the chest, dyspnœa, and vomiting after food. When this attack had lasted about five hours she coughed up about a pint and a half of clear fluid of a pale yellow colour, which gave her immediate relief, but a few hours later the pain and dyspnœa returned, although the symptoms were less urgent than before. On admission the patient presented a somewhat wasted appearance; there was considerable dyspnœa, accompanied by a hard, dry cough, but no cyanosis. The left side of the chest was very painful and tender; the temperature was 101° F., the respirations were 40, and the pulse was 100. She stated that the swallowing of food was somewhat difficult, the difficulty being experienced at a point about half-way down the œsophagus. On inspection a large tumour was seen causing marked prominence of the epigastric, both hypochondriac, and the upper portions of the umbilical, and both lumbar regions, reaching below to the umbilicus. (Fig. 1.) The surface of the tumour

FIG. 1.



a, Heart. *b*, Hydatid cyst.

was hard and smooth. Distinct fluctuation could be felt in two or three places, but no thrill was obtainable. The tumour moved with respiration. Percussion dulness was obtained over the left part of the chest up to the first intercostal space; in the mid-axillary line on the left side dulness extended from below upwards to the fifth rib. This dulness extended at the same level over the lower part of the back of the chest on the left side as far as a line dropped vertically from the inferior angle of the left scapula (Fig. 2), inside which line a fairly resonant lung note was obtainable. Over the right front of the chest percussion dulness extended upwards to the fourth rib (Fig. 1) and to a corresponding level in the axilla. Over the whole of the right back a resonant lung note was obtainable. No breath sounds could be heard on auscultation over the entire dull area, and vocal fremitus could not be obtained. The heart was pushed considerably upwards (Fig. 1) and could be felt beating on the left side of the chest, the maximum impulse being obtainable in the second left intercostal space. The cardiac dulness was continuous with the dulness below, and extended a finger's breadth to the right side of the manubrium. The

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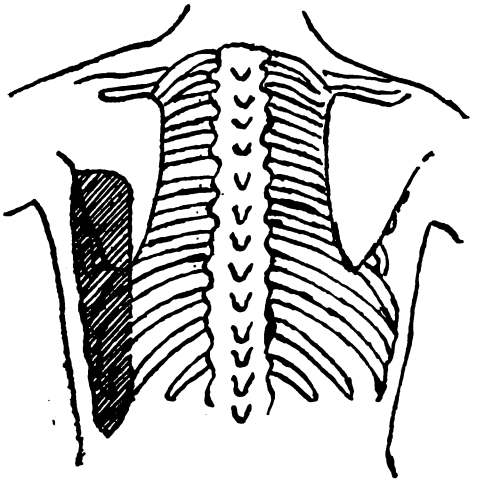
heart sounds were normal. The urine was of specific gravity 1030, acid, and free from albumin and sugar. The pint and a half of clear fluid coughed up five days before admission were evidently due to rupture of a cyst into the lung, and the temperature of 101° on admission was probably caused by the rupture. The absence of hæmoptysis—often an early symptom of pulmonary hydatid disease—and the fact that the heart was displaced directly upwards and not pushed to the right side, were indications that the growth was not a primary one of the left lung or pleura; moreover, there was no deficiency of thoracic movement on the left side, as there generally is in pulmonary hydatid disease. My diagnosis was extensive hydatid disease of the liver, with probable extension of the disease into the left pleural cavity. Mr. Silcock, who saw the case with me, agreed with this diagnosis and decided to operate.

Ether was administered and Mr. Silcock opened the abdomen by a four-inch incision in the middle line between the ensiform cartilage and the umbilicus. The fleshy-looking cyst wall was exposed bulging downwards into the

FIG. 2.



abdominal cavity. An effort was made to draw off some portion of the fluid from its interior by means of aspirator needles and ovariotomy trocars. These instruments speedily became blocked; hence, having so disposed a number of sponges that the general peritoneal cavity would be thereby exempted from infection the cyst wall was freely incised. Immense quantities of daughter cysts escaped, their eviction being greatly facilitated by using a stream of sterilised water (temperature 100°) projected into the cyst through a glass tube tipped by a short indiarubber one in connexion with an irrigator cistern; the pressure of the fluid could easily be regulated by raising or lowering the latter. Much time was thus spent, the irrigation being continued until the contents of the cyst had been thoroughly cleared out. The long glass tube was most useful in that the depths of the cyst beyond reach of the finger-tips were easily reached by its means. The cavity of the cyst being packed with large sponges, its connexions were examined. That portion of the cyst wall incised was indistinguishable from the left lobe of the diaphragm, the latter having been displaced downwards by the cyst occupying the left pleural cavity. The left lobe of the liver lay to the right of the mid-line, atrophic and shrunken from pressure. Air whistled in and out of the opening into the cyst with the respiratory movements and the subserous tissues below the diaphragm near the spine became emphysematous. The peritoneal surface of the cyst wall was united to that of the edges of the parietal wound and the latter partly closed, a large drainage-tube being passed deeply into the cyst. The weight of the cyst walls removed amounted to six pounds four ounces; the amount of fluid was computed to be six pints. The subsequent course of the case requires but slight notice. The wound remained aseptic, the cyst being frequently washed out, and drainage was effected by keeping the patient lying on her right or left side or in the prone position.

Remarks.—The great surprise at the time of the operation was to find the liver normal in size. The well-defined lower edge of the tumour that before the operation could be felt reaching to the level of the umbilicus was evidently due to the diaphragm having been pushed down by the hydatid tumour situated within the thoracic cavity. During and after the operation the entry of air into the cyst cavity during inspiration (the right half of the diaphragm was certainly not paralysed) was an indication that the cavity was above the diaphragm. The proofs that the cyst was connected with the liver were: (*a*) that a quantity of bile came away from the wound for some time; (*b*) some of the daughter cysts were bile-stained; and (*c*) the parent cyst wall contained columnar epithelium and fibrous tissue, and the source of the former might have been the biliary ducts or gall-bladder. The probability is that originally the woman suffered from hydatid disease of the liver and that some of the daughter cysts passed through the diaphragm into the left pleural cavity from the parent hydatid in the liver.

Weymouth-street, W.

DEATH UNDER CHLOROFORM.

BY J. HOPKINS WALTERS, M.R.C.S. ENG.,
SURGEON TO THE ROYAL BERKSHIRE HOSPITAL.

THE following two cases, one of death and the other of threatened death while under chloroform, seem to be worthy of record.

CASE 1.—A boy aged six and a half years was anæsthetised by chloroform on March 27th, 1896, for the removal of tuberculous cervical glands. In other respects he seemed to be healthy and had returned only a few weeks previously after being five months at the seaside. The operation was performed at 10.30 A.M., a breakfast-cupful of beef-tea having been taken at 8 A.M. in lieu of breakfast. The glands were large and numerous; the surrounding tissues were infiltrated and unusually vascular, rendering the dissection down to the sheath of the vessels delicate, difficult, and prolonged. There was free hæmorrhage, amounting, probably, to three or four ounces (but this is always most difficult to estimate; it possibly might have been more, not much). The operation was almost finished when sudden arrest of oozing from the raw surface was noticed to take place, while at the same moment the experienced anæsthetist who was kindly giving the chloroform drew attention to the patient's pallor. I give in my friend's own words the notes he has made on the case: "The boy had been under chloroform for about forty-seven minutes, during which time he took the anæsthetic in a manner that gave rise to no more than ordinary anxiety. The first unfavourable sign noticed by me was a sudden and extreme pallor, not the bluish grey of respiratory failure, but a deathly whiteness. After a few seconds the breathing stopped. Immediately the radial artery was felt, but there was no pulse. The heart was auscultated, but there was no pulsation. Artificial respiration was at once performed, with the result that a very irregular sighing or gasping respiration was established. During the artificial respiration the air entered and left the lungs quite freely. The tongue was pulled out forcibly with tongue forceps and kept out while artificial respiration was maintained for three-quarters of an hour; nitrite of amyl was administered, and brandy and strychnia were hypodermically injected." In addition to the above friction was made over the heart while the head was depressed and the body raised, but all to no purpose. The child was dead.

The case of threatened death under chloroform presents similar features to the above fatal case, but was followed by a happier result.

CASE 2.—A child aged seventeen months, the subject of large double inguinal congenital hernia, was put under chloroform for the operation of radical cure. The child took the anæsthetic well and was fully under its influence when the incision was made. Two sweeps of the knife were followed by the application of a sponge, and on making the third sweep I noticed that blood ceased to flow. Looking round I found the child deathly white and apparently dead. Neither radial pulse nor heart pulsation could be felt. Artificial respiration was at once performed, the pulse returned, and in a few minutes the child had so well recovered as to enable me to complete the operation I had begun. In consequence of this *contretemps* I decided to postpone

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operating on the other hernia until after recovery from this operation. Owing to a little gastric disturbance the second operation was not performed for two months, and previously to the chloroform being given I warned the administrator, who had also been the chloroformist on the former occasion, to take especial care on account of the previous narrow escape. At the same stage of the operation apparent death recurred in a manner precisely similar to the previous occasion, with like treatment and fortunate result, followed, as before, by completion of the operation. This time we all were quite on the alert, and were thus able to make sure that it was a case of heart failure, the pulse stopping before respiration ceased.

These two cases present the following identical features: (1) both were children within the age at which chloroform can be given with the greatest immunity from accident; (2) auscultation indicated a sound heart in each case; (3) on each occasion a Skinner's inhaler was used; (4) in neither instance was the operation commenced before the conjunctival reflex had disappeared; (5) in each the first indication to the operator was blanching of the wound coincidently with the observation by the anæsthetist of sudden general pallor; and (6) uniformly the cause of death and threatened death was cardiac failure. The differences between the cases are that while the fatal case showed no unfavourable symptoms until the end of the operation the other exhibited them at the beginning: the one had taken a quantity of chloroform and the other little; the one had suffered loss of blood and shock from the operation and the other none. These probably were the determining factors between death and recovery. On comparing with the "respiratory failure" dictum from Hyderabad the statistics of THE LANCET Commission appointed to Investigate the Subject of the Administration of Chloroform and other Anæsthetics from a Clinical Standpoint,[1] one is struck by the enormous majority of reported primary pulse failures, which, together with the numerous cases of accident occurring in the very earliest stage of chloroform administration, indicate that much has yet to be learned of the causes of these calamities. The observations of Rosenberg and Guérin seem to throw on them some light, and their conclusion that respiratory and cardiac depression are due to reflex rather than direct action deserves careful investigation. Certainly, until such conclusion is negatived or confirmed the suggestion to avoid nasal inhalation or to neutralise the local effect of chloroform by thorough cocainisation of the nasal cavity is worthy of universal adoption. That ether is so much safer than chloroform as to outweigh the great advantages of the latter has still, I think, to be proved after the honest tabulation of its delayed disastrous after-effects.

Reading.

NOTES ON A CASE OF COMBINED SCLERODERMA AND RAYNAUD'S DISEASE.

BY J. A. HENTON WHITE, M.B. DURH.,
SURGEON TO THE BIRMINGHAM GENERAL DISPENSARY.

THE following case appears to me worthy of note as throwing additional light on certain cases of scleroderma and indicating a possible etiological connexion between these and Raynaud's disease.

A married woman aged forty-four years sent for me on account of a hardening of the skin in various parts of the body, rheumatic pains in her joints, and attacks of "dead fingers." On examination I found that the integument of the face and forearms, and to a less extent of the arms, thighs, abdomen, and chest, was thickened and indurated. It could not be pinched up from the subjacent tissues and the natural folds and wrinkles were for the most part obliterated. On the forearms, where the contraction of the thickened skin had gone so far as to painfully compress the bones and tissues, the colour of the surface was rather brown. The appearance of the chest was white and cicatricial, whilst the epidermis of the legs and the lower part of the body was covered by coarse flakes not unlike psoriasis. The case was, in a few words, a well-marked one of that affection described by Fagge as scleriasis diffusa and now usually termed scleroderma.

[1] THE LANCET, March 18th and 25th, April 15th and 22nd, May 6th and 20th, and June 17th, 1893.

In addition to these integumentary changes were arthritic lesions, many of the large joints, and notably the temporo-maxillary articulations, exhibiting the coarse crepitus of arthritis deformans. Perhaps the most interesting point about the case, however, was the occurrence of frequently repeated syncopal attacks in the fingers and hands. These attacks came on "twenty or thirty times a day" after the least exposure to cold. The woman had suffered from syncopal attacks in one of the fingers of the left hand for many years. Three years ago she had an eruption of "heat lumps" on the arms, face, and legs, which itched and smarted considerably. These soon became blebs and lasted about six months before finally disappearing. One and a half years ago another eruption of "heat lumps" appeared on the forearms and legs, but on this occasion no blebs formed. Accompanying those on the legs there was considerable œdema. These "heat lumps" had since this time frequently recurred, and gradually the skin had become hard, first in the forearms and then in the face, legs, &c. At times the induration had spread, but the extension had been preceded by the appearance of the lumps. With the first occurrence of the "heat lumps" (one and a half years ago) she also began to have symmetrical vaso-motor spasms in both hands, and lately these phenomena have been very frequent. A few months later her joints became affected, and now she is much crippled in her movements and has especial difficulty in mastication.

Regarding this case from a pathological standpoint it seems possible that the scleroderma, which is anatomically a simple overgrowth of fibrous tissue in the deeper layers of the dermis, may be due to a chronic inflammation resulting from an intermittent blood-supply. This vaso-motor factor may be also assisted by a want of proper trophic stimuli to the tissues affected—here the skin and joints. The initial heat lumps and blebs, as also the œdema, are all occasionally present in Raynaud's disease. Bristowe speaks of a persistent eruption of wheals or erythematous tubercles, in connexion with which vesicles and blebs may be developed, as occurring in this latter disease. Another argument in favour of a vaso-motor explanation of scleroderma is found in the fact that both diseases occur in those classes of patients whose vaso-motor apparatus is very active—namely, women and young people. With regard to treatment the application of warmth to the affected part as a preventive of the spasms, and galvanism with the anode placed in the hand and the kathode on the spine during the spasms might be tried. Medicinally, drugs producing arterial dilatation seem to be indicated. Those, too, which are not too evanescent in their action should be chosen. My patient is at present on jaborandi and salicylate of soda and is taking fifteen minims of the tincture with fifteen grains of the salicylate three times a day. This treatment has produced no sudoresis at present. Jaborandi, however, I hardly consider the ideal drug as it is somewhat irritant to the kidneys, which in skin cases are apt to be irritable. Thyroid extract might be useful, as it certainly, in my experience, causes sudoresis and lowers blood pressure, and I intend to try this if there should be any spread of the disease under the jaborandi. Of course, when the fibrous tissue is once laid down its complete disappearance is very improbable. Massage, however, might render the skin more pliable.

Birmingham.

DURHAM UNIVERSITY MEDICAL GRADUATES' ASSOCIATION.—A large number of the members of this association resident in the metropolis dined together at the Café Royal, Regent-street, on April 17th, under the presidency of Dr. Arthur H. Robinson, the President of the association. The réunion was a pleasant one, and the association was honoured by the presence of several guests, the invitation having been extended to graduates of the University outside the association.

HOSPITAL FOR EPILEPSY AND PARALYSIS, REGENT'S-PARK.—At the annual meeting of the governors of this institution the Earl of Carnwath, speaking from the chair, stated that the annual report showed an increase in the work and a diminution in the contributions. He referred to the fact that in four years the lease of the present building would expire, and a new building, involving the creation of a building fund of some £10,000 or £15,000, would soon become a pressing necessity. He hoped that some munificent gift would soon be forthcoming towards this object.

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A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

ST. GEORGE'S HOSPITAL.

A CASE OF ACROMEGALY TREATED BY PITUITARY EXTRACT; REMARKS.

(Under the care of Dr. H. D. ROLLESTON.)

THIS case is a typical one of acromegaly and differs but in degree from the majority of recorded cases. The remarks of Dr. Rolleston remind us how very far we are at present from understanding the exact nature of this disease, and no apology is required for bringing a carefully observed case before our readers. We regret that it is necessary to record another failure in the treatment with pituitary extract. At present the extract has not had a very extensive trial; little encouragement for the future is, however, given by our present experience of it. There are certain lines along which investigation should proceed and certain questions which require answers. We want to know if there is any relation between the thyroid gland and the pituitary body, also what the relation is between these two bodies and the nervous system, before we can make very definite progress. In many recorded post-mortem examinations the thyroid gland as well as the pituitary body has been described as diseased. Dr. Bonardi[1] found no tumour of the pituitary body, but atrophy and sclerosis of the thyroid gland in a case examined by him.

A married woman aged thirty-four years, who had been under the care of Dr. Hollis of Wellingborough, was admitted into St. George's Hospital on Feb. 11th, 1896. She dated her illness from her last confinement in August, 1891. Since then she had suffered from fatigue on slight exertion and had had amenorrhœa. But the first definite symptom of acromegaly only appeared in the early part of 1894, when her sight began to fail, and she noticed that her hands and feet were increasing in size. In less than a year she became blind in the left eye, and at the same time her hands and feet became painful both at night and on exertion. For the last two years she had perspired much over the body and limbs, less over the face, and had felt warm even in the coldest weather, so that she had been obliged to wear thin clothing. Since 1891, and especially in the last nine months, she had been getting much stouter. Her sleep had not been so good during the last two years as it was formerly. There was no history of rheumatism or syphilis. She had suffered from headache for twelve years and there had not been any increase of it in recent years. The face was somewhat expressionless and elongated; the skin was of a dingy colour, somewhat coarse, and the subcutaneous tissues apparently thickened; the lips were not specially affected, but the tongue was large and flabby; the nose was prominent and generally enlarged, and there was a considerable degree of prognathism; the hair was coarse, thick, and did not fall out. Of the eyes, the left was quite blind and there was no pupil reflex; the right had very imperfect vision on the nasal half of the field; hemiopic reflex was present, and the nasal half of the field of vision was blind. There was well-marked primary optic atrophy with some irregularity of the discs on both sides. There was no sign of past neuritis or retinitis. There was slight exophthalmos on both sides, and the eyelids were somewhat swollen. The special senses of smell, taste, hearing, and touch were normal, and the voice was natural. The patient was of fair intelligence and showed no sign of nervousness or mental instability—in fact, she was rather phlegmatic than otherwise. The hands were characteristically affected, the phalanges being enlarged together with the overlying tissues, and justifying fairly the comparison to sausages. The wrists were enlarged, while the elbows, shoulders, and clavicles were unaffected. A marked feature was the very considerable loss of power in the hands. The patient had suffered from childhood from talipes equino-varus with some degree of pes cavus. The toes were enlarged, especially the great toes. The ankles were enlarged. The knee-jerks were present. Kyphosis was but slightly marked. The thyroid gland appeared normal and the heart and lungs were normal. There was no post-sternal dulness. The specific gravity of the urine was 1010 to 1020, it contained no albumin but 2 per cent. sugar, which, however, disappeared two weeks before she left the hospital. Dr. Hollis said that there was no glycosuria when she was under his treatment, so it was probably transient. The amount of urine varied from twenty-eight to eighty ounces. She had been in the habit of getting up at night to pass her urine, so there had been some polyuria. The temperature was normal throughout her stay in the hospital. During the month that the patient was in the hospital she was treated with tabloids of pituitary extract (5 gr.) three times a day, and when headache and pains in the limbs were urgent occasional doses of phenacetin (10 gr.) were given. Under the conditions of rest, good food, and the above treatment the pains in the head and limbs were diminished and the glycosuria passed off. The patient herself thought that, inasmuch as she could feel her knuckles more distinctly, her hands were getting smaller; but a comparison of the careful measurements taken on admission and before leaving the hospital by the clerk of the case, Mr. E. L. Hunt, showed that there was a uniform increase in all, or nearly all, the measurements. The effect of pituitary extract therefore seemed to be almost entirely negative. The question of removal of the pituitary tumour was discussed with Mr. Sheild, but the risks and dangers on the one hand and the somewhat hypothetical advantage that would accrue on its successful performance on the other did not seem to warrant its being proposed to the patient.

Remarks by Dr. ROLLESTON.—The case is a fairly typical one of acromegaly and there are only two points in the *clinical* features worthy of special notice. 1. The rapid development of optic atrophy as the result of pressure exerted by the enlarged hypophysis cerebri. The symptoms of acromegaly had only been noticed for two years and at the longest calculation the morbid changes cannot be dated back further than her last confinement in 1891, after which the menses ceased. 2. The presence of sugar in the urine; this has only been noted in a small minority of the recorded cases, though in some there has been definite diabetes mellitus. The glycosuria has usually been found to be easily controlled; in this case no restriction of diet or special treatment (other than the pituitary extract) was employed, and no sugar was present for the last two weeks of her stay in the hospital. As regards the *pathology* of acromegaly, while optic atrophy, when it occurs, and headache may be the local or mechanical effects of the enlarged pituitary body, the essential symptoms are presumably due to some alteration in the internal secretion of the gland. The internal secretion might conceivably be modified in three different ways. I. Suppression—a condition of pituitary inadequacy analogous to myxœdema or Addison's disease. The morbid condition necessary to bring this about would be either atrophy of the pituitary gland, which is not in accordance with the observed facts, for the gland has been almost always found to be enlarged in acromegaly, or destruction by a tumour. In their exhaustive paper on the Pathology of the Hypophysis Cerebri, Boyce and Beadles[2] describe a case of acromegaly with a cystic hypophysis cerebri, but the other cases of tumour given by these writers did not show signs of acromegaly. That simple absence of the internal secretion is not the entire explanation of acromegaly is strongly suggested by the disappointing results of giving pituitary extract. II. Hypersecretion due to excessive activity. Souza-Leite[3] describes the change in the gland tissue as being one of simple hypertrophy. This observation is in favour of the view that the symptoms are due to hypersecretion. If this be true, administration of pituitary extract should only exaggerate the symptoms, but the observations of Ransom[4] and Marinesco[5] show that it has practically no effect, while in a case under the care of Sir William Broadbent[6] there

[1] Riforma Medica, Naples, 1893, vol. ii.

[2] Journal of Pathology, vol. i., p. 359.
[3] Acromegaly: New Sydenham Society, 1891.
[4] Brit. Med. Jour., vol. i., 1895, p. 1269.
[5] Quoted in Epitome, Ibid., vol. ii., 1895. No. 447.
[6] THE LANCET, March 28th, 1896.

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appeared to be some improvement. Oliver and Schäfer[7] find that pituitary and thyroid extracts have opposite physiological effects. Pituitary extract resembles in its action that of the suprarenal capsules, though there are points of difference. Thyroid extract has been found to exercise a curative effect in a case of acromegaly recorded by A. H. Benson.[8] Murray,[9] however, thinks it doubtful whether thyroid extract has any specific effect on acromegaly; this opinion is endorsed by Osler.[10] It is not improbable that any good it does is by influence on the general health. If acromegaly were due to a hypersecretion of the normal internal secretion of the pituitary body, the administration of pituitary extract should intensify and giving thyroid extract should remove the symptoms. If this is not the case—and it does not appear to be so—hypersecretion on the part of the pituitary gland cannot be regarded as a satisfactory explanation of acromegaly. III. Perverted function due to a heterogeneous transformation of the structure of the pituitary body (Marinesco). But in what direction the secretion is perverted is a matter of speculation. Three alternatives may be suggested. 1. The secretion might be deficient in an active principle the function of which is to restrain exuberant growth in the extremities. This, perhaps, is rendered improbable by the general failure of pituitary extract when given medicinally, and there is of course no evidence that irregular growth is spontaneously likely to occur if not kept in check. 2. The abnormal secretion might contain some toxic principle which stimulated the tissues to overgrowth. That the disease is a toxæmia receives some support from its points of resemblance to hypertrophic pulmonary osteo-arthropathy. Marie suggested that the changes in the limbs characterising the latter disease were due to the local action of poisons absorbed from the pulmonary lesions. 3. It might be thought that owing to alteration in the secretion of the pituitary the equilibrium and interaction between it and other internal secretions are disturbed. Possibly some toxic body such as was suggested in the preceding alternative might be thus produced. The thyroid and pituitary glands have been thought to be compensatory; recently they have been shown by Schäfer and Oliver to be physiologically antagonistic. Superficially there are some resemblances between acromegaly and myxœdema, and it might be thought that acromegaly is the result of a disturbance of a chemico-physiological equilibrium maintained in health by the normal activity of these two glands. Such a consideration suggests that acromegaly might be benefited by giving pituitary and thyroid extracts at the same time. The dose of the two extracts should be varied so as to get the desirable mean, but at first, perhaps, a larger quantity of the pituitary extract should be given. The failure of pituitary extract to ameliorate the symptoms of acromegaly is then somewhat in favour of the view that the cause of the disease is perverted and not suppressed or exaggerated functional activity of the gland.

BOLTON INFIRMARY.

A CASE OF TRAUMATIC VENTRAL HERNIA AND ONE OF HÆMOPHILIA.

(Under the care of Mr. GABSTANG.)

TRAUMATIC ventral hernia of the kind described in the first case is of very unusual occurrence—in fact, it has received little notice in our general text-books. Such a hernia, as the result of direct subcutaneous injury, may develop immediately in consequence of rupture of the muscles in the abdominal wall, the protrusion taking place through the opening made, or atrophy with resulting weakness may ensue at the point injured and a hernia develop secondarily. Examples of the former are given by Gay, Meckel, and Bryant. The patient under the care of Gay had a blow from a buffer in the abdomen, and on dissection some of the viscera were under the skin and had come through a rent which divided the left rectus and left epigastric artery, the linea alba, and part of the right rectus. Included in the term traumatic, and much more common than those already referred to, are the hernias which protrude through the scar resulting from the wound made by a surgeon for the removal of an abdominal tumour or for the evacuation of an abscess, also wounds of the parietes received in other ways by stab or gunshot. We are still in a condition of uncertainty as to the exact deviation from the normal which produces hæmophilia, and the facts that are known about it, such as its hereditary character, its more frequent appearance in the male, and also that it is congenital, do not help us in respect to the treatment of the hæmorrhages which are so apt to prove fatal. It is probable that antiseptic treatment with pressure will do more for the arrest of hæmorrhage in these cases than was formerly possible. When the wound suppurated and hæmorrhage frequently recurred from it the attempt to apply pressure or the application of styptics only seemed to make the wound a larger one and the fever more intense. Of the numerous drugs which have been recommended for the treatment of the hæmorrhages the only one which has seemed to us to exercise any control on the loss has been belladonna, applied externally in the event of large subcutaneous hæmorrhages, or given internally in cases of bleedings from the mucous surfaces. For the notes of the cases we are indebted to Dr. G. Wilkinson, late senior house surgeon.

CASE 1.—A boy aged fifteen years was admitted to the Bolton Infirmary on Feb. 7th, 1895, with a swelling in the left hypochondriac region the result of an injury. He gave the history that he was carrying a bundle of dye-sticks when he stumbled and fell with his abdomen on the blunt end of one of them. On admission there was found to be a swelling about the size and shape of half an orange, midway between the umbilicus and the cartilage of the tenth rib on the left side. When the patient coughed the swelling enlarged. It could be put back entirely into the abdominal cavity, and when this was done a well-defined rounded opening about one and a half inches in diameter could be felt in the abdominal wall beneath the skin. The substance protruded beneath the skin when the patient coughed and had the knotted feel of omentum. The skin over a part of the swelling was superficially abraded. The patient was put to bed, carefully dieted, and a pad and bandage were applied to the seat of injury. On March 6th the subcutaneous rent in the abdominal wall had nearly closed, so that only the tip of a finger could be introduced, and the abrasion had healed. The patient was supplied with an abdominal belt with pad and was allowed to get up. On Dec. 9th the patient came up for inspection. He had resumed work and discontinued the use of the belt. There was a prominent scar marking the seat of abrasion, which showed signs of cheloid growth. The rent in the muscular layers had quite closed and firm scar tissue was felt.

CASE 2.—A boy aged eleven years was admitted on June 18th, 1894, with hæmorrhage from the cheek and gums. He gave the history that he was struck on the left cheek with a cricket bat four days before admission and that there had been continual bleeding from his gums and cheek since. His previous history was as follows. When two years of age his tongue ulcerated and bled for three weeks; at three years of age he received a wound on the back of his head, which bled during five or six weeks; when seven or eight years of age he had a wound of the temple, which bled three or four weeks in spite of plugging, caustic, &c. There was no history of any male relative having been similarly affected. A sister aged twenty-five years had had four miscarriages and a boy who died at the age of eight months. The patient had a sallow complexion with transparent condition of skin. The conjunctiva was not unusually pale and there was no heart murmur. Tincture of perchloride of iron was applied to the wound of the cheek without much beneficial effect. Finally a silk suture was introduced and proved effectual. Arsenic and tincture of perchloride of iron were given internally and the mouth was frequently washed out with iced Condy's lotion. On July 9th the wound had quite healed. On Nov. 28th, 1895, the patient was readmitted on account of hæmorrhage from a wound of the upper lip inflicted by falling against a frame eight days previously. The hæmorrhage having ceased after admission it was not thought advisable to disturb him. Free hæmorrhage, however, came on in the night, which was controlled by the introduction of a silk suture. On Dec. 23rd the wound had not healed, but was slowly granulating.

[7] Journal of Physiology, 1895, p. 277.
[8] Brit. Med. Jour., vol. ii., 1895, p. 949.
[9] Ibid., vol. i., 1895, p. 294.
[10] Principles and Practice of Medicine, 1896, p. 1047.

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Medical Societies.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

Recent Progress in Pathology and Treatment of Diseases of Joints.—Optic Neuritis.

A MEETING of this society was held on April 10th, Mr. ERNEST CLARKE, President, being in the chair.

Mr. HOWARD MARSH read a paper on Recent Progress in Pathology and Treatment of Diseases of Joints, illustrated by specimens. 1. He discussed syphilis as affecting joints, first in children, secondly in adults. As to children, he pointed out that two forms of syphilitic disease occur—viz., a destructive lesion of the growing part of the bone, especially common in early infancy, and a gummatous infiltration of the synovial membrane affecting children between three and nine years of age frequently multiple and often symmetrical. The joint is swollen, but freely movable, which is not the case in tuberculous disease. In adults syphilis produces: (1) a simple synovitis with effusion, readily mistaken for subacute rheumatism, sprain, or commencing tubercle, but yielding readily to potassic iodide; (2) a gummatous infiltration of the sub-synovial tissue similar to Brodie's pulpy degeneration; and (3) a deep serpiginous ulceration of articular cartilage similar to and simultaneous with ulceration of soft parts and of the long bones. The treatment of the two latter groups is necessarily prolonged, and it is especially unsatisfactory in joints and rheumatic subjects. 2. The joint lesions of syringomyelia were then described and specimens shown of both the atrophic and hypertrophic forms. 3. Senile tuberculosis of joints was next discussed and its comparative frequency insisted on. The prognosis of these cases is invariably bad; the older the subject the more rapid is the downward course. 4. A very rare specimen of the effects of repeated hæmorrhages into the joints in Hæmophilia was shown. 5. Finally, Mr. Marsh showed the practical importance as regards treatment of the fact, recently ascertained, that the seat of active tuberculous disease in the joints of children is the growing tissue at the end of the diaphysis, and he urged that in children under twelve exercise is radically wrong, not touching the seat of disease. In these cases rest, begun early and maintained for prolonged periods, gives the best results. It is difficult to induce people to go on long enough. Less than fifteen to eighteen months is a farce. Some patients have been kept in leather splints for seven years to effect a cure. The principle of forcibly straightening the joint is wrong, because it is desirable to avoid interarticular pressure. The leather splints should be fitted to the limb as it is and altered as the limb gradually straightens itself, as it will do when the muscular spasm is relieved.—Mr. POLAND and Dr. TAYLOR spoke.

The PRESIDENT showed a case of Optic Neuritis following Influenza in a girl whose vision was reduced to $\frac{6}{60}$, but under potassic iodide had again become normal (both eyes $\frac{6}{6}$), while the pearly whiteness of the discs originally observed still continued.

LIVERPOOL MEDICAL INSTITUTION.

Ladies' Charity and Lying-in Hospital.—Multiple Wound of the Small Intestine and Penetration of the Gravid Uterus by a Stab.—Operative Treatment of Varicose Veins of the Lower Extremity.

A MEETING of this society was held on April 7th, Dr. WILLIAM MACFIE CAMPBELL, Vice-president, being in the chair.

Mr. MITCHELL BANKS called attention to the recent action of the committee of the Ladies' Charity and Lying-in Hospital which involved the resignation of the entire staff.—The following resolution was proposed by Mr. BANKS, seconded by Dr. CAMERON, and was carried unanimously: "The members of the Medical Institution desire to place on record their firm and unanimous protest against the course recently adopted by the managing committee of the Ladies' Charity and Lying-in Hospital, in endeavouring to place the matron-midwife in a position which practically would have vested in her the medical control of the patients. They consider that, however efficient she may be as a midwife, her want of knowledge in other respects might have caused her to overlook or fail to recognise dangerous incidental complications occurring in the course even of a so called natural labour, the timely treatment of which by a member of the medical staff might have averted serious consequences to the patient. They wish at the same time to convey to the members of the medical staff their high appreciation of the sense of duty and professional honour which actuated them in declining to retain office under conditions to which they themselves could not possibly submit, and which they believed to be detrimental to the best interests of the charity."

Mr. CHAUNCY PUZEY related a case of Multiple Wound of the Small Intestine with Penetration of the Gravid Uterus by a Stab. The patient, aged twenty-eight, came to the Northern Hospital in October, 1895. A loop of bowel was protruding from a small abdominal wound half-way between the pubes and the umbilicus. There were two wounds in this piece of bowel, one completely dividing it and the other cutting it half through. These wounds were closed by continuous Czerny-Lembert sutures. On extending the abdominal wound downwards there was a gush of blood and clots, and a second loop of bowel came out; this had been transfixed by the weapon and presented three wounds—two of the bowel itself and an extensive one of the mesentery—which bled profusely. The arteries being secured, the intestine was clamped above and below the wounded portion with Lane's clamp and nine or ten inches of gut were removed. The divided ends were joined by a Murphy's button (No. 2) and the rent in the mesentery repaired. The intestines were replaced and the abdomen irrigated with hot boracic solution. Dark blood welled up from the pelvis, which was filled with black clot. The incision was enlarged and the clots scooped out with the hands. A wound in the uterus was discovered which admitted two fingers; the divided umbilical cord protruded. The cord was pulled out and cut away. The uterine wound was closed with one thick chromic gut suture. The abdomen was flushed, a large drain-tube inserted, and the wound closed. Four days later the patient miscarried. She ultimately recovered, but the button had not passed. It was now apparently lodged in the sigmoid flexure.—Dr. MACFIE CAMPBELL said that he had seen the patient four days after the operation. There were at this time uterine contractions and a very offensive vaginal discharge. The os was patulous and some placenta presented. This was cleared away, but no fœtus was ever found. He presumed that the fœtus must have escaped through the uterine wound into the abdominal cavity and have been lost in the clots.—Mr. PAUL said he did not share in Mr. Puzey's fear that harm might result from retention of the button. He had used the button in seven cases; four recovered, including an extensive pylorectomy, and three died. In only one case could the button be blamed in the least degree.—Mr. BANKS made some remarks and Mr. PUZEY replied.

Mr. THELWALL THOMAS read a paper on the Operative Treatment of Varicose Veins of the Lower Extremity. He advocated a method of ligature and division of the internal saphena vein just below the saphenous opening. In some cases where a large bunch of varices existed at the inner side of the knee he noticed that there was nearly always a deep communication which necessitated the excision of a small bunch. Other cases could be cured by cutting and tying the external saphena at the lower end of the popliteal space. He read notes of seventeen cases in all of which union by first intention took place. When the limb is carefully bandaged after the operation thrombosis does not occur. In two cases a large varix was present at the saphenous opening; the ligature and division were performed immediately below this. It was astonishing to see old ulcers of the leg heal so rapidly as they did after the operation and not recur even in cases when the ulceration had lasted for years. The paper was illustrated by lantern slides of the patients before and after the operation.—Mr. ROBERT JONES had performed Trendelenburg's operation fifteen times, in some instances excising both internal and external saphena veins. Where ulceration existed the operation materially helped the healing process. The general results of the operation were most favourable. He laid much stress on the after-treatment, more especially the employment of massage in cases where there was brawny swelling due to lymphatic obstruction.—Mr. RUSHTON PARKER and Mr. LARKIN took part in the discussion.—Mr. THOMAS replied.

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WIGAN MEDICAL SOCIETY.

Some Recent Advances in Surgery.—Exhibition of Specimens.

AN ordinary meeting of this society was held on April 14th in the board-room of the Royal Albert Edward Infirmary, Mr. C. R. GRAHAM, President, being in the chair.

The PRESIDENT read an exhaustive address on Some Recent Advances in Surgery, reviewing the operations and treatment of middle-ear and intracranial disease, laminectomy in injuries to the spine, cholecystotomy, resection of the intestines, operations for appendicitis, &c., and concluded with some remarks on the new photography and Roentgen's rays. An interesting discussion then followed.

The following cases and specimens were shown :—

Dr. MILROY: Patient suffering from Elephantiasis of Both Legs. Specimens of (1) Encephaloid Cancer of the Gall-bladder and Spigelian Lobe of the Liver; and (2) Fracture of the Body of the Third Cervical Vertebra with Hæmorrhage into the Cord caused by Indirect Violence in a Young Man; death in twenty-four hours.

Mr. BERRY: (1) Ununited Fracture (transverse) Wired with an excellent result; (2) Compound Fracture of the Elbow-joint; and (3) Triple Osteotomy (both femora and one tibia) in a child aged three years.

Mr. COWAN: Compound Depressed Fracture of the Skull in which he had trephined in three places. The patient was nearly well.

Mr. HUGH E. JONES: (1) Coloboma Iridis; (2) Choroiditis Senilis; and (3) Ophthalmic Demonstration of several cases.

Mr. MACDONALD: (1) Hydatid of Liver; and (2) Uric Acid Calculus from a Boy aged two years which weighed 134 grains.

Mr. WM. MITCHELL ROOCROFT: Mulberry Calculus removed from a Boy aged ten years which weighed 220 grains.

The PRESIDENT: Fifty-two Biliary Calculi removed by Cholecystotomy.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.

A MEETING of this society was held on April 14th, Dr ADOLPH BRONNER, President, being in the chair.

Dr. S. LODGE gave a demonstration of Micro-specimens illustrating Pathological Conditions of the Nose, Throat, Mouth, and Orbit.—Dr. GOYDER and Dr. HIME discussed the specimens.

Dr. H. BRONNER showed a patient who had recently suffered from Tetanus and whom he had treated with injections of antitoxin. Recovery was complete. The patient was a woman who was admitted into the Bradford Infirmary suffering from trismus. There were no stiffness of the muscles of the neck and no dysphagia. The knee-jerks were present. The pulse was 92, the respiration 24, and the temperature 100° F. Fifteen grains of antitoxin were injected and 20 grains of chloral hydrate and of bromide of potassium were given by the mouth. The patient had a spasmodic attack twenty-four hours after admission. At intervals 40 grains (followed by doses of 20 grains and 15 grains) of antitoxin were injected and there were further spasms of the neck and jaw noted. On the tenth day (after admission) pain in the back and legs was complained of; around the left knee-joint there was a roseolar rash, and the left wrist and shoulder were swollen and tender. There was a sore throat and the temperature was 104°. The after progress of the case was one of gradual improvement. Two abscesses in the back required to be incised and drained. The mode of action and the method of administration of the antitoxin were described.—The case was discussed by Dr. GOYDER, Dr. FARRAR, Mr. GABRIEL, Mr. HORROCKS, Dr. HIME, and Dr. CAMPBELL, and Dr. H. BRONNER replied.

Dr. J. HAMILTON CRAWFORD showed a man suffering from Idiopathic Muscular Atrophy.

Dr. FARRAR showed a Skiagraph of the Hand which disclosed a piece of Steel near the second Phalanx of the Little Finger, and described the apparatus necessary for the new photography.—Mr. PARKINSON, Dr. CAMPBELL, and Dr. GOYDER spoke on the subject and Dr. FARRAR replied.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.

A MEETING of this society was held on April 17th, Dr. NEWMAN being in the chair.

Dr. R. M. BUCHANAN showed specimens from a case of Cancer of the Pylorus. The special feature of the case was provided by the secondary distribution of the malignant elements. This had occurred widely in the lymphatic glands in various parts of the body and some of the glands were observed to have undergone caseous changes—an unusual circumstance in malignant growths. The peritoneum, pericardium, and right pleura were dotted over with a large number of minute secondary malignant formations, though no symptoms during life had suggested the involvement of these serous membranes.

Dr. WALKER DOWNIE related eight consecutive cases in which he had opened the larynx (crico-thyrotomy) for the purpose of removing Intra-laryngeal Tumours and showed several of the patients. The series included only one death, that of an adult who was the subject of a chronic lung affection and who died from septic pneumonia. The most noteworthy of the other cases were:—1. An adult from whom the left vocal cord was excised three and a half years ago on account of malignant disease and who had now a somewhat rough but distinct voice; in phonating the right cord would be seen to cross the middle line and rise up to meet the left ventricular band, which acted, therefore, as a substitute for the vocal cord. The disease had not recurred. 2. A boy aged five years on whom it was necessary to perform Tracheotomy for Attacks of Dyspnœa, one of which reduced the patient to a state of coma. The laryngoscope failed to detect any new growths, but on performance of crico-thyrotomy a small mucous polypus was seen to spring by a long pedicle from the tracheal wall about the level of the second ring, and the length of the pedicle was such as to allow the tumour to irritate the laryngeal mucous membrane and so lead to spasm of the glottis. The removal of the polypus was followed by complete cessation of the symptoms. 3. A child two years of age on whom Crico-thyrotomy had been performed six times for recurring papillomata. Dr. Downie expressed his conviction that growths within the larynx are much more satisfactorily dealt with by crico-thyrotomy than by an endo-laryngeal operation. He regards the operation as an eminently safe one and has had no trouble with subsequent malposition of the cartilages leading to aphonia. In order to secure accurate readjustment he is in the habit of making the incision in the thyroid cartilage, not in the middle line in its whole length, but commencing obliquely in one ala he reaches the middle line, continues downwards, and then completes the division obliquely in the other ala. Then when the divided parts are replaced they dovetail into one another and so accuracy of apposition is secured. For malignant growths Dr. Downie considers an endo-laryngeal operation quite unsuitable. Such growths are almost invariably larger and more widely extended than appears in examination by the laryngoscope, and they cannot be properly attacked unless by an operation which renders complete access to them possible. The patient who had now been free from any sign of recurrence for three and a half years after extirpation of the vocal cord for epithelioma illustrated the advantage of operating thoroughly and in an early stage of the disease.—Dr. NEWMAN agreed generally with Dr. Downie's views with regard to the crico-thyrotomy as compared with an endo-laryngeal operation. He quoted a case in which he had extirpated both vocal cords for malignant disease six years ago and in which there had been no recurrence. His experience had led him to the conviction that early operation in malignant disease offered a very good chance of complete cure, whilst when the disease had advanced to such a point that complete extirpation of the larynx was necessary it was almost as well to refuse to operate; one of his cases, however, had survived the operation for eighteen months.

Dr. J. H. TEACHER showed two patients illustrating the value of Skin Grafting in Promoting the Healing of Extensive

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Wounds. In one the wound had been caused by the excision of a large part of the skin of the thigh on account of numerous small sarcomatous growths and the other was due to an accident. In each case it had been found that whilst epithelial grafts give rapidly a covering layer to the granulations this covering is thin and nothing like so permanently valuable as that provided by whole-skin grafts. Photographs representing the various stages of the healing process were exhibited.

Dr. NEWMAN showed specimens from a case of Malignant Disease of the Œsophagus which had terminated fatally in consequence of the ulcerative process extending into the aorta. The stricture had been recognised during life, the growth not only producing dysphagia, but also paralysis of the left vocal cord. Gastrostomy was successfully performed and for fourteen days progress was quite satisfactory. Then blood began to pass from the opening in the stomach and in the end death occurred suddenly from a severe hæmorrhage. The opening into the aorta was situated in the descending arch.—Dr. HAWTHORNE, in discussing the case, referred to the rarity of the mode of death in malignant disease of the œsophagus, and directed attention to a very similar case under the care of Dr. Frederick Taylor, reported in THE LANCET of April 11th 1896, p. 991.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

The Radical Cure of Inguinal Hernia.—Restoration of the Nose.

A MEETING of this section was held on March 20th, Sir W. THORNLEY STOKER, President, being in the chair.

Mr. HEUSTON read a paper on the Radical Cure of Inguinal Hernia, in the course of which he said that as hernia gave rise to a general weakening of the fascia transversalis in the inguinal region it was necessary in any operation aiming at radical cure to support and strengthen this fascia, and the most frequent cause of recurrence after some of the recent operations was neglect of this point. He then mentioned some of the operations now generally recommended, dividing them into those where the inguinal canal is not opened and those where the inguinal canal is opened; the results of the second variety were very good as it was possible to see which structure required most attention, but he feared that after a time recurrence would be likely to occur through absorption of cicatricial tissue. He then described an operation which he had himself performed on thirty-two occasions, the patients varying in age between eighteen months and fifty-two years; all of the patients recovered, and, as far as he could ascertain, the hernia had not recurred in any. This operation consisted in exposing the inguinal canal, separating the sac from the cord to its full extent, twisting the neck of the sac and ligaturing it by a Staffordshire knot with strong gut at its exit from the external abdominal ring, then suturing the twisted neck of the sac to the posterior and superior walls of the canal in such a manner as to approximate those walls and cause the twisted sac to become united to the posterior wall and fascia transversalis, thus hindering a recurrence through any portion of the posterior wall of the inguinal canal. He uses catgut sutures throughout the operation, and depends on inflammatory adhesions to hinder recurrence.

Mr. ROBERT H. WOODS read a paper on a Modification of the Indian Operation for Restoration of the Nose. The patient, a female aged twenty-nine years, had had the cartilaginous nose destroyed by lupus. The forehead flap was cut according to Dieffenbach's pattern. The skin from the bridge of the nose was detached and reflected downwards so that the raw surface looked forwards and the skin backwards towards the nasal cavity, the raw surface of this triangle was adapted to that of the forehead flap, and so formed a portion of the skin lining the new nose. The lining was completed by the flaps inverted to form the alæ, so that the whole new nose was lined with skin, and the tendency to contraction which is always present where a surface is left to granulate and cicatrise was obviated. The forehead surface was not sutured but was covered by a flap of skin, transplanted from the arm as in Wolfe's method. This flap perfectly covered the deficiency; it was absolutely wanting in sensibility. There was no secretion from the nose.

Reviews and Notices of Books.

Dictionary of National Biography. Vol. XLVI. Pocock—Puckering. Edited by SIDNEY LEE. London: Smith, Elder, and Co. 1896. Price 15s.

THIS volume contains upwards of 450 articles, the most noteworthy of which are probably those on Alexander Pope and Joseph Priestley. Mr. Leslie Stephen, to whom we are indebted for the biography of Pope, says of him that "he had qualities which would have enabled him to give an adequate embodiment in verse of the spirit of any generation into which he had been born. He might have rivalled Chaucer in one century and Wordsworth in another." The poet was a remarkable example of the association of great mental endowments with bodily infirmity, being of weakly constitution, greatly deformed, and only about four and a half feet in stature. He was born in Lombard-street in the City of London in 1688, died in 1744, and was buried in Twickenham Church. The versatility of Priestley's genius is sufficiently attested by the fact that the writing of his biography has been divided between two authors—Mr. Hartog undertaking the scientific and the Rev. Alexander Gordon the theological and political survey of his work. His discovery of oxygen gas was made on Aug. 1st, 1774, and was first publicly announced in a letter to Sir John Pringle dated March 15th, 1775. Scheele made the same discovery independently, but did not publish his results until a later date. Priestley also was the first to prepare seven other gases—namely, hydrochloric acid gas, nitric oxide, nitrous oxide, ammonia gas, carbonic oxide, sulphur dioxide, and silicon tetrafluoride. He and Professor Rutherford of Edinburgh simultaneously and independently discovered nitrogen in 1772. Priestley was born in Yorkshire in 1733, went to America in 1794, and died in 1804 at Northumberland in Pennsylvania.

The medical biographies are about twenty-four in number. Sir Francis Prujean was born at Bury St. Edmunds in 1593 and graduated as M.D. at Cambridge University in 1625. He was elected a Fellow of the Royal College of Physicians of London in 1626, was censor for several years, registrar from 1641 to 1647, president from 1650 to 1654 and treasurer from 1655 to 1663. He was knighted in 1661 and died in 1666. Prujean-square, a small passage leading off the Old Bailey, is named after him. Richard Powell was born in 1767, and graduated as M.D. at Oxford University in 1795. He was elected a Fellow of the Royal College of Physicians of London in 1796, was censor for several years, Gulstonian Lecturer in 1799, Harveian Orator in 1808, and Lumleian Lecturer from 1811 to 1822. In his Gulstonian lectures he mentioned the fact, up to that time unrecorded in this country, that impaction of biliary calculi in the gall-bladder does not necessarily cause serious symptoms. Dr. Powell was physician to St. Bartholomew's Hospital from 1801 to 1824 and was the first to print the whole text of the ancient charter granted to the hospital in the year 1137. He died in 1834. Sir John Pringle was the youngest son of a Roxburghshire baronet and was born in 1707. He studied medicine at Leyden, where he graduated as M.D. in 1730, and after some years of practice in Edinburgh he received in 1742 a hospital appointment with the British forces in Flanders. In 1744 he was made physician-general to the forces there, and in 1745 was present with the Duke of Cumberland at the battle of Culloden in Scotland, subsequently returning for two years to the army serving on the Continent. About 1748 he settled in London, still holding his appointment of physician to the forces, and rapidly attained professional distinction, being made physician to the Duke of Cumberland in 1749, to the Queen in 1761, and to the King in 1774. In 1763 he was elected a

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Fellow of the Royal College of Physicians of London, in 1766 he was created a baronet, and in 1772 he became President of the Royal Society. He died in London in 1782. Pringle's writings and practical work did much for the advancement of military hygiene; his biographer (Dr. J. F. Payne) says that "he may fairly be regarded as the founder of modern military medicine in distinction from surgery." Percivall Pott was born in Threadneedle-street in 1714, and was admitted into the freedom of the Barber-Surgeons' Company in 1736. The union of the Surgeons and Barbers came to an end in 1745, and in 1753 Pott and John Hunter were elected the first Lecturers on Anatomy to the newly-formed Corporation of Surgeons. He became Assistant Surgeon to St. Bartholomew's Hospital in 1744, and was full Surgeon from 1749 to 1787, during which long period of active service he made many improvements in practical surgery. He was also the author of many celebrated treatises, the chief of which are those on Ruptures, on Fistula in Ano, on Injuries of the Head, on Fractures and Dislocations, on Curvature of the Spine with Palsy of the Lower Limbs, and his "Chirurgical Observations." The term "Pott's fracture" originated in his having himself sustained that injury in 1756 through being thrown from his horse. His practice was very large and the lectures delivered by him to the students of St. Bartholomew's Hospital were the most celebrated in London. He died in 1788. Sir George Hornidge Porter was born in Dublin in 1822, being the only son of Mr. William Porter, a distinguished Dublin surgeon, who was Professor of Surgery in the Irish College of Surgeons School of Medicine and filled the office of President of the College in 1838. Having studied medicine in his native city and become a Fellow of the Royal College of Surgeons in Ireland in 1844, he graduated as M.B. at Trinity College, Dublin, in 1845 and in 1849 was elected surgeon to the Meath Hospital, in the duties of which appointment he continued to be actively engaged for the remainder of his life. In 1865 he received the degree of M.D. from Trinity College, Dublin; in 1868 he was elected President of the Royal College of Surgeons in Ireland; in 1869 he was appointed surgeon-in-ordinary to the Queen in Ireland; in 1883 he was knighted, and in 1889 he received a baronetcy in recognition of his distinguished position as a surgeon. His literary work consists of numerous records of surgical cases and operations published in the periodical press. He died in 1895. Sir James Prior was born at Lisburn about 1790, entered the Navy in 1810, and became surgeon to three of the Royal yachts in 1815. In 1843 he was created deputy-inspector of hospitals, received knighthood in 1858, and died at Brighton in 1869. He had a considerable literary reputation, having published a memoir of Edmund Burke, which appeared in 1824 and passed through several editions, as well as some poetical pieces, a life of Oliver Goldsmith, and an edition of Goldsmith's miscellaneous works. John Postgate was born in Scarborough in 1820, took the diploma of the Royal College of Surgeons of England in 1844, settled in practice in Birmingham in 1851, became a Fellow of the College of Surgeons in 1857, and acquired a well-deserved prominence by his labours for the exposure and repression of the adulteration of food. Under his influence nine Bills were introduced into the House of Commons by the members for Birmingham. Postgate obtained no public recognition of any kind for his services. He was appointed professor of medical jurisprudence in Queen's College, Birmingham, in 1860, and died in 1881.

Sewerage and Sewage Disposal. By HENRY ROBINSON, M. Inst. C.E. London: E. and F. N. Spon. 1896.

PROFESSOR ROBINSON'S book deals with a most important subject upon which he is an accepted authority. It is disappointing, however, not to find in it any indication of a promise of the solution of the problem of really utilising sewage. It is, of course, an important thing to be able to purify sewage or to dispose of it in a sanitary way, but it would be far more satisfactory if it could be turned to useful account rather than be left with the chance of polluting watercourses, or in the form of sewage cake to go begging for want of a purchaser or given of an individual to take it away gratis in any quantity he pleases. Chemical treatment and precipitation have accomplished a good deal in effecting the purification of our rivers and in having a marked favourable influence on the public health, for which we are thankful, but the process in its entirety is not scientific. Mainly through the admirable researches of the Massachusetts Board of Health, and of the experiments of Mr. Scott Moncrieff, we are beginning to suspect that with a due study of the conditions we shall be enabled soon to "engineer" organisms so as not only to dispose of sewage but to convert it into an innocuous and a highly valuable agricultural product. Nature knows no waste, and we have only to patiently wrest her mystic plans of action from her to effect the same end. Professor Robinson's book is admittedly a summary of important data connected with water-supply, sewerage, and sewage disposal, and it places in the hands of the engineer many valuable facts that he should be in possession of. The first chapter relates to house drainage and is followed by memoranda relating to sewage, and then by a section on sewage generally, and the question of the formula of flow, &c. The chapter on river pollution is excellent, as is also the section on precipitation dealing with the more important methods in use. Included under this heading are the electrical method of Webster, which depends largely upon the formation of iron salt by electrolysis acting upon and precipitating the sewage matters, and the Hermite process. We find no reference to THE LANCET report[1] upon the latter process, which we believe was more exhaustive than any other report, giving as it did full details bearing on its chemical and bacteriological aspect. Filtration, in which the claims of the Scott Moncrieff method are epitomised, but not to any extent criticised, is then dealt with. The volume concludes with a diagram giving at a glance the discharges and velocities of oval and circular sewers.

LIBRARY TABLE.

Elementary Inorganic Chemistry. By A. HUMBOLDT SEXTON, F.I.C., F.C.S. Fourth Edition, revised and considerably enlarged. London: Blackie and Son. 1895. Price 2*s.* 6*d.* — Though we deprecate the publication of books written almost exclusively for purposes of examination we are pleased to find that the small work before us has arrived at the stage of a fourth edition. Despite the fact that it is adapted to the wants of students preparing for the Science and Art examination and the London Matriculation, it is a sound exposition of the facts and the general principles of chemical science. It is an excellent chemical primer, due and equal emphasis being given to theory and practice and a proper importance to the physical aspect of the changes in matter. The treatment of the subject is scientific although simple, and it is this feature which singles out this elementary work from a shoal of others which have no real *raison d'être.*

Hygiene. By Professor J. LANE NOTTER, M.D. Dub., and Surgeon-Major R. H. FIRTH, F.R.C.S. Eng. Second Edition. Longmans, Green, and Co. 1895.—The rapid exhaustion of the first edition of this work has necessitated the issue of a second edition within only a few months of publication.

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[1] THE LANCET, May 28th, 1894.

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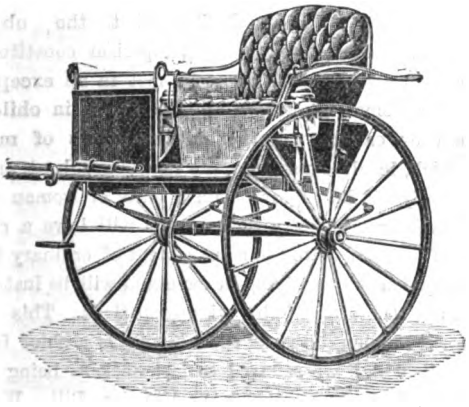
Expansion and growth are the natural conditions of manuals when re-issued, but we are glad to see that the authors have not added much to the bulk of their new volume. The new material which has been added is chiefly to be found in the chapter on the "Removal and Disposal of Refuse and Excreta," which has been almost re-written and much improved on, and in the entirely new chapter on "Sanitary Law." This new chapter we welcome as a great addition to the work; in it is clearly set forth all that should be known or might be required by the head of a household; in place of analysing each Sanitary Act separately the general effect of legislation as a whole upon certain matters of sanitary importance is considered, the summary being limited to the law as applicable to England and Wales.

New Inventions.

VEHICLES FOR THE USE OF MEDICAL PRACTITIONERS.

CARRIAGE-BUILDING has of recent years undergone several improvements, and some novel features have been introduced, designed chiefly either to reduce the weight of the vehicles or to render them more comfortable and commodious in use. These various desiderata appear to have been carefully and successfully studied by the Cortland Wagon Company of Henrietta-street, Covent-garden, and it may be useful to direct attention to a few styles of vehicle which seem to possess qualities likely to be serviceable to medical men. The Henrietta Gig or Car (Fig. 1)

FIG. 1.



weighs about 2¼ cwt., and is suitable for a horse standing from 14 hands to 15½ hands. It has elliptic springs, hickory wheels 4 ft. high provided with steel tyres, and from its lightness and strength is well adapted for long journeys over unfavourable roads. It is well finished and cushioned, and carries either one or two persons.

The Bombay Cart is slightly heavier than the foregoing. It carries two in front, and if required can be fitted with a Syce's seat in the rear suitable for use in India, as well as with a pole when a pair of horses are to be driven.

To those who desire increased protection in winter weather, or against wind, sun, and rain, the four-wheeled hooded carriages (Fig. 2) offer many advantages. They are seated for two persons, may be drawn by either one horse or a pair, and have ample space for instrument bags and similar requisites. The hoods fold up and can be opened or closed at will; the spaces at the back and side are filled by leather curtains.

The Cortland Stanhope Phaeton is a somewhat larger style of four-wheeled carriage, carrying two in front and two behind. This phaeton may be driven with either one horse or a pair, in which latter case a pole is supplied. It is very light in draught and turns in a small space.

The Cortland Bellamy Trap is a four-wheeled carriage constructed to carry a party of four, but the back seat may

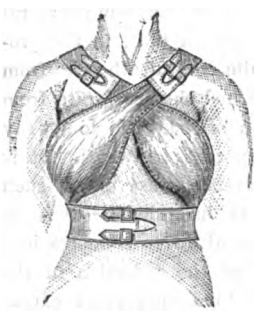
FIG. 2.

be folded up when not in use. Either one horse or a pair may be driven in it.

In all these vehicles the excellence of the materials is guaranteed, and the execution of needful repairs is facilitated by interchangeable parts being kept in stock. When required any carriage can be fitted with indiarubber tyres, either solid, as commonly used for hansom cabs, or pneumatic. American harness is supplied to purchasers who prefer it; it differs in some respects from the English patterns, the bearing reins in particular being less irksome to the horses.

THE "ELLISON" BREAST BANDAGE.

WE have received from Messrs. W. H. Bailey and Son, 38, Oxford-street, W., a little appliance which we can conceive might be of considerable practical use in many circumstances. It is a form of breast bandage consisting of a waistband of strong linen and braces of the same material made to cross at the back just above the lumbar region and in front at about the junction of the superior and middle portions of the sternum. The accompanying illustration shows that the front of the braces are expanded on either side into shallow linen bags, which will receive the respective breast and support it in any direction and with any required amount of tightness, according as the straps upon the collar-bone are adjusted. Pressure can of course be regulated and applied in this or that direction by the insertion of pads within the bags. The bandage may also be used for securing dressings or poultices, when it will obviate unnecessary moving of the patient. It is made in three sizes, small, medium, and large, and the price is 5*s*. 6*d*.



A LITMUS PENCIL.

LITMUS is an admirable indicator of acids and alkalies, but for this purpose can only be relied upon when pure. Its preparation in a pure state is not easy and involves a series of operations which take an inconveniently long time. The litmus pencil provides us at once with the pure colouring material in a very convenient form for use. Thus by merely tracing a piece of paper with the pencil a mark is obtained which we find is extremely sensitive to minute quantities of acids and alkalies, according, of course, as to whether the blue or the red end of the pencil has been used. For the practitioner in testing, for example, the reaction of urine it will be invaluable because reliable, and the indication it gives is distinct. The specimen was sent to us by Messrs. T. Christy and Co. of 25, Lime-street, E.C.

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THE LANCET.

LONDON: SATURDAY, APRIL 25, 1896.

THE question of midwifery attendance on women whose position in life is just above that of paupers is becoming more simple, and the parties that have been ranged on opposite sides of the controversy are now finding out—as some have seen all through—that the differences between them are not great. As the discussion has proceeded the objects to be aimed at and the dangers to be averted are more clearly seen. Both are very real, as we shall try to show, and both place the profession in a delicate and responsible position, in which the help of practitioners in every grade of practice is needed. We have said that the objects to be aimed at and the dangers to be averted are very real. The great object is the saving of hundreds or thousands of lives of parturient women lost yearly through the ignorance of midwives. Dr. W. FRASER in his scheme[1] says that from 1871 to 1893 no less than 98,856 mothers died in England and Wales, or 4493 per year, from puerperal fever and the accidents of childbirth. As Dr. FRASER says, such a fact as this occurring in the antiseptic period of history may well cause searchings of heart. At a meeting lately held in Sheffield this mortality was attributed more to accidents than to puerperal fever, and rather to the want of skilled assistance than to the poisoning of patients by careless and ignorant attendants. This is, however, very doubtful. The serious matter is that while deaths from puerperal accidents are becoming fewer, the death-rate from puerperal fever is rising. Dr. BOXALL has shown that, in the provinces of England at least, while the death-rate from accidents of childbirth has diminished the death-rate from puerperal fever has considerably increased. We do not say that all the blame rests with ignorant midwives. It is enough to know that their ignorance must entail such consequences. Dr. W. WILLIAMS has shown[2] that in Wales the death-rate from puerperal fever is increasing, and he says that the prevalence of the infection in the thickly peopled mining valleys is to a very great extent due to the general employment of ignorant midwives. It is computed that 450,000 women are delivered annually by midwives, most of these midwives being quite untrained. It requires no effort of the imagination to picture the disadvantage and the disaster that such a fact implies. It is ascertained that a little training of midwives, with the opportunity of easy reference to a medical practitioner, vastly reduces the mortality of those whom they attend. This point need not be urged. Though labour be a natural process it leaves the woman a ready prey to the attacks of the most deadly microbes. The object of all enlightened and humane people, medical or lay, must be to reduce to a minimum the risks of the 450,000 women who, as a matter of fact, are attended mostly by ignorant midwives.

How can this object be attained? The best way would be to secure for all women the attendance of fully qualified medical practitioners. There are reformers in this matter, such as Dr. RENTOUL, whose suggestion is attendance by medical practitioners—male or female—and they say that there are registered practitioners of medicine, who, after six or eight years spent in general education, five in medical study, and a series of severe examinations, will be content to take these hundreds of thousands of cases at a charge of 7*s.* 6*d.* for each case. We neither believe this nor desire it. We should despair of our profession if medical men had to do the drudgery of 7*s.* 6*d.* midwifery. But though we see no chance of medical men taking the midwifery of mere midwives into their direct care, we fully appreciate both the necessity and the practicability of placing the midwife in such a relation to the medical practitioner that he shall be available in every emergency. Every Midwives Bill supposes this. Dr. RENTOUL requires the midwifery nurses whom he is willing to register to act under the immediate supervision (does this mean in the presence?) of a medical practitioner. We think, with the Lancashire and Cheshire Branch of the British Medical Association, that such an arrangement is impracticable. It would be as exacting to the practitioner as if he had no midwifery nurse, and two fees would have to be paid by the patient. Another way out of the difficulty is to throw the cost of the midwifery of the classes we are considering on the Poor-rate and to give them the benefit of the attendance of the Poor-law medical officer. This course is open to the formidable objection that it pauperises the patients. Accordingly the great majority of persons who have considered this subject have come to the conclusion that the obstetric needs of the classes just above pauperism constitute an exceptional problem which must be met in an exceptional way. The women cannot be allowed to die in childbirth because they cannot pay the minimum fees of medical men—which, in all conscience, are small enough at present. Consequently all Bills provide for a class of women to act as midwives or midwifery nurses, who will have a certain amount of training as to the management of ordinary labour and the hygiene of the lying-in room and will be instructed as nurses in the risks of the lying-in periods. This insistance on the nursing duties of the midwife is a chief feature of the Bills which we referred to last week as being likely to compete in Parliament with the Midwives Bill. What is wanted is a class of women who will do *both* duties as at present. It is obvious that the lying-in woman is as much at the mercy of the nurse as of the midwife, who in the poor woman's case are one and the same person. Ignorant or dirty nurses will do all the mischief of ignorant or dirty midwives. It is no use to save women from one and not the other risk.

> "What boots it at one gate to make defence
> And at another to let in the foe?"

It is to the credit of the Lancashire and Cheshire Branch that it emphasises very specifically the nursing function of the midwife. It will be the duty of the suggested Midwives Board to lay down rules for the training of the midwife, for her examination, and for limiting her to normal cases.

We have not space to-day to go minutely into the rival merits of the different Bills and of the clauses which

[1] THE LANCET, Feb. 29th, 1896.
[2] THE LANCET, April 18th, 1896, p. 1067.

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are meant to avert the risks of this legislation. The greatest risk which it behoves us to avert is that of doing anything to detach midwifery from the science and art of medicine. It is only since midwifery has come to be studied in this relation that it has achieved its great improvements in saving life alike from accidents and from infections. It is of no use to argue that the results of midwives' practice in lying-in hospitals and charities afford proof of the propriety of giving them sole charge of lying-in women. The argument is utterly fallacious. In this connexion they are the mere handmaids and nurses of medical practitioners. And the test of safe legislation is the degree in which it ensures that the women who are to be registered as midwives and midwifery nurses shall continue to occupy the same relative position. The important letter of Mr. HUMPHREYS, which we print in another place to-day, shows that on some essential points there is a difference between the General Medical Council and the Privy Council. It is satisfactory to know that the promoters of the Midwives Bill sympathise with the General Medical Council and disapprove the action of the Privy Council or of the House of Lords in not accepting the suggestions of the General Medical Council which has a great responsibility in this matter. Some teachers of midwifery would seem to add very much to the difficulty of procuring reasonable legislation on this subject by rash statements. Dr. W. C. GRIGG is reported by Dr. RENTOUL as saying to his pupil midwives: "I am sure you will agree with me in hoping the day is not far distant when all midwifery will again fall into the hands of women." We cannot help thinking that Dr. GRIGG has been misreported. Surely he does not wish for so retrograde and disastrous a change as seems to be implied in this remark.

FOR months to come the Dongola expedition and the forward movement in the Soudan will be of absorbing interest, and already the arguments for and against this latest departure in our Egyptian policy are being stated and restated with conspicuous ability on either side. It is not within our province to criticise or defend that policy, but as medical journalists concerned in the future even more than in the immediate present of a great health resort for the English-speaking world we have a view of our own which is not without its interest even for the diplomatist and the military man. There are, indeed, two causes in Egypt—a sanitary and social work on the one hand, and a political and imperial one on the other; and while the latter is receiving an attention which no patriotic or far-sighted Englishman will grudge, the former is for the time being lost sight of, if not wholly relegated to the background.

No one can have followed our Cairo correspondence for the last few years without vividly realising two facts—to wit, that Egypt, particularly the upper reaches of the Nile, is becoming steadily an important factor in the resources of medicine—an aid to treatment which the English consultant has more and more to consider in the interests of patients; and, secondly, that the sanitary conditions of the country are very far from keeping pace with the influx of the ailing or the weakly in quest of warmth and pure air. In Cairo itself—which in the winter months has been not inaptly described as "almost a suburb of London," so full is it of our compatriots—the death-rate is at least three times as high as in either the English or the Scottish capital. It is, in the words of a recent reporter on its sanitation, "absolutely destitute of any drainage or sewage system," and on certain days when the wind blows, there being little or no rain to cleanse the streets, "the analysis of the air would yield results which ought to terrify the Government into sanitation." The condition of the towns further up the Nile is even worse, their defect in wholesome potable water being a byword. This is one, though by no means the only, cause why their native children die in such appalling numbers—"two-thirds of them before they are five"!—and it is a cause which cannot but affect disastrously the health of even the well-fed, well-cared-for sojourner from the British Isles. True, efforts are being made to remedy this defect by boring, and just as at Biskra, in the Sahara, artesian wells now supply he English-speaking resident with water he can drink with safety, so in Egypt the adoption of similar measures has already begun and nothing but a sufficient money grant is required in this, as in other departments of public hygiene, to make the country habitable by the stranger and healthy for the native.

But it is at this point that the sanitary and social cause for which we have been pleading comes into conflict with the political and imperial. The forward movement in the Soudan threatens to assume proportions which will drain the country of its resources for years to come and may throw back public hygiene for a decade and more. Relying for her prosperity as she does on "the foreign import," as the health-seeking sojourner is somewhat cynically called, Egypt is in danger of losing this source of income and with it the means of promoting that sanitary reform which is year by year becoming more indispensable for her as a climatic resort. Three millions sterling is the estimated amount of what Great Britain alone contributes annually through her visiting population to the Egyptian Exchequer, and this contribution will continue so long as the country attracts the health-seeker, but not a day beyond. Once let it be found that infective disease, the Nemesis of backward sanitation, endangers the English resident or neutralises the benefits he looks for and the stream of pecuniary gain which is to Cairo and the Nile towns what the fertilising flood is to Lower Egypt itself will be deflected into other channels, and places like Biskra will thrive at Egypt's expense and rectify their sanitary frontier, and with it the monetary one, in a sense which will make the contemplated "rectification" at Dongola or Khartoum a costlier one than its promotors bargained for.

There are, in fact, two conquests as well as two causes to be provided for in Egypt. There is the political and imperial conquest, into which we have now entered and of which we are far from seeing the end, and there is the sanitary and social conquest, barely begun but giving promise of success—in danger, however, of being compromised, if not suspended altogether, by its more dominating counterpart. As we have said, we have no wish to attack or vindicate the "forward policy" now in course of being carried out. We leave that to our political contemporaries. But our duty as medical

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journalists would not have been fulfilled if, amid the arguments for and against that policy, we had failed to put in a word for the sanitary and the social crusade on which we have started. *Sanitas sanitatum, omnia sanitas* was once a political watchword. It is worth while recalling it now when it is apt to be forgotten in one of the chief health resorts of the English-speaking world.

THE death of Dr. WILLIAM SHARP of Rugby, recorded in our columns last week, removes one of the last of the holders of a medical degree conferred by the Archbishop of CANTERBURY and registered under the Medical Act. Although the obtaining of a medical qualification in this unconventional way is altogether at variance with modern views as to expediency and the fitness of things, it is nevertheless a time-honoured usage almost contemporaneous in its inception with the Royal College of Physicians of London and fully sanctioned by Act of Parliament. It was the rejection of the POPE'S domination by King HENRY VIII. which led to the English Primates being invested with the power of conferring distinctions which we of the present day consider to be the exclusive prerogative of a university. The granting of degrees in divinity, law, and medicine appears to have been exercised by the Popes independently of the universities, and the abolition of the Papal authority in this country by King HENRY would, therefore, involve some inconvenience to such of his subjects as had expected to receive the coveted titles through the instrumentality of the Church. This disability was, however, easily removed by the Act 25 HENRY VIII., c. 21, which is entitled "An Act concerning the Exoneration of the King's Subjects from Exactions and Impositions heretofore paid to the See of Rome, and for having Licences and Dispensations within this Realm without suing further for the same." Section 2 provides that the Archbishop of CANTERBURY shall have power to grant "all manner such licences, dispensations, compositions, faculties, grants, receipts, delegacies, instruments, and all other writings for causes not being contrary or repugnant to the Holy Scriptures and laws of GOD, as heretofore hath been used and accustomed to be had and obtained by your Highness or any of your most noble progenitors, or any of your or their subjects at the See of Rome." Degrees are not specified in this transfer of authority, but they are understood to be included in the term "faculties." The right of conferring degrees was exercised by Archbishop CRANMER as early as 1539, in which year he commissioned the Bishop of NORWICH to confer the degree of Doctor of Divinity on ELIGIUS FERRERS. Only seven examples are known of Lambeth degrees granted prior to the Restoration—namely, one of D.D., four of B.D., one of M.A., and one of *ad eundem* B.A. After the Restoration in 1660 Archbishop JUXON (1660–63) bestowed degrees six times—D.D. twice, LL.B., M.A., M.D., and M.B. once each. His successors continued the practice, and the right of doing so—which was conferred, or presumed to be conferred, by Parliament under HENRY VIII.—was exercised by the Archbishops apparently without objection until in the reign of GEORGE I. it was disputed and made the subject of a law suit in consequence of the Bishop of CHESTER having refused to admit SAMUEL PEPLOE, a B.D. of Lambeth, to the wardenship of Manchester College. The cause was first tried at Lancaster Assizes in 1722 and was subsequently carried by appeal before the King's Bench, where it was decided in favour of the Archbishop in 1725. From the decease of Archbishop JUXON in 1663 to Feb. 1st, 1848, there were 451 Lambeth (or Cantuar.) graduates, namely:—D.D., 169; B.D., 11; LL.D., 24; LL.B., 41; M.A., 170; M.D., 31; M.B., 1; and Mus.Doc., 4. The solitary M.B. was PETER DENT, of Trinity College, Cambridge, who received the M.B. degree in 1678, and was incorporated at Cambridge in 1681. To the above list of graduates may be added the name of Mr. JOSEPH BRIGSTOCKE SHEPPARD, M.R.C.S. and L.S.A., of Canterbury, who was made LL.D. Cantuar. in 1885. This gentleman was seneschal of Canterbury Cathedral and was for many years distinguished as an archæologist; he died in January, 1895.

The Medical Act of 1858 recognised the Lambeth medical degrees to the extent that Section 15 and Schedule (A) provide for the registration of such degrees if granted prior to the passing of the Act, and the London and Provincial Medical Directory in the annual issues from 1848 to 1856 inclusive, but apparently not afterwards, at the end of the list of the "Institutions granting Degrees" had the paragraph:—"In addition to these the Archbishop of CANTERBURY is empowered to authorise any person whom he may deem fit to practise as a physician, by virtue of the Lambeth Diploma." The following is a complete list of the Lambeth Doctors of Medicine, together with the year of graduation, from the beginning of the present century to 1862. The other qualifications of each of these gentlemen, as far as they can be clearly ascertained, are placed within parentheses after the respective names:—In 1803, ROBERT POPE; in 1806, THOMAS DAY; in 1817, WHITLOCK NICOLL (M.R.C.S. Eng., 1809; L.R.C.P. Lond., 1816; M.D. Aberd., 1816; M.D. Glasg., 1826); in 1818, JOHN DAY; in 1819, CARR ELLISON LUCAS; in 1822, WILLIAM OLIVER LOCKE; in 1824, JAMES RUMSEY; in 1825, DANIEL JARVIS; in 1826, EDWARD GRIMSTONE; in 1827, Sir CHARLES MANSFIELD CLARKE, Bart. (M.R.C.S. Eng., 1802, F.R.C.P. Lond., 1836), and WILLIAM CHANDLER; in 1828, WILLIAM SAMWAYS OKE (L.R.C.P. Lond., 1828; M.R.C.S. Eng., 1838; L.S.A.); in 1836, Sir DAVID DAVIES, K.G.H. (L.R.C.P. Lond.); in 1840, ROBERT HULL (L.R.C.P. Lond., M.R.C.S. Eng., 1816); in 1841, Sir WILLIAM HYDE PEARSON; in 1849, JOSEPH LAURIE (L.R.C.S. Edin., 1837); in 1850, WILLIAM BAYES (M.R.C.S. Eng., 1844; L.R.C.P. Lond., 1853) and EDMUND CHARLES JOHNSON (M.R.C.S. Eng., 1843; F.R.C.S., 1858); in 1851, FREDERICK GILDER JULIUS (M.R.C.S. Eng., 1833; L.S.A., 1833; F.R.C.S., 1853) and JOHN GREEN BISHOP (M.R.C.S. Eng., 1809); in 1854, GEORGE CANNEY (M.R.C.S. Eng., 1841; L.S.A., 1843); in 1855, JOHN HODGSON RAMSBOTHAM (M.R.C.S. Eng., 1832; L.S.A., 1832; M.D. Erlangen, 1851) and RALPH BARNES GRINDROD (L.S.A., 1830; M.D. Erlangen, 1851); in 1856, WILLIAM SHARP (M.R.C.S. Eng., 1827; L.S.A., 1826) and EDWARD PHILLIPS (M.R.C.S. Eng., 1843); in 1858, EDWARD CRONIN (M.D. Dublin, 1828), EDMUND SMITH (M.R.C.S. Eng. and L.S.A.,

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1827), and WILLIAM BAKER; in 1861, JOHN RAYNER (L.S.A., 1842; M.R.C.S. Eng., 1859; L.R.C.P. Edin., 1860; M.R.C.P. Edin., 1864) and EDWARD WESTALL; in 1862, WILLIAM SHERWIN.

The information as to the sources whence these particulars might be gleaned was supplied a considerable time ago by Mr. S. WAYLAND KERSHAW, M.A., the learned and courteous librarian at Lambeth Palace.

Annotations.

"Ne quid nimis."

ANNUAL REPORT (1894) OF THE MEDICAL OFFICER OF HEALTH OF THE ADMINISTRATIVE COUNTY OF LONDON.

WE have just received a copy of Mr. Shirley Murphy's third annual report as medical officer of health of the administrative county of London. The report for 1894 is a substantial folio volume running to about 170 closely printed pages and plentifully illustrated with charts, diagrams, &c. Relating as they do to the health and sanitary condition of the population of the English metropolis, which now numbers little short of four and a half millions, these reports have come to possess an importance not inferior to that attaching to the similar publications of the medical staff of the Local Government Board. The volume before us has been evidently prepared with the same care that had been shown in the compilation of its two predecessors. The subject matter is arranged in two main sections—the first statistical, the second administrative—and these are supplemented by a series of appendices, eleven in all, which give to the entire work a completeness that leaves nothing to be desired. In consequence, however, of the bulkiness of the volume, and the costliness of its illustrations, there is little hope that it will obtain adequate general circulation. Having regard to this consideration and to the great interest attaching to so important a work, at least to Londoners, we have resolved to deal with its several sections somewhat in detail, and to review the various points for the benefit of the readers of THE LANCET in our issues of the next few weeks.

THE USE OF CHLOROFORM IN DENTAL PRACTICE.

A DEATH under chloroform which has recently occurred during the performance of a dental operation serves as a sad comment enough upon the correspondence which has recently taken place in our columns[1] upon the subject of the justifiability of using chloroform during the extraction of teeth. The particulars of the case are as follows. The patient, a girl aged thirteen, suffered from neuralgia due to two carious teeth. Her health not being good the removal of the teeth was deferred and her general health attended to. However, a recurrence of pain occurred and her medical practitioner deemed it advisable to call in a local dentist and decided to give the child chloroform. At the inquest he was asked why he did not give the girl ether, and his reply is reported to have been that he thought that she would stand chloroform better. No reason for this assertion is given, nor is any mention made of any lung or renal condition being present which would have contra-indicated the employment of ether. The patient appears to have dreaded the pain, but was reassured when she was told that chloroform would spare her all discomfort. The anæsthetic was given from a mask "slowly and cautiously. Barely a drachm had been given when she was 'under.'" The dentist had some difficulty in getting out the first tooth. Although the patient did not feel anything at first she called out "oh" before the tooth was out and twisted herself round. At this moment "the pulse was good and she breathed deeply, the face became red." No more chloroform was given. The extraction of the second tooth was then attempted. The girl grew white in the face, the pulse imperceptible, and the breathing stopped. The usual restorative measures failed to restore animation. The chloroform used was from a good maker and had been safely used for another patient. The chloroformist stated that death was due to heart failure, and added "perhaps fright had something to do with it."—In addition to the above we note that the *Times* of the 22nd inst. contains the following:—"One of the district coroners of the West Riding, Major Taylor, has held an inquest at Idle on the body of Lavinia Sawdon, fourteen, who died while under the influence of chloroform on Friday afternoon last, administered by Joseph Priestley, 'herbalist and maker of artificial teeth.' The case has since been before the magistrates. Evidence as to the death of the girl was given. She called at the shop of Priestley to have two teeth drawn and she consented that chloroform should be used. She died in a chair after a second dose had been administered. Priestley had no assistance. Dr. R. Honeyburne spoke to the girl being perfectly healthy, and said a medical man would never, as a rule, both administer chloroform and extract teeth. The coroner at the inquest directed the jury to consider whether the act of Priestley was a grossly rash act or whether it was a case of misadventure. The jury deliberated an hour and brought in a verdict of 'Manslaughter' against Priestley. Before the West Riding magistrates he pleaded 'Not guilty' to the charge and reserved his defence. He was committed for trial at the next Leeds Assizes, bail being accepted."

[1] THE LANCET, March 21st and 28th, 1896.

THE FALCON-COURT IMPROVEMENT SCHEME.

THE London County Council, in pursuance of a scheme for the improvement of an insanitary district of Southwark, propose to sweep away no less than 111 houses in Falcon-court and adjoining courts and alleys. The evidence of Dr. F. J. Waldo, medical officer of health of the district, as given before the Local Government Board representative, bears out the fact that the destruction of these premises is an undoubted improvement. The Falcon-Court area, said Dr. Waldo, is hemmed in on the west by lofty model dwellings, on the east by houses lining the Borough High-street, and on the north and south by warehouses. In addition a manufactory, the Midland Railway Receiving Depôt, and other warehouses stand between the parallel courts and alleys comprised in the unhealthy area. This arrangement—an obstructive one—taken in conjunction with an existing faulty construction and grouping of houses in the area in question, effectually prevents a due admission of light and air. The dwellings themselves in many cases have no means of obtaining a through ventilation, and in those instances where a backyard is present such yard is usually narrow and insufficient for purposes of ventilation. The cellars, especially of the back-to-back houses in Falcon-court, often contain the waterclosets, ash-pails, and other sanitary conveniences. They also serve as kitchens and are generally used for the washing and drying of clothes as well as for other purposes. The occupied houses cover together one acre, thirty poles—that is to say, rather under one and a quarter acres—and upon that space 822 human beings are concentrated. The population density for the whole parish of St. George the Martyr is 211 to an acre, as against 58

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for London. Eighty-nine deaths in this area are known to have occurred during the four years 1892-93-94-95, which figures give an average death-rate of 29·5 per 1000. The (corrected) death-rates for 1892-93-94-95 are 24·6 for the whole parish and 19·7 for London. During the three years 1893-94-95 188 official notices have been served under the Health Acts on owners and occupiers of property within the area under inquiry. This action, however, has only touched the fringe of a long-standing and insanitary evil, and has merely ended in the removal of a few of the grosser and more glaring defects. On the other hand, those faults of a structural nature, which are both many in number and of a serious nature, can only be mended by radical measures in the shape of a rehousing scheme followed by demolition of the buildings covering the area.

THE JENNER MEMORIAL FUND.

THE collection of "Jenner Relics" got together by Mr. Frederick Mockler of Wotton-under-Edge, and shown by him at the Bristol Exhibition of 1893, has been accepted by the Dean and Faculty of Medicine, University College, Bristol, to be located there, provided that the necessary amount (£1,000) to purchase it from the owner can be raised by public or other subscription. The Centenary of Dr. Jenner's decisive and successful experiment in vaccination will be May 14th, 1896, and now that the value of his work is receiving such terrible confirmation in Gloucester—the very town to which he belonged—we cannot but believe that the required sum will be forthcoming. Intending subscribers, of whom a very fair list has been already announced, will greatly oblige by sending in their names at their earliest convenience to the hon. treasurer, Mr. W. H. Greville Edwards, or to the secretary, Mr. D. Butler, 114, North-road, Bristol. Cheques should be made payable "The Jenner Memorial Fund" and crossed "Messrs. Prescott, Dimsdale, Cave, Tugwell, and Co., Limited, Bankers, Bristol." To each subscriber of one guinea and upwards a silver medal, and of half a guinea a bronze medal, commemorative of the Centenary of Dr. Jenner's successful experiment in vaccination will be presented at the close of the list.

THE TSETSE FLY DISEASE IN ZULULAND.

THE tsetse fly disease, called "nagana" by the natives, occurs in the horse, donkey, ox, and dog, and varies in duration from a few days or weeks to many months. It is uniformly fatal to the horse, donkey, and dog, but of the cattle affected with it a few recover. It is characterised by fever, more or less rapid destruction of the red blood corpuscles, extreme emaciation, and infiltration of coagulable lymph into the subcutaneous tissue of the neck, abdomen, or extremities, which consequently become swollen. Post-mortem examination shows the presence of a yellow, gelatinous material in the subcutaneous tissue and under the serous covering of the heart, ecchymoses in various regions, and congestion and fatty degeneration of many organs. Geographically it is limited to certain warm and moist tracts which in Zululand are situated in the vast plain extending from the coast inland for a distance of some fifty miles. The disease is not new; it has existed in such districts time out of mind. The tsetse fly (Glossina morsitans: Westwood) is about 11 mm. or seven-sixteenths of an inch in length, and has transparent wings about 10 mm. long. On the upper surface of the abdomen there is a longitudinal yellow line with four yellow lines crossing it at right angles. In 1894 Surgeon-Major David Bruce, A.M.S., discovered that the blood of animals suffering from the tsetse fly disease invariably contained a [illegible]ozoon which had not been previously observed in Africa, but which he considers to be either identical with or closely resembling the Trypanosoma Evansi found in surra, a disease occurring in India and Burmah; surra, however, as known in India, does not affect cattle. In fresh blood these hæmatozoa are seen as actively moving transparent elongated bodies, in thickness about a quarter of the diameter of a red corpuscle, and in length about two or three times the diameter of a corpuscle. One end is bluntly pointed and the other is prolonged into a very fine lash, which is in constant whiplike motion; the body is cylindrical and has a transparent, delicate longitudinal membrane or fin, which is also in constant motion. In September, 1895, Surgeon-Major Bruce, under instructions from the Governor of Natal, proceeded to Ubombo in Zululand for the purpose of continuing his investigations. He believes that the fly acts only as a carrier of these microbes from infected to susceptible animals and does not cause the disease by means of any poison elaborated by itself. A limited number of flies may bite a susceptible animal over and over again without producing any ill effect, but when a horse is taken into the fly country for even a few hours, or when numerous successive relays of flies freshly caught in the fly country and brought into a healthy district are made to settle on an animal there, the disease is almost inevitably set up. Five flies kept in a cage with muslin sides were allowed to bite the shaved abdomen of a small dog every two days from Sept. 25th to Nov. 28th, but the animal remained quite healthy. On the other hand, flies which had fed for a short time on a dog affected with fly disease were allowed to bite another dog on Nov. 21st, 23rd, 25th, and 29th, the effect being that on Dec. 5th hæmatozoa were found in its blood. In order to show that neither food nor water is the channel by which the disease is conveyed two healthy horses, provided with network nosebags, were taken into the fly country from about 10 A.M. to 4 P.M. on Sept. 19th, 24th, and 29th, but were not allowed to graze or drink. Many flies settled on them and they both contracted the disease, one on Oct. 4th and the other about Oct. 28th. Another experiment was made by bringing to Ubombo tsetse flies caught in the low country and allowing them to bite a healthy horse; 129 flies were used in this way on ten days from Nov. 22nd to Dec. 14th, the horse fell ill on Dec. 15th, and the hæmatozoa were found in its blood. The source from which the fly obtains the hæmatozoa still remains to be discovered. Copious details, with drawings both of the hæmatozoa and of the fly (those of the fly being coloured), are given in Surgeon-Major Bruce's report on the subject, presented to the Governor of Natal and printed by Messrs. Bennett and Davis of Durban. Our columns last year[1] contained a similarly interesting memoir on the horse sickness of South Africa by Dr. Alexander Edington.

THE OUTBREAK OF GLANDERS IN LIVERPOOL.

THE somewhat exaggerated reports of the spread of glanders in horses in Liverpool have not been unattended with good results, as they have had the effect of putting team owners and others on the alert. At the same time there is no doubt that an outbreak, which might have been attended with the most serious consequences, has, we are pleased to hear, been practically nipped in the bud. This is due to the prompt measures adopted by the Health Committee of the City Council, a deputation from which body, we understand, waited on the Board of Agriculture last week in order to obtain powers for the effective repression of the disease. We are informed that the Liverpool deputation laid before the Board the necessity for isolating horses which had been in contact with diseased animals, powers which, it appears, are not now possessed by

[1] THE LANCET, Aug. 24th, 1895, p. 477.

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the Board of Agriculture, and for which a special Act of Parliament is required. The deputation also suggested the compulsory notification of disease amongst horses; they also alluded to the importation of horses from abroad, by means of which, it was stated, influenza had been imported into the city, especially by horses from American and Canadian ports. They strongly advocated a compulsory system of inspection and the isolation of all imported horses. It seems most anomalous that horses can be landed from abroad without inspection and sent about the country from stable to stable irrespectively of diseased conditions; legislation on this point is absolutely necessary, as the powers now possessed by local authorities are restricted to ordering the slaughter of horses found to be affected with glanders. As a result of the interview between the Liverpool deputation and the Board of Agriculture a scheme was agreed on, in the absence of Parliamentary powers, which is much the same as that adopted by the London County Council, viz.—to isolate horses in sheds somewhere in the suburbs under the supervision of the veterinary superintendent. The owner of a horse which is suspected of being infected with glanders can send the animal to the isolation shed, the mallein test, with his consent, will be performed, when, if the horse reacts to the inoculation, it will be placed in a separate shed and frequently treated with mallein. Should the horse recover the owner must pay for its maintenance and treatment; but if, on the other hand, it develops symptoms of glanders the animal is to be slaughtered, the owner receiving as compensation one-fourth of its original value. As an estimate of the disastrous results which would accrue to Liverpool by the spread of this disease, we may mention that it is computed that 12,000 horses, some of great value, are employed by team owners, whilst tramways, cabs, and omnibuses employ between 6000 and 7000 more.

THE PERSISTENCE OF EXCITABILITY IN DIVIDED NERVES.

THE duration of the excitability of the distal end of a divided nerve is a point that has attracted the attention of many observers, and Longet, more than half a century ago, stated as a fact which has been very generally accepted that after division of the facial, hypoglossal, and sciatic nerves in the dog the most remote branches of the distal portion ceased to respond to stimuli after the lapse of four days. The first part of the *Archives de Physiologie* for the present year contains a short communication from Professor Arloing, a practised and careful experimenter, in which some strictures are made upon Longet's statement and evidence is adduced showing that the irritability of the divided nerve is not always uniform in the date of its departure and that considerable variations may be observed both in different genera and even in different animals of the same species. Thus Ranvier observed that whilst irritability might persist in the dog for four days, it was lost in the rabbit, guinea-pig, and rat in the course of forty-eight hours, and after the lapse of sixty-two hours in the pigeon. Ranvier also pointed out that it disappeared more quickly in young animals than in adults and in vigorous animals than in those that were ailing. Professor Arloing himself found that in the horse, ass, and mule the persistence of irritability in the branches of the facial nerve after section of the trunk was remarkable, being prolonged in some cases to the thirteenth day. The particular instance in which the functional activity of the nerve lasted to the thirteenth day was in an ass in which the facial nerve had been divided. Different nerves seem to vary in their faculty of retaining their irritability, for whilst in one case the peripheric extremity of the divided facial nerve retained its excitability for five days, the corresponding portion of the divided median and of the moderator of the heart had both lost their excitability between the fourth and fifth day. A physiological and highly valuable test is thus afforded of the existence of certain doubtful nerves. Professor Arloing, for example, has in this way satisfied himself of the presence in the cervical portion of the vagus nerve of the ass, besides the cardiac inhibitory, cardiac accelerator fibres, and motor fibres for the larynx and œsophagus, of yet a fourth set which is characterised by the retention of its excitability for three weeks after section, and which he regards as the ordinary motor nerve of the myocardium.

THE ABUSE OF MATERNITY CHARITIES.

WHEN other charitable medical institutions are trying to administer charity without abuse it behoves the authorities of lying-in hospitals and maternity charities to do the same. There is some reason to believe that tickets for the midwife are granted loosely to those who can afford to pay the ordinary fees. This is contrary to public policy and to the understanding with the good charitable people who subscribe. We feel persuaded that the committees of such charities will not resent a reminder on this point. The midwife should not be the almoner of letters and evidence should be forthcoming in every case of the circumstances of the patient.

THE LATE DR. WILLIAM SHARP.

DR. WILLIAM SHARP of Rugby died at Llandudno on April 10th, aged ninety-one years. He was born at Armley, near Leeds, studied medicine at Guy's and St. Thomas's Hospitals, and became qualified as L.S.A. in 1826. Next year he took the diploma of the Royal College of Surgeons of England, studied in Paris for a time, and settled in Bradford in 1828. In 1840 he was elected a Fellow of the Royal Society in recognition of his advocacy of local museums. In 1843 he removed to Hull and in 1847 to Rugby. Dr. Sharp was a prolific writer, and in 1856 the degree of Doctor of Medicine was conferred on him by the Archbishop of Canterbury. This Lambeth (or Cantuar., which might, by the way, be mistaken for Cantab.) degree supplies an interesting chapter in medical history and is dealt with at length in another portion of our issue.

THE STUDY OF PHYSIOLOGY IN MOSCOW.

AT present, when the attention of the medical world is being drawn to Moscow, any information concerning the medical schools, laboratories, and institutions of that city is of interest. Some time ago the committee of organisation of the International Medical Congress issued a series of papers giving descriptions of some of these institutions. The first one that has come to hand ("Le Laboratoire de Physiologie de l'Université Impériale de Moscou," par M. le Dr. B. N. Popov) gives a short account of the Institute of Physiology of the University of Moscow. This institute was founded in 1862, when Professor Einbrodt was elected to the chair of Physiology, and has since that time gradually expanded first into two chairs—histology and physiology—and then into a double professorship, Professor Chérémétevesky nominating Professor Morokhovetz as professor agrégé. Professor Morokhovetz, as a result of careful planning and of visits to the various large Continental laboratories, has been able to found and equip a physiological institute, which appears to be exceedingly well arranged and to be supplied with all the requirements of a modern laboratory. A list of the papers, fifty-one in number, that have come from this department since the year 1857 is worth studying as indicating what has been done in a very quiet way during the last forty years. In a second pamphlet ("Appareils et Instruments à l'Usage des Physiologistes construites d'après les dessins de M. le

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Professeur Léon Morokhovetz, Moscou") a list of the apparatus designed by the writer and used in this laboratory is given; it is freely illustrated with photographs and plates, and a number of pieces of most ingenious apparatus which should attract the attention of those who take an interest in physiology are described. We recommend those who intend to make the journey to Moscow next year to keep these laboratories in mind.

THE SWISS NATIONAL EXHIBITION AT GENEVA.

FROM May 1st till the middle of October a national exhibition will be held at Geneva, and the programme which has been sent us promises well. Mr. M. J. R. Dunstan, the Director of Technical Instruction to the Nottingham County Council, has been appointed the official delegate of the Council to the exhibition with the object of making a thorough investigation into Swiss agricultural methods as exemplified in the central feature of the exhibition—the model village. Among the novelties to be introduced to the public at the exhibition is an instrument for "the cure of dyspepsia." A box or case is placed round the body in the region of the stomach and liver, a handle is turned, and "liquid air is pumped in through the pores of the skin." We abstain from further description of an apparatus which as yet we have only seen described on paper.

THE CLINICAL RESEARCH ASSOCIATION.

THE first annual report of the Clinical Research Association, Limited, is a satisfactory record of useful work. The Association was formed in September, 1894, its object being to assist medical men in the diagnosis and treatment of their cases by providing them with accurate laboratory reports on pathological products. At present there are more than 2000 members, representing every branch of medical practice, and the actual number of investigations conducted in the laboratory during the first twelve months after it was opened was 5227, including 1532 in the chemical department, 984 in the histological, and 2610 in the bacteriological. The chemical examinations related chiefly to urine and the bacteriological to pus and diphtheria exudation. Experienced attendants with instruments are sent to assist at necropsies. Subscribers of one guinea before the end of 1896 will, we are informed, be exempt from any further entrance fee and from any annual subscription and will have work done for them at the reduced scales charged to members. The offices of the Association are at No. 1, Southwark-street, London Bridge, S.E.

THE PREVENTIVE INOCULATION OF DOGS.

THE researches undertaken by M. Pourtalé in collaboration with Professor Jolyet regarding the preventive inoculation of dogs against hydrophobia do not appear to have excited much attention, although the subject is unquestionably one of considerable importance. It is certainly better to prevent an evil than to cure one, and if dogs can be rendered refractory to hydrophobia in the manner advocated by these investigators it would seem as though we were arriving within measurable distance of the annihilation of one of the most terrible of all diseases. The conclusions which M. Pourtalé came to were laid by him before the International Congress for the Advancement of Science in August last, and also before the Sixth International Veterinary Congress, held at Berne in the following month; but according to a communication which M. Pourtalé recently made to the Société d'Hygiène at Bordeaux the reception he met with was far from encouraging. The president of the section at Budapest, Professor Hutérat, while cordially recognising the academic merit of the work, was, nevertheless, of opinion that it was not necessary to take any further action with regard to it, and at Berné "the systematic opposition which has for years pursued all endeavours to establish the prophylaxis of hydrophobia" is likewise said to have been in the ascendant with the majority of the members of the congress. That M. Pourtalé was not entirely destitute of supporters is, however, clear from the following resolution, which was proposed as an amendment: "The Sixth International Congress of Veterinary Medicine, taking into consideration the major importance of the author's conclusions as to the immunising and curative inoculation of dogs against hydrophobia, expresses the hope that all persons engaged in experimental science will interest themselves in the verification and control of the tests upon which these conclusions are founded, with a view to the introduction into the various European states of preventive canine vaccination after the method indicated."

LONDON POST-GRADUATE COURSE.

THE daily classes in Bacteriology are now going on and the summer term will open on Monday, May 4th, to be followed by the summer vacation courses during the first fortnight in July. The classes will meet at Moorfields (Eyes), Blackfriars (Skin), Great Portland-street (Throat, Nose, and Ear), King's College (Bacteriology), Cleveland-street (General Medicine and Surgery), Institute of Preventive Medicine (Urine Testing, &c.), Parkes Museum (Hygiene), and classes in Pathology and other subjects will also be formed. The large number of practitioners who find themselves in London or who can spare the time to visit the metropolis will be able during the next two or three months to occupy themselves profitably. Early entries will materially assist in the formation of classes. A prospectus can be obtained from Dr. Fletcher Little, 32, Harley-street, W.

A NONAGENARIAN AMERICAN PHYSICIAN.

A RECENT number of the Philadelphia *Medical and Surgical Reporter* contained an appreciative obituary notice of Dr. Hiram Corson, who was born in Plymouth township, Montgomery county, Pennsylvania, on Oct. 8th, 1804, and died at the same place on March 4th in the present year. He received his diploma in medicine from the University of Pennsylvania in 1828 and the same year he established himself at Plymouth Meeting, where he continued in active practice for more than sixty-five years. It was not until a year ago that his advanced age compelled him to retire from work and he was then the oldest practising medical man in the United States. He was a member of the Orthodox Society of Friends and was conspicuous for his influence in the meeting at Plymouth. Dr. Corson was one of the first among American medical men to advocate the formal recognition of female practitioners. He was a frequent contributor to the *Medical and Surgical Reporter* from its commencement, and as recently as May, 1895, an article by him on Diphtheria and its Treatment was published in its columns.

A CORONER ON THE CONTAGIOUS DISEASES ACT.

THE coroner for West Surrey (Mr. G. F. Boumieu) held an inquest on April 15th at Godalming on the body of a young seaman who had hanged himself. Depression was clearly the cause, a letter the young man left containing the sentence, "Everything I do I cannot get right, so I think it is best that I were out of the world." The rest of the epistle—it was couched in pathetic language—dealt with family matters and arrangements. The young man who had been staying with his aunt and uncle was on leave from H.M.S. *Excellent* at Portsmouth and was to have been drafted to H.M.S. *Fox*. A medical man does not appear to have been

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called, but a policeman who had examined the body stated that the deceased had "contracted a serious disease." Warrant-officer McDowell of Portsmouth said, in answer to a question from the coroner, that the men in the navy were greatly affected in this direction, the numbers being something appalling. While they were commissioning H.M.S. *Fox* on one day upwards of sixty men were rejected by the medical officers on this account—a remark which created what the reporter calls "sensation." The coroner, in summing up, urged the importance of the re-enforcement of the Contagious Diseases Act. There could not be any amelioration in the disgraceful and disgusting state of the army and navy, he said, until that step was taken. So deplorable a state of affairs as that which had been mentioned called for some supervision, and he thought nearly all of them agreed with him that it was essential that something should be done. The jury returned the customary verdict of "Temporary insanity."

COUNTRY HOLIDAYS FOR FACTORY GIRLS.

IT always gives us pleasure to call attention to the annual report of the "Factory Girls' Country Holiday Fund," of which the Duchess of Teck is patron. The report for 1895 marks the eighth year of the work of the fund and shows an increase in the number of girls sent away of 180 over the number for 1894. For an expenditure of £850 15*s.* 2*d.* 874 girls and women—whose individual holidays represent in the aggregate 1440 weeks—were enabled to leave their unhealthy surroundings and take up their residence in the country. To those who are compelled to spend the greater part of their lives amid the roar of machinery, among the noisome fumes of chemicals, standing for hours together at a bench or sitting with the head bent and the eyes ceaselessly straining to follow the work in hand, a week or a fortnight in the country means a new lease of life physically and morally. The Fund is a most deserving one, and we can only echo the wish that donations may so increase that the number sent away will each year "be supplemented without break until we attain the ultimate goal of our efforts—viz., that every girl or woman employed in the factories and workshops of this huge metropolis may be certain of obtaining a fortnight's recreation in the country."

DEATHS UNDER ANÆSTHETICS.

ONE of the gravest perils connected with anæsthesia is asphyxia due either to paralysis of the central controlling mechanism regulating respiration—a condition usually easily detected and remedied—or to some peripheral interference with breathing—e.g., spasm of the glottis, foreign bodies in the air passages, &c. In cases of empyemata where the abscess opens into a bronchus this danger is rendered acute. The patient is liable to be turned on the side for operative purposes and the pus coughed from the diseased side is aspirated into the lung of that side and in some cases even into that of the healthy side. This, coupled with the hampered condition of the heart from pressure or displacement, too often determines a fatal issue. Through the courtesy of Dr. Howard Green we record a case of death under the A.C.E. mixture followed by ether which exemplifies these remarks. The patient, a young woman aged twenty-five, was admitted to Charing-cross Hospital for relief of an abscess in her chest. The position of the abscess was not determinable by repeated acupuncture, and as the patient was rapidly losing ground it was decided to resect a rib and explore the chest. Her condition at the time of operation was critical. Hectic fever, progressive emaciation, and constant expectoration of foul purulent material existed. The empyema affected the left side and was believed to be of gastric origin. The patient was given the A.C.E. mixture (two drachms) as a preliminary to ether, and the chest was punctured. The second puncture drew pus. Resection of the rib was commenced, but the patient became asphyxiated from pus entering the air passages in large quantities. The amount of ether given was an ounce and a half. Artificial respiration was practised, but recovery did not take place. We are not told what position the patient was in when the operation was in progress.

BOARDS OF GUARDIANS AND THE VACCINATION LAWS.

THE severe object lesson enforced on the city of Gloucester in consequence of the guardians not carrying out the existing law as to primary vaccination should cause those boards who have for some time left this duty in abeyance to rescind their previous resolutions, which were to the effect not to enforce the law till the report of the Royal Commission was issued. In consequence of a letter addressed to the Wigan board of guardians by Mr. Berry, medical officer of health of Wigan, the following resolution was passed at their board meeting on April 17th, namely: "That the vaccination officers throughout the union be instructed to forthwith carry out the Vaccination Acts." It would be well just now for all medical officers of health to call the attention of their boards of guardians to the non-fulfilment of the law in reference to the carrying out of the Vaccination Acts and ask them to pass a similar resolution.

HOW DISEASE IS SPREAD.

THERE has lately been some correspondence on this subject in the *Standard* which is interesting in contributing to our knowledge of the great carelessness which some individuals exhibit as to the public welfare. The few cases that we hear of are, unfortunately, in all probability a very small proportion of those who actually travel in an infectious state. It would be well if individuals more thoroughly realised the far-reaching effects of illness and death which their selfishness or carelessness may lead to, and a severe penalty in all cases where carelessness in this matter has been proved should be inflicted. Of the cases which have been quoted, by far the worst example is that of a young woman who was sent from a London school when suffering from scarlet fever in order to save the school, and while in a highly infectious state is said to have travelled in at least three public conveyances. Under such circumstances the possibilities of the disease spreading are enormous and the only wonder is that so many people escape. We may also refer to some correspondence on "Cigar-ends" which has likewise appeared in the *Standard*. "A Smoker" recommends that all cigar-ends, &c., should be placed where they can be readily seen and picked up by poor people or that they should be collected and given away wholesale. Such a suggestion is to be most strongly condemned from most points of view, and more especially from the medical. Most medical men have seen diseases of the worst type accidentally acquired through drinking out of an infected cup or smoking an infected pipe, and to encourage the smoking of other people's cigar-ends is at the best to encourage a disgusting practice which may often end disastrously to those who indulge in it.

THE LATE BARON HIRSCH.

FROM Hungary comes the news of the death of Baron Hirsch, in his sixty-fifth year. The news will be received with profound regret by the social and sporting worlds in which the Baron was a distinguished figurehead, but by none will his death be more regretted than by those who have been the recipients of his charity, under which comprehensive heading fall all who have benefited by his munificence to the London hospitals. It is said that up to

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the year 1891 Baron Hirsch had spent the extraordinary sum of £3,000,000 on objects of charity, and two years later it was announced that he had distributed a sum of about £42,000 among selected charities. In 1894 he caused £15,000 to be divided among London hospitals and charitable institutions, and last year the medical charities of London received from him donations amounting in the aggregate to £5000. His sympathy for the poor of his own faith is well known, and his scheme of colonisation will prove a lasting memorial of his name among the Semitic race; but the remarkable cosmopolitan character of the man is shown by the fact that he did not regulate his munificence by any considerations of race, colour, or creed, but distributed his wealth where he thought it was most required. All his winnings on the turf in gross amount, with no deduction for enormous expenses, were spent on objects of charity—he is said to have himself used the words, "I race for the London hospitals"—and it must not be forgotten that these winnings were often supplemented from other sources of his income. In 1894, when his winnings only amounted to £7500 he doubled the sum, and, as we have recorded above, gave £15,000 to London charities. Baron Hirsch will be sincerely mourned by the thousands who reaped the fruits of his wide benevolence.

MEDICAL MEN AND EVIDENCE IN DENTAL MATTERS.

AN action recently heard at the Cardiff county court opens up a point of interest as to the value of medical evidence on questions relating to dental surgery. In the case in question a registered dentist sued for the recovery of fees, the defendant putting in a counter claim for damages alleged to have been sustained in connexion with the operation performed by the plaintiff—namely, "scaling." In the course of her evidence the defendant stated that her mouth had been so injured that she was compelled to leave off her work, obtain a substitute, and eventually to call in medical advice. In support of this the medical man was called and stated that the condition of the patient's mouth might have been caused by dirty instruments, although he was unable to state whether or not it was due to any particular malpraxis on the part of the defendant. The judge commented on the evidence of this witness, finding that it showed unnecessary animus. We hope that here the judge was mistaken, but a second remark that fell from him deserves attention. The defence was practically a charge of malpraxis, and he said that a qualified dentist, practising specially as a dentist, should have been called to speak to this and not a general practitioner. We think that the very large majority of medical practitioners would prefer not to express anything like an expert opinion upon a question relating to the practice of dentistry, especially in connexion with a charge of malpraxis.

THE ANTI-VACCINATION CRAZE AT EASTBOURNE.

IT is important at the present time, when small-pox and rumours of small-pox meet us at every hand, that persons intending to proceed to our health resorts should be in possession of reliable information regarding the condition of the place selected. This is the tone which a correspondent takes in forwarding to us a copy of the *Eastbourne Chronicle* of the 11th inst. We find in its columns a short space allotted to a discussion of the vaccination question by the board of guardians. Miss Hall, one of the lady members, had the courage to bring forward the matter of the serious state of the town, there being vast numbers of unvaccinated children growing up in the place, and pointed out that as regards the infants born in 1894 only 10 per cent., and of those born in the succeeding year only 19 per cent., were returned as vaccinated. She laid stress on the prevalence of small-pox at Gloucester as calling for reconsideration of the attitude of the guardians towards their plain duty under the Acts, and drew attention to the dependence of the town on the large number of visitors who flocked there from time to time. But the matter was speedily quashed by others, and the raising of the question was deplored at the present moment *when the season was just beginning* and so soon after the scare about bad water. As to the latter point we now say nothing, but we do most emphatically advise all intending visitors to Eastbourne this year to get themselves re-vaccinated before going there, and to see that their children are protected at least by primary vaccination. With the inflammable material now in the place it behoves all who desire to stay at Eastbourne to secure protection.

A REPORT by the medical officer (Dr. W. R. Smith) of the School Board for London on the Prevalence of Diphtheria in London and Elsewhere, and its Alleged Connexion with the Elementary Schools, was presented to the Board on Thursday last. We must defer analysis of its contents until a later issue of THE LANCET, with the remark that its publication practically simultaneously with that of the Annual Report for 1894 of the medical officer of health of the Administrative County of London will serve to increase the interest of both reports.

MR. T. A. DE LA RUE, the chairman of the council of management of the Royal Chest Hospital, City-road, E.C., has sent a donation of 300 guineas towards the fund being raised in connexion with the festival dinner to be held at the Hotel Métropole on May 26th. The Right Honourable Lord Charles Bruce, P.C., president of the hospital, will take the chair on the occasion.

A MEETING was held on Tuesday afternoon at 20, Hanover-square, to consider the suggestion of the School Board that Dr. Glover and two others should meet the School Attendance Committee to discuss matters which affect the friendly relations of the profession to the board. The suggestion was accepted and arrangements were made for such a meeting.

MR. EDGCOMBE VENNING will preside at the annual dinner of the St. George's Hospital Medical School on Oct. 1st next. The introductory address will be given by Mr. Wm. Adams Frost, ophthalmic surgeon to the hospital.

WE understand that Dr. Wilks, since his appointment as President of the Royal College of Physicians of London, has resigned his seat on the General Medical Council as representative of the University of London.

THE French Academy of Medicine has decided to divide a prize of 25,000 francs between Dr. Roux of Paris and Dr. Behring of Berlin, in recognition of their joint work upon the antitoxic treatment of diphtheria.

THE annual dinner of the Army Medical Department will be held this year in the Whitehall Rooms of the Hôtel Métropole, London, on June 15th, 1896, at 7.30 P.M., the Director-General in the chair.

THE Queen has signified her gracious intention of subscribing 100 guineas to the fund now being raised for the re-endowment of Guy's Hospital.

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THOMAS WAKLEY,

THE FOUNDER OF "THE LANCET."

A BIOGRAPHY.[1]

CHAPTER XVII.

The Contemporary Medical Press. — Its Attitude towards THE LANCET.—*The Medical and Physical Journal.—Macleod v. Wakley.—Dr. James Johnson.—The Medico-Chirurgical Review.—Wakley v. Johnson.—The London Medical Repository.—The Medical Gazette.*

IT has been previously noticed that the interference of other medical journals had an exceedingly irritating effect upon Wakley. The virulent articles in the *London Medical Repository* had impelled him into continued litigation with Abernethy, and the narrow protests of the *Medico-Chirurgical Review* led to the strictures upon "hole-and-corner" surgeons, which resulted in the two lawsuits, Tyrrell *v.* Wakley and Bransby Cooper *v.* Wakley. It would seem at first sight that this susceptibility to criticism at the hands of the press betokened some weakness and inconsistency, as a man who gives hard blows himself ought to take punishment quietly. But this would not be quite a just estimate of the position. Wakley was a pugnacious man, and the advice of journalistic rivals for whose methods he had no respect only made him more resolute to go his own way. He did not wince under stricture, but he writhed under well-meaning advice. In the very early days of THE LANCET his inimical attitude towards the medical press had its only explanation in this proud and pronounced restiveness, but later the position became more serious. Wakley was set up by his brother editors as a bogey-man and a terrible example. Astounding lapses of truth and decency were attributed to him, and dark hints as to his past were scattered broadcast. A paper was specially subsidised by his opponents to run counter to THE LANCET, and it, like its older contemporaries, showered personal abuse upon Wakley. Language in those days was somewhat unmeasured, and Wakley's retorts were very strong, full-flavoured, and effective. The survival of THE LANCET while all its rivals have long since succumbed keeps Wakley's language on modern record, while that of his adversaries is lost to memory. The early numbers of THE LANCET in which this wordy warfare was waged—not, as will be seen, that the warfare always stopped at words—have often been reprinted and many libraries possess them. All interested in the history of medicine constantly consult them, and in so doing must happen upon some of the many contentious articles. It would be difficult for such readers to acquit Wakley of scurrility, but for the right understanding of him it is necessary to know something of those against whom he was fighting and to appreciate a little the measure of offence that he received. Also the license of the time must be insisted upon, for in the twenties and thirties what now seem the necessary amenities would have been regarded as mealy-mouthed hypocrisies.

There were three contemporary medical journals of some consequence published in London at the time that Wakley founded THE LANCET. These were the *Medical and Physical Journal*, the *Medico-Chirurgical Review*, and the *London Medical Repository*. The *Medical Gazette* followed almost immediately.

The *London Medical and Physical Journal* was founded in 1799 as the *Medical and Physical Journal*. The original editors were Messrs. Bradley and Willick, of whom fame has nothing to relate; but a new series was started early in the century under the editorship of Dr. Roderick Macleod. It was a decent monthly magazine of some ninety pages, with no particular reason for its existence. Its editor followed an easy conservative policy, and the bulk of its articles were translations from the foreign medical journals, with critical remarks appended, while long excerpts from scientific books were inserted as reviews. When THE LANCET was first started the *Medical and Physical Journal* ignored its existence—which looked like dignity. But in three years' time this policy became laughable, because all the profession were speaking of the revolutionary weekly paper of which the *Medical and Physical Journal*, addressed monthly to that profession, had no cognisance. This was very well at first. But later the *Medical and Physical Journal* became frankly imitative. Its circulation had waned, many of its subscribers having been seduced from it by the more spirited management of THE LANCET, and Dr. Roderick Macleod invited to his columns contributions from hospital officials. He proposed, in fact, to publish hospital reports as THE LANCET was doing. These reports, and, indeed, the whole of the journal, were subjected frequently to bitter criticism in THE LANCET. This was natural, and not due, it should be added, to any excess of journalistic rivalry. It was all in the way of fair rejoinder, for Dr. Roderick Macleod when he found himself compelled, if he desired at all to register public thought, to notice THE LANCET had been severe upon it and very high with Wakley. He had found fault with his taste in publishing hospital reports and the lectures of hospital surgeons. Then Dr. Roderick Macleod took to the same ill habit himself. It is true that Wakley published independent accounts of the medical and surgical proceedings of the day without asking permission from anyone, and that Dr. Roderick Macleod only published accounts sent to him by the different operators, but this was not a distinction with so much meaning as it would appear to have. The various hospital surgeons had found Wakley's action in publishing these reports to be wrong, not because their leave was not asked, but because they considered the publicity thus afforded to the doings within the walls of hospitals would militate against the interests of the profession. And Dr. Roderick Macleod's journal had approved of their view. In no uncertain terms he had declared the publication of lectures and hospital reports to be a monstrous breach of professional etiquette. Therefore, it was inconsistent of him to desire to publish these reports and to consent to be the medium through which they should reach the world, and it was this inconsistency that gave Wakley his opportunity of retaliation. He took it and unsparingly. The *Medical and Physical Journal* had a yellow cover and was termed a "Yellow Fungus," while Dr. Roderick Macleod's sonorous baptismal name was eternally introduced into the columns of THE LANCET and always in some ridiculous connexion. Either as Roderick the Goth, or as the Editor of the Gothic Absurdity, or as plain Roderick, he was made the perpetual object of a ferocious sort of joking. Dr. Roderick Macleod answered back, but he had neither the force of his adversary nor the same popular cause. Wakley was working for the profession at large and his methods, right or wrong, were consistent. Dr. Roderick Macleod, a member of the honorary staff of St. George's Hospital, represented his own order only and stood convicted of tergiversation. At last the strained relations brought the rival editors into a law-court. The dispute was an entirely trivial one, but so clearly was it inevitable that a judge would sooner or later be asked to decide between them that it was well for the reputation of both and for the after chances of peace that the quarrel had no serious origin. It arose out of a difference of opinion as to the merits of

[1] Chapters I., II., III., IV., V., VI., VII., VIII., IX., X., XI., XII., XIII., XIV., XV., and XVI. were published in THE LANCET, Jan. 4th, 11th, 18th, and 25th, Feb. 1st, 8th, 15th, 22nd, and 29th, March 7th, 14th, 21st, and 28th, April 4th, 11th, and 18th respectively.

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what is now known as "Wardrop's method" of distal ligature for the cure of aneurysm. Dr. Macleod appears to have thought lightly of the method and published an account of "the dissection of one of the cases of aneurysm in which the artery was *supposed* to have been tied beyond the tumour," the object of the publication being to show that Wardrop's operation had failed in this instance. Wakley then published the alleged libel, which had been intended as a rebutting statement in Mr. Wardrop's behalf, who was a highly valued member of Wakley's literary staff. He pointed out that the patient on whom the post-mortem examination had been made had died from other causes entirely than aneurysm, so that it was unfair to speak of it as a case where Mr. Wardrop's treatment had failed, and went on to say that while Dr. Macleod was ready enough to publish what he thought was a failure he had omitted to publish a successful case which had occurred some months back. The accusation was that in his character as editor Dr. Macleod had been guilty of improper partiality. As a matter of fact Dr. Macleod *had* published the successful case and Wakley had overlooked it. The defence was that the comments had been made in fair rivalry and that an oversight had occurred. Mr. Brougham, who looked after Wakley's interests, was not instructed to offer any apology. The libellous paragraph alluded to was offensively worded, and this, coupled with the absence of all apology, caused the jury to award to Dr. Macleod £5 damages out of the £100 that he claimed. Dr. Macleod resigned his position as editor shortly after this case and became editor of the *London Medical Gazette* in 1827. The *London Medical and Physical Journal* ceased to exist in 1833.

The *Medico-Chirurgical Review* was edited by Dr. James Johnson, another of Wakley's contemporaries whose enmity to him was undoubted. Dr. James Johnson, an Irishman, was, like Wakley, the son of a farmer. He was born in 1778, and apprenticed at the age of fifteen to a medical man in Antrim. At the age of twenty he was appointed surgeon's mate in the navy, and later he served as full surgeon in the Egyptian campaign. It is worthy of note that at this time he possessed no diploma. In 1800 and 1801, being on leave, he studied at the Windmill-street School (Dermott's), where he was a very assiduous worker. He was appointed to another ship and cruised in the Northern seas, Greenland, and Hudson's Bay. On his return he again studied in London, as he did on his return from a second cruise, spending his prize-money in walking the hospitals. In 1806 he attended the lectures of Sir Astley Cooper with assiduity, and, possibly through that great man's boundless interest, was appointed to the *Impregnable*, Captain the Duke of Clarence, afterwards William IV. This was the turning point of his career. He became surgeon to the Duke, and at the peace in 1814, when Bonaparte was believed to have been safely relegated to Elba, settled down to practice at Portsmouth, where he was very popular with the Naval authorities. In 1816 he started the *Medico-Chirurgical Review*. This was at first called the *Medico-Chirurgical Journal*, and was published monthly in collaboration with two medical friends, but in 1818 he took over the whole liability and became the sole proprietor. He then changed the title of the periodical and transformed it at the same time into a quarterly. He wrote the greater part of his *Review* himself. This he was competent to do, for though largely self-taught he was a widely-read, able, and industrious man. In 1821 he took the degree of M.D. St. Andrews, at that time obtainable by decidedly lax methods.

This brief sketch of Dr. James Johnson, or Johnstone, as he later called himself, reverting to his correct patronymic, is necessary to the comprehension of some of the personal allusions to him. The *Medico-Chirurgical Review* at the time of the issue of THE LANCET enjoyed a large circulation and a good reputation. In the last number of 1823 Dr. James Johnson acknowledged the receipt of the early numbers of THE LANCET in terms which seem to have been intended to be amiable; but Wakley objected to their patronising ring, and what was intended to be a sort of welcome struck the first note of the future relations of bitter and prolonged quarrel.

"We hold it to be a breach of etiquette for one periodical publication to animadvert on the conduct of another unless attacked or interfered with itself," said the *Medico-Chirurgical Review*. "We mean, of course, medical journals, for political publications use no ceremony with each other. In offering a word or two of advice to our young friend The Lancet, and through him several others of our juvenile contemporaries, we trust they will not impute to us any unworthy motives, and that on mature reflection they will acknowledge the propriety of the advice we give .....

"We are convinced, then, that no medical periodical publication can succeed unless conducted on *unexceptionable* principles—we mean such principles as cannot be reasonably objected to by the members of the profession. We think that the unauthorised publication of a man's lectures as they are delivered from day to day cannot be defended on principles of morality, equity, or medical ethics, and therefore we advise our junior contemporaries not to take advantages of, or rely upon, a practice which can at best but afford a temporary interest. Secondly, we would dissuade them, if in our power, from mixing up politics, theatrical criticisms, and other heterogeneous matters with medical science or literature. It is an unnatural union which cannot long hold together, and has invariably failed hitherto in every instance where it was attempted. The above exceptions made, we wish every success to The Lancet and all other candidates for public favour; nor will we ever refuse to give whatever publicity they require through the medium of this journal."

The qualified proffer of friendship was rejected roughly by Wakley, who did not think that a quarterly *résumé* of things in the medical world, written in the interests of a few leading men, could be of any practical use to his revolutionary weekly print. The unceremonious manner in which Dr. James Johnson was told to mind his own business and try to obtain something readable for his own paper galled that hot-headed sailor, who seems at once to have made up his mind to demonstrate the good he might have been by the harm he could do. The following number contained an article headed "Property and Privileges of Lecturers, Hospitals, and Medical Societies Considered." It formed nearly six pages of forcibly written censure on the practice of publishing lectures, the writer challenging Wakley to produce a "single respectable testimony in favour of the practice," and saying "that the baleful influence of a private spy and public informer" will with "vampyre presence chill the current of communication between the preceptor and the pupil." This article defined the relations that were to exist between the rival editors, and for the next two years THE LANCET and Wakley were made the subject of the most unfavourable comments by Dr. James Johnson, while Wakley answered back in like vein. Each hit very hard. Dr. James Johnson was the elder—a man with an unblemished record, the friend of the heads of the profession, accepted by them as an exponent of medical thought, an officer of the two most important scientific societies then meeting in London, and a friend of Royalty; so he may be said to have carried heavy guns. On the other hand, his acquaintance with the leaders of the medical world hampered him by taking away from him his powers of free criticism, while his quarterly form of publication precluded him from any reply to attacks made upon him until, perhaps, three months had elapsed. Wakley's position was not in those early days so influential as that of Dr. James Johnson, but he got thirteen shots to one, and his ease in manœuvring gave him immense advantages over his adversary.

In the third year of the issue of THE LANCET came the

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action-at-law that had been expected by everyone since the disputes began. Each side had been so profoundly abusive of the other that no one could guess who would be plaintiff and who defendant, but that legal proceedings were inevitable all could see.

On June 21st, 1826, the libel action of Wakley *v.* Johnson occupied the attention of the Chief Justice of the Court of Common Pleas and a special jury. The plaintiff was represented by Mr. Denman and Mr. Fitzroy Kelly; while the defendant retained two of the most noted members of Serjeants' Inn—viz., Serjeants Vaughan and Wilde. In the libel complained of Dr. James Johnson alluded to Wakley as an "outcast of medical society," who had been "accused of arson, convicted of libel, and cast in damages in a Court of Equity." These remarks alone would have been sufficient material upon which to base an action; but Dr. James Johnson, who had two long years of adverse criticism to answer, went further and elaborated his unpardonable phrase, "accused of arson." In the following sentence the cruel calumny of Argyll-street was raked up:—

"The threatened expulsion of Lucifer from the presence of the Gods on high Olympus," he wrote, "spread terror among the inhabitants of the lower regions; but happily they were spared a visit from this *firebrand*, or rather *fire factor*, as he is now generally denominated, who willingly, for once, made his exit from the postern gate."

This passage, which purported to describe a wholly imaginary movement on the part of certain infuriated members of the Royal College of Surgeons to expel Wakley from the gallery of the council chamber while he was speaking therefrom, was supplemented by an explanation of the term "Lucifer":—

"The common derivation of this word is wrong," runs the footnote; "it is not from *lux* and *fero*, but from *ignis* and *facio*. (*Vide* Secret Memoirs of the House of Argyll.)"

Mr. Denman made the most of the cruelty of these allusions, and of another in the same article in which the public were invited to consider "a new mode of lighting the streets without lamps and of extinguishing debts by means of fire-engines." He showed that the wicked rumours concerning the fire in Argyll-street which had been aroused by the withholding on the part of the company of the sum insured had been definitely disproved, that in a court of law no evidence whatever had been brought forward by the Hope Fire Assurance Company in support of the absurd suspicion, and that the Company had paid Wakley's claims in full.

The defence chiefly rested on Serjeant Vaughan's attempt to demonstrate to the court the known libellous proclivities of the plaintiff. Chief Justice Best paid no attention to this *tu quoque* argument (if argument it could be called), and in his summing-up said that there could be no doubt at all that the matter complained of was libellous. He instructed the jury, however, to take into account in assessing damages the aggravation and provocation which the defendant had received before he overstepped the bounds of legitimate controversy. The jury, after two minutes' consultation, found a verdict for the plaintiff for £100 and costs.

A second action brought by Wakley on the same day against the printer of the *Medico-Chirurgical Review* was settled by a compromise, Wakley being reimbursed all costs. After this action the war in words was continued for some time in both papers, but not with the spirit or bitterness with which it had opened. Eventually the quarrel died out. The *Medico-Chirurgical Review* had a longer life than the *Medical and Physical Journal*, for it did not cease to appear until about 1850, and THE LANCET interfered but little with its success from a business point of view. When it was apparent that no profit could come out of quarrelling both editors would seem to have decided to bury the hatchet.

The *London Medical Repository* was another quarterly medical journal, and was edited by Dr. James Copland, F.R.S., the author of the Medical Dictionary and a man of great scientific attainments. Dr. James Copland, who had himself with some success played the part of medical reformer, ranged his forces on the side of Wakley's foes, though he is said to have come into line with his fellow editors in opposing Wakley not through conviction but through the inadvertency of a sub-editor. As a consequence, however, of some words in slight of THE LANCET that appeared in the *London Medical Repository* that paper was nicknamed The "Mausoleum" by Wakley, and the dulness of its erudition and the staleness of its contents were weekly held up to ridicule. Dr. James Copland was a physician and a man of science, but no journalist. Nor did he want to quarrel. The quarrels were ready made when he blundered into them, and the abuse that he got was not directed personally at him, but at the causes that he was conceived to have espoused. His paper soon perished under the attacks of his foe and the successful rivalry of his friends, and he betook himself to the more congenial labour of writing his well-known dictionary.

Yet one more paper must be mentioned, as its life was longer than any of those to which allusion has been made, and its opposition to Wakley more distinct, more bitter, and more effective. This was the *Medical Gazette*.

The *Medical Gazette* first made its appearance in December, 1827, and in its address to its public avowed its hatred of and strenuous opposition to the policy of THE LANCET. The paper was started by Brodie, Abernethy, and other hospital surgeons, who bore a bitter and very intelligible grudge against Wakley, and Dr. Roderick Macleod left the *Medical and Physical Journal* to become its editor. Wakley declared that the only object of the paper was obviously to oppose, and if possible to ruin, THE LANCET, because THE LANCET had so ruthlessly interrupted the even tenour of the lives of the great men of the profession. The following passage from its preface denotes the attitude of the new paper towards the question of the publication of lectures and was accepted at once by Wakley as a formal declaration of war.

"A few years ago a set of literary plunderers broke in on the peace and quiet of our profession. Lecturers who had spent their lives in collecting knowledge, arranging it for communication, and acquiring the difficult art of oral instruction, saw the produce of their lives suddenly snatched from them and published for the profit of others, with the additional mortification of finding what they had taken so much pains with disfigured by bad English and ridiculous and mischievous blunders."

THE LANCET was not behindhand. The outward resemblance of the new newspaper to THE LANCET was very great, while all the editorial inspiration had been borrowed from Wakley. "Some despicable imitations of us have arisen," said Wakley, "and *stunk*, and become extinguished ..... one or two are still *emitting a little fœtor*." In the very first year of its existance the *Medical Gazette* published thirty more or less bitter attacks not only on THE LANCET but on Wakley, while for three years a steady fight was maintained between the rival papers. The *Medical Gazette's* method of attacking THE LANCET was fairly effective and very safe. Every week THE LANCET was searched for grammatical errors, solecisms, or failures in taste, and any treasure-trove was quoted as "wit," "veracity," "refinement," "good English," and the like. Later in its course, which was long and fairly successful, the *Medical Gazette* came into more violent contact with Wakley, but the account of this belongs to a later era. It was at first offensive but timid.

(To be continued.)

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THREE YEARS OF MY LIFE UNDER THE SOUTHERN CROSS.

BY THOMAS LOWE LAXTON, L.R.C.P. EDIN., M.R.C.S. ENG.,
SURGEON TRANSVAAL STATE ARTILLERY.

LEAVING the River Thames by steamer on Nov. 9th, 1892, I arrived at Durban on Dec. 6th, and after spending a few weeks in that beautiful town I obtained the post of resident surgeon to Grey's Hospital, Pietermaritzburg, also in the colony of Natal. My patients here were of every race, nationality, and colour. The Kaffirs display marvellous recuperative powers after even the most severe injuries, especially of the head, their skulls being remarkably thick and dense; but when they are attacked by disease of an acute type their power of resistance compares most unfavourably with that of the whites. I was particularly struck with the frightful ravages that syphilis has made and is making amongst the natives, especially among the Zulus in Natal since the death of Cetewayo, under whose government the punishment for contracting syphilis was death either by impalement on a stake or burial alive. Pregnancy occurring in an unmarried female was also under the same regime punished with death. I noticed also that syphilis was virulent amongst the natives when it had been contracted from a white person and also among the white men infected by native women. Among the children of the natives scabies when neglected produces very severe effects, such as large suppurating sores, ulcerations of the skin, and general emaciation. After leaving Pietermaritzburg I spent six months at Barberton, where malarial fever is common, although neither so prevalent nor so severe in type as formerly. I then, in company with some friends, set out by waggon for Buluwayo in Matabeleland, which was then very little developed, but on arriving in the middle of June, 1894, at Pietersburg, a town in the north of the Transvaal and on the main road between Pretoria and Buluwayo, I found that military operations against the Kaffir chief Malaboch were in progress and that medical assistance was needed. I therefore volunteered my services, being anxious to see the Boers on the war-path, and to gain an insight into commando life and Kaffir warfare generally. The commandant-general, P. J. Joubert, of Majuba and Langs Nek fame in the English war, received me most courteously and I immediately went to the front. The enemy's position was on the top of a high mountain called Blaauwberg, and it took us four hours' hard climbing to reach it, but the labour was well repaid by the beauty and grandeur of the scenery. The campaign had been conducted with only partial success owing to the physical difficulties of the situation and to the unwillingness of the commandant-general to risk the lives of his men in attempts to rush the positions occupied by the rebels, but want of food and water compelled them to surrender during the last days of July, and early in August the camp was broken up and we returned to Pietersburg. Between thirty and forty were killed on the side of the Boers in this small campaign, besides several of the native allies.

[Operations were almost immediately resumed against a number of petty chieftains, including Modjaji (the celebrated "She" of Rider Haggard) and Magoeba. The latter held out the longest, but was killed about the middle of June, 1895.]

The natives are marvellously resourceful in their treatment of fractures, applying numerous small sticks closely woven together by string or stout grass and binding them firmly round the limbs after the fractured ends have been placed in apposition. Immediately after the termination of the campaign against Magoeba I was sent by the Transvaal Government as medical officer to the famous warm baths at Waterberg, some eighty miles north of Pretoria. This water has a very high reputation amongst the Boers, and I must admit, both from my own experience and that of others, that its medicinal properties are of no common order. I have seen marvellous effects produced by it in cases of gout, rheumatism, lithiasis, intractable neuralgias and neuroses, callous ulcers, wounds of long standing, and various forms of bone and joint disease, especially of a scrofulous origin. I have not been able to obtain an analysis of the water, but I am given to understand that it contains an unusually large proportion of lithia salts. The water rises abundantly and with great force and is nearly at the boiling point.

In the beginning of October of last year I was appointed surgeon to the State Artillery with the rank of captain, and for my services to the Government was made a full burgher of the Transvaal. Since then I have witnessed the defeat and capture of Dr. Jameson and his troopers at Doornkop, near Krugersdorp, particulars of which are so recent that I need not enter into details beyond stating that I was the Government medical officer placed in charge of the officers and men while prisoners in this country, and that all the wounded when sufficiently recovered were handed over to my care for transference to the Imperial authorities at the Natal border. Most, if not absolutely all, of Jameson's wounded were struck by Martini-Henry bullets, while the few burghers that were either killed or wounded—nine in all—were struck by Lee-Metford ammunition (Maxim gun or rifle). The majority of Jameson's men were wounded in the extremities. Fifteen received bullets in the right side of their bodies—namely, one in the jaw, two in the upper extremities, and twelve in the lower extremities. Eight were wounded in the left side, three in the upper extremities, and five in the lower. Three men were also wounded in the back and one through the bladder and intestines; of the remainder some were suffering from fractures, dysentery, abscesses, &c., and injuries not due to bullets. Three of the troopers underwent amputation—one above and two below the knee. Of the wounded burghers who were brought into hospital one had his brain traversed by a bullet, but nevertheless survived for ten days, one was wounded through the abdomen, one through the right lung, and one through both hand and lung; there were also five suffering from illness and injuries not caused by bullets. Considering the amount of ammunition expended by Jameson's column it is marvellous how few casualties occurred among the Boers—a result which was not due to bad shooting, but to the careful manner in which the burghers seek and obtain cover. Several of Jameson's troopers told me that the magazines of their rifles were practically useless, for the least portion of rust, dirt, or grit renders the mechanism unworkable; the rifles also became so hot that they could not be grasped with the hand, and some of the older men said that they longed for the Martini-Henry rifle which they had previously used.

IMMUNISATION AGAINST SERPENTS' VENOM AND THE TREATMENT OF SNAKE-BITE WITH ANTIVENENE.

BY T. R. FRASER, M.D., F.R.C.P.EDIN., LL.D.ABERD., F.R.S.,
PROFESSOR OF MATERIA MEDICA AND CLINICAL MEDICINE AT THE UNIVERSITY OF EDINBURGH.

PROFESSOR FRASER delivered an interesting address before the Royal Institution of Great Britain on March 20th. His subject was Immunisation against Serpents' Venom and the Treatment of Snake-bite with Antivenene, and the following is an abstract of his remarks:—

Traditions originating at a remote period and statements contained in the narratives of travellers—several of which were quoted—strongly suggest that human beings may acquire a power successfully to resist the toxic effects of serpents' venom. There is evidence, further, that venomous serpents are themselves protected to a considerable degree against their own venom and that of other serpents. These statements suggested to the lecturer the importance of experimentally investigating the subject, for if they were proved to be correct results would be obtained likely to be of value in the treatment of snake-bite in man. Some twenty years ago the collecting of venom was begun for this purpose, and soon facts were obtained which showed that by the administration of a succession of minute doses of venom animals became able to resist a lethal dose without any distinct injury. The first supplies of venom failed at this point and the investigation was not resumed until several years afterwards. In the meantime, the results of experiments on the toxines of disease had suggested to others that serpents' venom might, like those toxines, be able to produce protection in animals. Starting with Sewall's experiments of 1886, an account was given of the work of other investigators, until those of Phisalix and Bertrand, made in 1893, and of Calmette, made in 1894, were described. The lecturer chiefly used the

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venom of the cobra of India in his experiments, but the leading experimental results obtained with it were reproduced with the venoms of several serpents of Australia, Africa, and America. The minimum lethal dose for a number of animals was first defined, and the protection was produced by a series of gradually increasing doses, until rabbits were able to receive, without injury, fifty times the minimum lethal dose, and in the course of five or six months a total quantity sufficient to kill 370 animals of the same species and weight. The blood-serum of these animals, called by the lecturer "antivenene," was next tested as an antidote, and having been found to be efficacious the limits of its antidotal power were defined in several series of experiments. The results appeared to justify the opinion that the antidotal action is a chemical and not a physiological one. The question—bearing also upon the antitoxins of disease—of the origin of this antidotal substance was discussed. In connexion with it the lecturer stated that he had found that by the stomach administration of antivenene, and more remarkably of cobra venom itself, an antivenomous substance could be introduced into the blood in a quantity sufficient to prevent death after the subcutaneous injection of more than the lethal dose of venom. Experiments were described in which from 500 to 1000 times the subcutaneous lethal dose of venom were introduced into the stomach of animals, and although no definite toxic symptoms were produced by these enormous quantities still the animals had become so far protected that within a few hours afterwards they were able to receive with almost no injury a dose of venom injected under the skin one-half larger than that which was able to produce death. These facts suggest that the antivenene is actually a normal constituent of the venom itself, and that the venom while in the stomach had been subjected to a process of analysis, whereby the poisonous constituents had failed to be absorbed into the body or had been destroyed, while the constituent or constituents which are antidotal had passed into the body in sufficient quantity to protect the animals against otherwise lethal administrations of venom. The measures to be employed in the treatment of snake-bite, including the administration of antivenene, were finally explained, and it was concluded that by its use human life could be saved in a considerable if not in a large proportion of cases that would otherwise terminate in death.

THE HISTORY, METHODS, HINDRANCES, EXPENDITURE, AND POLICY OF THE CIVIL RIGHTS DEFENCE COMMITTEE.

(Continued from page 1090.)

EARLY in 1894, on the initiation of the West Indian Alliance, the Civil Rights Defence Committee was formed. On March 5th a deputation of members and friends of the Alliance and of gentlemen not connected with the Alliance but who were interested in the successful vindication by Mr. Anderson of his own rights and in the establishment of the principles and rights of general and public interest to be upheld by Mr. Anderson in his appeals to the Judicial Committee of the Privy Council was organised to enlist the coöperation of the London and Counties Medical Protection Society in supporting Mr. Anderson and enabling him to prosecute the appeals to the Privy Council to obtain a reversal of the decisions in the cases of Marshall and Wife, Frank and Taylor. In reply to the deputation the London and Counties Medical Protection Society adopted resolutions that the decisions in the suit of Marshall and Wife *v.* Anderson are such as to seriously and unjustly affect the freedom of action of medical men in the practice of their profession and are matters of concern to all medical men, that it concerns the honour as well as interests of the profession to support the appeal of Mr. Anderson to the Privy Council, and that the proceedings in Trinidad were opposed to the absolutely assured rights of British subjects, and advised the nomination of a committee to issue an appeal to the medical profession. This led to the formation of a joint committee composed of members nominated respectively by the London and Counties Medical Protection Society and the West Indian Alliance, which issued invitations to public bodies to send representatives to the Committee, and in response to these invitations the British Medical Association, the West London divisions of the London and Counties Medical Protection Society and the Incorporated Medical Practitioners' Association, the West Indian Union, and the Trinidad and Dominica branches of the Union nominated representatives to the Committee. Shortly afterwards the Council of the Royal College of Surgeons of England also sent two representatives. The first appeal was issued by the Committee to about 1500 of the leading men in the profession, the amount of individual subscriptions being limited to 1 guinea. Subscriptions to the amount of £120 came in, and many strong expressions of opinion that the wrongs done vitally affected the honour and interests of the medical profession. After this, as further subscriptions came in slowly, Mr. Anderson, with the full approval of the Committee, appealed personally in August and September, 1894, to every Fellow of the College—about 1100 in number on the Register—bringing in about 35 guineas at a cost of £15 to £18. Some votes were passed by branches of the British Medical Association, and some subscriptions raised amongst members of branches. In April, 1894, Mr. Anderson gained the verdict of a Middlesex special jury for £500, Lord Coleridge entering judgment for the defendant on the ground that the action did not lie against a judge, and this judgment was confirmed in August by the Master of the Rolls, Lord Esher, and the Court of Appeal. When this judgment in Anderson *v.* Gorrie was pronounced by the Appeal Court, the Committee took this serious violation of Mr. Anderson's rights into consideration, and came to the conclusion that the best way of dealing with it would be by forming a new and powerful committee. The next important measure was the preparation of a formal report, under the title of an interim report, giving the investigations of the Committee and its conclusions with much of the evidence on which they were based together with the very strong opinions of the medical papers, professional public bodies, and professional men—an extraordinary weight of authority and opinion. The report was issued under the date Dec. 4th, 1894, but not struck off till later.

On Dec. 18th a printed letter from Lord Stamford giving a *précis* of the case and strongly appealing to the public for support was sent to two hundred and fifty leading newspapers in London and the provinces, but excepting a brief abstract in the *Times* and short notices in a few other papers it did not receive insertion or comment. Finding that the subject of judicial immunity was little understood or appreciated Mr. Anderson prepared with the approval of the Committee a short review of the subject with authorities, and it was published by the committee under the title of "The Doctrine of Judicial Immunity." Shortly afterwards "An Appeal to Public Men and Public Bodies" was prepared and published. Copies of the "Interim Report" "The Doctrine of Judicial Immunity," and "The Appeal to Public Men and Public Bodies," with a covering letter from Lord Stamford multiplied in the office, were sent to all the corporations and all the guilds, about eighty in number of the City of London, to every member of the House of Lords and House of Commons and to about 400 leading barristers, with apparently very little result either in moral support or funds. Just before the issue of the interim report THE LANCET had inserted a most earnest appeal for help in the work of the Committee and had opened a fund, heading it with a subscription of 10 guineas, but only one subscription of 5 guineas followed.

Efforts were next made to enlist the interest of some of the leading London papers. The *St. James's Gazette*, *Pall Mall Gazette*, and *City Press* consented to receive deputations headed by Lord Stamford. Upon this the *St. James's Gazette* and *Pall Mall Gazette* inserted an appeal from the Committee signed by Lord Stamford and many members, accompanied by a strong paragraph in support of the appeal. This resulted in a subscription of 10 guineas from a member of the jury who tried Mr. Anderson's action and a few other subscriptions also continued to flow in. As soon as Mr. Anderson became aware that when Lord Esher had adjudicated in his appeal Mr. Yeatman's action against Lord Esher was in progress he took legal opinion and was advised that the proper course was to move the Court to set aside the decision as voidable and to re-enter the appeal for hearing. Accordingly, at the end of July and beginning of August, 1895, he gave notice of his motions (1) to set aside as voidable the judgment of the Court of Appeal, and (2) on that motion being struck out of a motion to reinstate it in

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the list, but this last was not even allowed to be placed on the list. During the short August Session of Parliament Mr. Anderson, by means of letters of introduction, interviewed many Members of Parliament and eventually succeeded in arranging a conference for Aug. 29th. The British Medical Association sent a shorthand reporter, and the Committee printed the report. The conference greatly strengthened the Committee and has been one of the causes of quickened interest in its work. As Mr. Anderson was placed in a very difficult and embarrassing position in applying to the Court of Appeal to constitute a court without Lord Esher the Committee invited the attendance of all members when Mr. Anderson's motion came on on Oct. 24th. Four were able to attend—viz., General Graham, Mr. Ross Clyne, Mr. Greenberg, and Mr. Rivington. This was a fortunate circumstance as the adverse decision of the Court of Appeal, which included the Lord Chancellor, might otherwise have alienated some of Mr. Anderson's supporters; but, as it is, the testimony of the delegates to the courteous but firm demeanour of Mr. Anderson in the face of a very trying ordeal has increased the general interest in his case.

In July, 1895, the Committee had published its second interim report, and at the end of the year the third interim report was issued giving many important press notices and carrying the work of the Committee up to date. The third interim report dealt also with the refusal of the Court of Appeal to hear Mr. Anderson's motions. It has since been enlarged and been issued as a second edition. Through the agency of General Graham the Committee were able to invite the coöperation and support of the Torquay Medical Society. Draft resolutions were suggested for adoption and also a form of memorial for signature soliciting the assistance of the Member of Parliament for that division. In response to this appeal the Torquay Medical Society gave a vote of £5 from its fund, raised £13 amongst its members, and obtained numerous signatures to the memorial to Captain Philpotts, its representative in Parliament. It also communicated its cordial good-will to the Devon and Exeter Medico-Chirurgical Society, which a little later voted seven guineas from its funds and twenty-two guineas were subscribed by the members individually. The members also memorialised their Member of Parliament. St. Mary's Hospital Medical School, where Mr. Anderson was a pupil, voted five guineas to the fund.

The next step, and one which brought great accession of strength, was a deputation inviting the Association of Fellows of the College to join the Committee. The proceedings, a short notice of which appeared in the *Times*, are given at length in the second edition of the third interim report. The Association appointed representatives on the Committee who have added to its working influence.

The forms of resolution and memorial above referred to were afterwards further elaborated and, with a draft letter to Members of Parliament, were submitted to the President and Council of the British Medical Association, and the same letter, resolutions, and memorial were sent to the constituent bodies. The Council of the British Medical Association at their meeting on Jan. 15th, 1896, resolved: "That a copy of the report of the Civil Rights Defence Committee be forwarded to the branches, together with copies of the resolutions and draft suggestions referred to." Six hundred copies of memorials to Members of Parliament, each with five of the letters inviting constituents, both lay and medical, to sign the memorials, have been delivered to the general secretary of the British Medical Association to enable the resolution of the Association of Jan. 15th, 1896, to be carried out. Several branches of the Association have passed the resolutions and are obtaining signatures to the memorials to their Members of Parliament. The course adopted by the Shropshire and Mid-Wales Branch and ably carried out by Mr. Cureton, the president, is one that affords the best prospect of success. Mr. Cureton addressed each Member of Parliament in the area of his branch, he interested the mayor of Shrewsbury, and he secured an admirable article in the *Shrewsbury Chronicle*. This, it is hoped, will be followed by the signing of memorials, both by medical men and laymen, in every division and borough in the area of the branch. It is very essential to secure the coöperation of medical men in obtaining the signatures of laymen. Few men are in a better position than medical men to do this, and at present the Committee, though obtaining other help when possible, has in few places anyone on the spot to whom it can personally appeal for help except medical men.

The forms of memorial have also been printed for general use by medical men and laymen throughout the United Kingdom, and many have been taken charge of by active friends for signature. Each member of the Committee has been asked to take charge of one and obtain signatures to it for the Member of Parliament in his district. A tabulated statement of the memorials which have so far been sent to Members of Parliament or are in course of signature is kept by the Committee, and every effort is made to keep these lists correct and complete up to date.

Special forms and invitations to convene public meetings in their constituencies were framed for Mr. Cohen, M.P. for East Islington, and Mr. Kimber, M.P. for Wandsworth, who had both expressed themselves strongly in favour of the objects of the Committee. The very energetic measures taken in East Islington are calling widespread attention to the matter and arousing general interest in that constituency. The executive committee of the Liberal Association received Mr. R. B. Anderson. He addressed them personally and the members as individuals signed the memorial to Mr. Cohen. The memorial has also been signed at the Mildmay Radical Club. In Wandsworth several invitations to Mr. Kimber to convene and preside at a public meeting have been signed.

Debates upon the questions arising out of Anderson *v.* Gorrie have taken place in the Hampstead Parliament and the Gray's-inn Debating Society. At the latter Mr. Copeland, Mr. Bellot, Mr. Degazon (of St. Lucia, British West India), and Mr. Pereira (of Ceylon) all delivered powerful speeches in support of a motion affirming the necessity, in the public interest, of appeal to the House of Lords in Anderson *v.* Gorrie. General Graham attended and spoke on behalf of the Committee. The motion was carried by a large majority. Mr. Bellot, who took part in the debate, has contributed an important article on the legal aspects of Anderson *v.* Gorrie to the *Westminster Review* in the numbers for March and April. He has reviewed all the previous cases in which actions have been brought against judges and has shown clearly that the doctrine of absolute judicial immunity has sprung up within the last few years.

Other efforts have been made by Mr. Anderson himself to inform the public mind and to arouse interest in the general community. Among these the following instances are deserving of record. Towards the end of 1895 very staunch friends of Mr. Anderson, Mr. and Mrs. Mann, the latter from Lincolnshire, proprietors of a large confectionery business, well acquainted with his family and himself in boyhood, very kindly afforded to Mr. Anderson an opportunity of addressing their operatives at their factory in the Wandsworth-road. The operatives are not combined in any organisation, but individually they were interested and most sympathetic. Mr. and Mrs. Mann and clerical staff took charge of memorials to their Members of Parliament and are obtaining signatures to them.

Early this year (Jan. 23rd) one of the fraternities of printers, or, as they are termed, the father and chapel of Messrs. Strangeways and Sons, printers, Tower-street, W.C., who had had their interest aroused in Mr. Anderson's case in the course of printing the various reports and issues of the Civil Rights Defence Committee, received Mr. Anderson. Mr. Williams, the father of the chapel, pointed out that the rights Mr. Anderson is defending are the rights of all. "They are," he said, "rights that we possess under Magna Charta and the Bill of Rights—and these rights, these great charters, are attacked and endangered in our courts." After an excellent speech from Mr. Anderson the following resolution was moved, seconded, and unanimously passed: "That this meeting of the employés of Messrs. Strangeways and Sons, printers, is of opinion that the judgment of the Court of Appeal reversing the verdict of the jury *given after a fair trial* in Dr. Anderson's case is subversive of the rights and liberties of the subject, and, with the circumstances under which it was given and upheld, demands the immediate and careful attention of Parliament as a public grievance before supply, and the punishment of all responsible; and the members of this chapel in meeting assembled pledge themselves to use what influence they possess with their representatives in Parliament to obtain a reversal of this illegal judgment." Twenty-two of the employés took charge of memorials all in separate divisions and have been obtaining signatures among the twenty-two constituencies. The chapel undertook to inaugurate a penny subscription throughout the trade numbering nearly a million and a half. If this subscription is successful it would bring in a considerable sum in defence of the rights involved in Mr. Anderson's case. The chapel have also delivered 500

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copies of the memorials, with 500 copies of the third interim report and 1500 reports of their reception of Mr. Anderson, to delegates attending a great meeting of compositors at the Memorial Hall, Farringdon-street. This cost 13*s*., by post it would have been less effectively done for £4.

Other measures for insistance on the rights involved and for compelling the attention of public men and of Parliament are in progress. Mr. Anderson drew up a petition to the Queen praying for investigation and redress. After two well-attended meetings and very full consideration the Committee decided not in any way to fetter Mr. Anderson's discretion, and the petition has been sent in. A petition to the House of Commons has also been prepared praying for a vote in aid of the appeals and that the petitioners may be heard at the bar of the House of Commons.

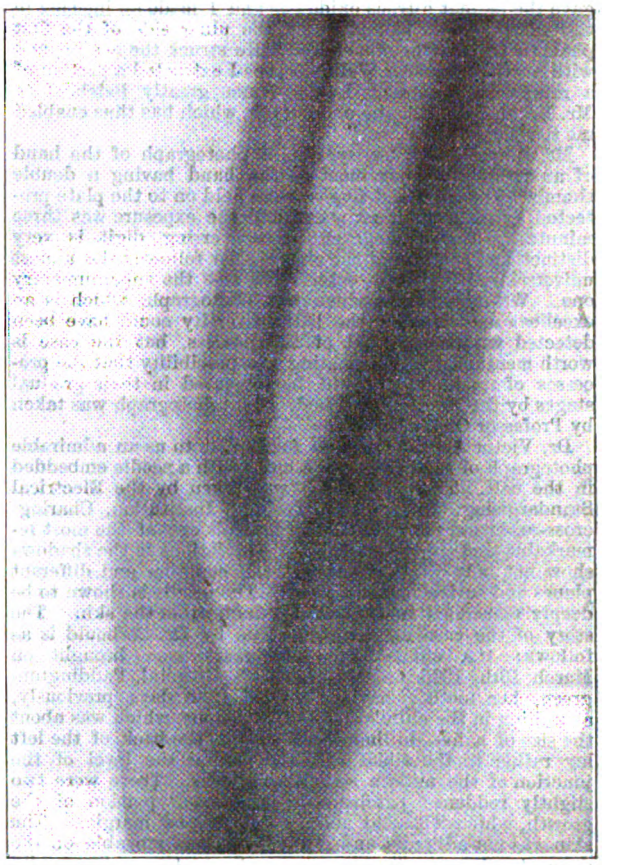
(To be continued.)

THE NEW PHOTOGRAPHY.

IN regard to the investigations made in THE LANCET laboratory there is little advance so far to report. We have made a few experiments with the modified process announced in our issue last week, but though in the case of the hand and fingers the requisite exposure is considerably shortened yet it does not appear to answer for thicker parts. It is curious, however, that prints are obtained at all, since the modification consists in placing the negative with the film side down upon fluor-spar. Mr. Strauss Collin of 15, Copthall-avenue, E.C., has placed at our disposal some new negatives which are said to produce images of the thicker parts of the body in five seconds, whilst excellent pictures of the arm, wrist, &c., with good detail may be obtained in a few seconds. So far as our experiments have gone the results have been to some extent confirmatory of this statement. The negatives are of thin zinc sheeting, upon which is placed the sensitive film, which, in addition to silver salt, probably contains a fluorescent substance. The development of the image is peculiar, the ultimate result being a positive resembling a ferrotype.

In response to numerous inquiries as to the apparatus necessary for obtaining good results we may state that all that is required is a focus tube of the pattern first designed by Mr. Jackson of King's College, and an induction coil giving a three-inch spark, and an accumulator such as that supplied by the Lithanode Company. The photographic plates should be specially rapid. The focus tubes are not so difficult to obtain as they were some weeks ago, and they are not quite so expensive now that several makers are supplying them. Messrs. Griffin and Co. of 22, Garrick-street, Covent-garden, W.C., have sent us a tube for trial costing 27*s*. 6*d*. It gives excellent detail and a fine sharp image with a few minutes exposure when placed at the proper distance above the negative. This distance should, whatever tube is being employed, be ascertained by use of the fluorescent screen, which will show at once the point at which the best definition is ensured. The tube submitted to us answered admirably with the potassic platino-cyanide screen. We have also had occasion to experiment with an induction coil supplied by this firm. It costs £9, and with a four-cell Lithanode accumulator gives nearly a four-inch spark discharge in air. It furnishes a very steady current when the contact-breaker or hammer is properly regulated, which may be done with ease and exactness by means of two screws. The coil is, in fact, just fitted for the requirements of the focus tube without exposing it to the risk of over-heating and probable destruction.

No new departure, save in brevity of exposure, enables us to give our readers illustrations showing that any marked development has taken place as far as medical and surgical utility is concerned. As many people are now employed in experimenting in radiography methods have become perfected, but that is all. We have had submitted to us a very great number of photographs. The one here reproduced was taken by Messrs. Brady and Martin, manufacturing and analytical chemists at Newcastle-on-Tyne. The patient was sent to them by Mr. Page, the precise nature of the injury to the forearm being at the time uncertain. As will be seen the new photography immediately revealed the site and position of the fracture, and the usual treatment was at once employed. We have reduced the negative submitted to us considerably in scale, but the illustration still shows the extreme utility that the process had. It has been our aim in the series of notices which we have written on the new photography to confine our attention almost entirely to cases where this practical utility could be ascertained. The Roentgen photography was only a curiosity in physics for a few days. The occurrence of the phenomena having been established, professional interest in them depends entirely upon their practical utility.



Messrs. Brady and Martin have also sent us a very good photograph of a needle buried in a patient's hand. The locality of the foreign body had not been ascertained until the photograph was taken, when it was immediately cut down upon and removed by Mr. Ingram of Newcastle.

Mr. Stanley Thomas, casualty surgical officer to the Middlesex Hospital, has sent us also a photograph which constitutes a good example of the success of the new process as an aid to diagnosis. He writes as follows:—"As an example of the great success of Professor Roentgen's method of photography as an aid to diagnosis, I think the following case may be of interest to the readers of THE LANCET. On Feb. 29th a woman aged twenty-six years ran a portion of a needle into her right hand; it entered the web of the hand on the palmar surface at the base of the ring finger. The patient came to the Middlesex Hospital on the evening of that day and was seen by Mr. A. E. Griffin, the house surgeon on duty. He could not detect the presence of the needle, and as the patient was suffering a considerable amount of pain he applied a hot boracic fomentation. I saw the patient afterwards daily and made several careful examinations of the hand, but could feel nothing, so the treatment of fomentations was continued on account of the pain, which was constant. There was no swelling, but the patient could not flex her finger. On March 10th she had her right hand photographed by Mr. Friese-Green, of King's-road, Chelsea, and the following day she brought the photograph to me and begged me to explore her hand. This photograph showed a distinct shadow across the proximal end of the first phalanx of the ring finger. I again examined the hand very carefully,

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but could detect nothing, but as she was still suffering considerable pain and was unable to flex the finger I determined to make an exploratory incision and at the same time told the patient not to be disappointed if I found nothing, as I was still unable to feel any unusual resistance in the palm of the hand. I rendered the limb bloodless by an Esmarch's bandage and applied a tourniquet. Dr. A. H. Lister kindly gave the patient nitrous oxide gas and I made an incision in the palm parallel to and along the ulnar side of the first phalanx of the ring finger, the knife struck the needle, and with a pair of Spencer Wells' forceps I extracted a portion of a needle half an inch long. I am greatly indebted to Mr. Friese-Green for the photograph, which has thus enabled me to relieve my patient."

Mr. Robert Jones has sent us a photograph of the hand of an infant aged six months, the hand having a double thumb. The hand and fingers were held on to the plate protected by an aluminium sheet, and the exposure was three minutes. The photograph of the erring digit is very distinct and shows that the abnormality followed the almost universal rule that the outer digit was the supernumerary one. We do not reproduce the photograph, which is an excellent one, because the little diversity could have been detected without the aid of the process, but the case is worth mentioning as indicating the possibility that the processes of ossification could be observed in their gradual stages by the Roentgen method. The photograph was taken by Professor Oliver Lodge.

Dr. Victor A. Corbould has forwarded to us an admirable photograph of the left leg of a child with a needle embedded in the calf. The photograph was taken by the Electrical Standardising, Testing, and Training Institution, Charing-cross-road, and for precision of detail is one of the most remarkable that we have yet seen. Gradations in the shadows show not only the outlines but the contours and different planes and surfaces of the bones. The needle is shown to be deeply embedded in the calf an inch from the skin. The story of the case as narrated to us by Dr. Corbould is as follows: "A child aged two years was brought on March 16th, 1896, to the Children's Hospital, Paddington-green, her mother having noticed, two days previously, a swelling in the child's calf. The tumour, which was about the size of a five-shilling piece, was on the back of the left leg rather to the tibial side and was at the level of the junction of the middle and lower thirds. There were two slightly reddened patches over the lower portion of the growth, which felt solid and had ill-defined margins. The skin was not adherent and the growth was movable on the deep structures. There was no fluctuation. The child had complained of pain when her shoes were being put on and had sometimes fallen suddenly complaining of pain at this spot. About two months before Christmas she had suddenly cried whilst playing on the floor and was put to bed in the middle of the day because she seemed to be in pain. She slept well, but again complained of pain in the leg on being taken out of bed in the morning; however, during the course of the day she seemed to become quite well, and nothing was noticed except occasional falls associated with pain in the left calf until March 14th, when the swelling was first noticed. Thinking of the possibility of a foreign body having entered the limb I got the mother to bring the child on March 21st to Faraday House, Charing-cross-road, where a room had been specially fitted up for the purpose, and, with the kind assistance of Mr. H. H. Powles, an admirable illlustration was obtained by means of Roentgen rays. The original photograph is upon a whole plate—and two were taken in slightly different positions. The exposure of one was five minutes and the other six minutes. They show a needle lying deep to the gastrocnemius and between it and the soleus,[1] the fat investing the limb is also shown. From the appearance of the two photographs one was able to guess that the needle had had its eye broken off. Armed with these results on the following Monday a curved incision was made over the centre of the growth and the pointed end of a needle was seized with sinus forceps. I am indebted to Mr. F. Wallis (to whom the child was brought) for his kind permission to publish this case." The utility of the process in this case is indisputable.

Mr. Lynn Thomas of Cardiff has also sent us some interesting photographs which he has taken in illustration of the relative penetrability of the "x" rays through various tissues and other objects. One photograph is the right hand of a gentleman who had his right thumb torn off when he was two years of age. It shows that the epiphysis of the proximal phalanx was left, and also the two sesamoid bones of the flexor of the thumb. It is interesting to observe that the sardonyx in the gold ring on the ring finger allows the bone to be distinctly visible through it, and that its outline is on the same plane as that of the bone on either side of the ring. Upon another plate are shown three vermiform appendices removed from cases of perityphlitis. One of these had five fæcal concretions in it; they were fixed on a needle and appear black in the reproduction, probably from rust, because the only concretion not pierced by the needle is to be seen at the left end of the appendix as simply a darker impression than that of the appendix itself. A second shows the appendix enormously thickened, the wall being almost impenetrable to the rays, though the exposure was the same as in the previous example, where the wall was nearly transparent. The third is a distended appendix tied with silk at the right hand end. There is evidently nothing in it but fluid, and there is no impression left by the silk on the plate. Another object on this plate is a kidney with three calculi and débris in it. The kidney has not been incised, and the exact localisation of the calculi or even their existence is not very obvious. The last object on this plate is the most interesting. It is the gizzard of a cock laid open tranversely, having a needle in it projecting beyond it for half an inch. "This cock," writes Mr. Lynn Thomas, "during life was known as the 'one that cannot crow,' and from curiosity to find out the cause of his futile attempts at crowing I found that the explanation was the needle in his gizzard. It had penetrated the left lobe of its liver and was half-way out through the anterior abdominal wall. A little reflection upon the condition of the needle during the proud attitude assumed by the bird in crowing will at once explain the discomfort it felt." The third plate presents examples of various calculi. Five of them are vesical calculi, laminated, and formed of uric acid, urates, and oxalates. They are very opaque and there is no difference in their relative opacities. A sixth object is a renal calculus consisting of pure crystalline uric acid. This also is opaque up to its thin edge. A seventh is a little collection of gravel which had been passed per urethram. The last two objects are gallstones removed from the same patient, one from the gall-bladder and one from the ileum. The latter caused fatal intestinal obstruction, although it got through the bile duct without much trouble. The calculus removed from the gall-bladder is very interesting; the stone itself is almost circular and smooth externally, but in the negative there can be seen distinctly the concentric laminations of its structure as well as the faint radiating structure of the individual strata. Mr. Lynn Thomas's three plates form a very interesting record of work, for it is clear to everybody that the most practical development in the process that can take place to render the method of utility in our profession is work in the direction of ascertaining *the comparative density* of different structures.

Dr. Mackenzie Davidson has sent us some interesting reproductions of bullets within the cranium, showing that the vault of the skull is quite transparent to the "x" rays under an exposure of ten minutes or so.

[1] Owing to the difficulty of keeping the child quiet, spasm occurring during exposure, the outline of the needle is double.

PRACTICAL APPLICATION OF THE ROENTGEN RAYS IN SURGERY.

At a meeting of the British Laryngological Association, held on the 17th inst. at the rooms of the Medical Society, Chandos-street, Dr. John Macintyre of Glasgow gave an interesting address on the Practical Application of the Roentgen Rays in Surgery, with special reference to Affections of the Ear, Nose, and Throat. He related the history of his experiments in connexion with the employment of the "x" rays in the examination of the various parts of the body and showed on the screen the results of the advances made by him during the past three months. His first photograph, taken shortly after the publication of Roentgen's paper, was obtained after an exposure of forty minutes, and the last with an exposure of only half a second. He desired to emphasise the title of his address, as the most important use of the rays in surgery had been overlooked, as it was not so much for the purpose of photography that it ought to be employed, but for the examination of the various parts of the body by means of cryptoscopic screens, the use of which was demonstrated to the audience. Thanks to the advice and valuable assistance of Lord Kelvin and Mr. Bottomley of Glasgow University Dr. Macintyre has

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been able to determine the best apparatus for the purpose. Firstly, secondary cells, with a current of from six to eight volts and from four to six ampères were necessary; secondly, a coil giving a spark of from two to three and a half inches; and thirdly, a good Crookes's tube which he considered the most important element, as improvement in results would be according to improvement in these tubes. He found that the best results were obtained by a tube of Newton's shape, in which the vacuum residue is about $\frac{1}{1\frac{1}{7}}$th of a million, the kathode consisting of a concave piece of aluminium, and the torrent passing directly across to the anode, which consists of a small disc of platinum placed obliquely, from which arise the "x" rays diverging in all directions. He had overcome the difficulty of the fatigue spot, or dark area, on the surface of the tube of which so many investigators have complained, by carefully heating the tube on the flame of a spirit lamp before the current was turned on. The best cryptoscope he has found was a sheet of paper evenly stretched on a wooden frame, and coated with a mucilaginous solution of barium or potassium platino-cyanide, preferably the latter. He had used the calcium tungstate, which is less expensive, but not with so satisfactory results. Dr. Macintyre showed on the screen photographs of nearly all the bones and joints of the living body including the deeply seated hip-joint. The cancellated structure of the bones of the hand was shown in a beautiful photograph taken with an exposure of six seconds. Photographs of the internal ear showing the semi-circular canals, the mastoid cells, and the ossicules were thrown on the screen. The lecturer described a case of a boy who six months previously had swallowed a halfpenny and had ever since complained of pain in the region of the cardiac end of the stomach with some difficulty in swallowing. On looking with the cryptoscope at the situation indicated by the pain nothing abnormal was detected, but on proceeding upwards the halfpenny was found impacted in the gullet on the level of the fourth dorsal vertebra, and a well-defined photograph of this case was shown, in which the ribs, spinal column, and the halfpenny could be distinctly seen. A case illustrating the use of the fluorescent screen in differential diagnosis was mentioned. A woman into whose middle finger some time ago a needle entered complained of pain at the point of the finger and insisted that the needle was still lying there, but it could not be detected by ordinary examination. On employing the cryptoscope, however, indications of periostitis of the terminal phalanx were observed and the needle was discovered in the tissues above the level of the wrist, the patient being convinced of this only when she saw the photograph. Dr. Macintyre had taken over 300 photographs. He objected to the introduction of new terms for the photographic results of the "x" rays, believing them to be vibrations in the luminiferous ether beyond the ultra-violet rays, and therefore the chemical effects on the sensitive film must be distinctly photographic in character. He spoke of the penetration of the rays and the methods he had adopted for obtaining the best definition and showed a photograph of the inner aspect of the right side of the skull with the courses of the meningeal vessels distinctly indicated and without any blurring although the rays passed through the other half of the skull, this result being attained by determining the penetration by length of exposure, distance of the tube from the part, and focussing by means of the cryptoscope. The most important advance, however, made by the lecturer was in photographing some of the soft parts as observed in a representation of a living larynx in which the tongue, the entrance to the œsophagus, the epiglottis, the cartilages of the larynx, and the hyoid bone were perfectly defined in various degrees of density according to their structure. By means of a small cryptoscope covered with a thin sheet of aluminum Dr. Macintyre had been able to see the antrum of Highmore as well as the roots of the teeth in the upper and lower jaws, and he showed a photograph in which erosion was distinctly visible in a case of cancerous disease of the upper jaw. He demonstrated the use of his cryptoscopic screens by passing the rays through the body of a boy, and the audience could distinctly see the ribs, spinal column, shoulder girdle, &c. Dr. Macintyre uses ordinary photographic plates, but by improving the Crookes's tubes he hopes soon to produce instantaneous photographs by the "x" rays.

Note.—Dr. Macintyre telegraphs that since his return to Glasgow he has obtained a distinct image of the bones of the hand "with one flash in the tube from a single interruption of an eleven inch spark coil," thus reducing the exposure to an exceedingly minute fraction of a second.

THE MIDWIVES REGISTRATION BILL.

A WELL-ATTENDED and influential meeting of the medical profession of Sheffield and its neighbourhood was held at the Medical School on April 16th, Dr. Dyson, senior physician of the Sheffield General Infirmary, being in the chair. The meeting was called to consider the above Bill and what steps ought to be taken with regard to it. A large number of the practitioners present took part in the discussion, and, as the outcome of the meeting, the resolutions, of which the following are abstracts, were carried unanimously.

1. That no legislation should take place until the General Medical Council and other public legalised medical bodies, and also the medical profession at large, have had full time to consider and opportunity to suggest amendments. Evidence on the subject has hitherto been taken somewhat too exclusively from special societies in London and elsewhere, and a truer view of the case would be acquired by obtaining also the opinion of general practitioners and of Poor-law medical officers.
2. That every Bill for the registration of midwives hitherto brought forward has proposed to institute what would, in reality, be a new and inferior class of medical practitioners, thus interfering with the beneficial operation of the Medical Acts by the licensing, in a most important branch of practical medicine, of, in our opinion, insufficiently trained and badly qualified persons.
3. That when it is stated that midwives are to have sole charge of cases of "natural labour" only, the expression made use of is very misleading, for a labour, apparently at first quite "natural," may suddenly become complicated and dangerous, and the fact needs emphasising that the heavy mortality amongst women during childbirth is by no means chiefly due to ignorance and mismanagement, as is sometimes asserted, but largely to "natural" causes, which can only be guarded against by superior skill. Well-regulated and prolonged study is absolutely necessary for those undertaking sole charge of any labour, and the short and perfunctory preparation and examination of women seeking to become midwives, too frequently practised of late, can be no adequate guarantee of their fitness for such grave responsibilities.
4. That the portals of the medical profession are now thrown open to both sexes—therefore that, after adequate study and authorised examination, women have now exactly the same opportunity for practising midwifery as men.
5. That we are prepared to support a measure for the registration of midwifery nurses, who shall attend confinements only under the control of fully qualified medical men or women, but never be entrusted with sole charge and responsibility.

A large general committee and an executive committee were appointed to take steps to bring the foregoing resolutions to the notice of the Members of Parliament of the city and district, and to as many other Members as possible, with a view to their being persuaded to take action, and not to allow any hasty or ill-considered legislation to take place in connexion with a question of such vast importance to the public in the first place, and to the medical profession in the second.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Marylebone Sanitary District.—This district is at the present time, Mr. Wynter Blyth observes, thanks in no small degree to the outbreaks of small-pox which have occurred within its limits, as well protected by vaccination as any part of London. We are glad to hear this, and we trust that other districts will not fail to profit by the experience which Marylebone has had. Mr. Blyth, in referring to the necessity for ample cubic space in fever hospitals, observes that it is a debatable point whether it is not better to temporarily curtail such cubic space than by insisting upon a liberal allowance to necessitate the retention of many patients in crowded tenement houses. It is difficult to decide a point of this nature, and it could probably only be discussed with profit in relation to the operations of a given hospital and district. If the reduction of cubic space minimises the chances of recovery of patients already in hospital and increases their tendency to septic complications and the contraction of other infectious diseases, we should say that a grave responsibility would rest upon the medical superintendent who permitted the "overcrowding"; but, again, there is the question of reduced chances of recovery to patients left in the tenement houses to be considered. Mr. Blyth, in discussing the hospital accommodation of the metropolis, refers to the fact that for two years the Marylebone vestry established and maintained temporary hospitals for infectious disease, but as no other

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local authority followed the example set by Marylebone the vestry declined to maintain another hospital. Typhoid fever showed an increase in Marylebone in 1895, and Mr. Blyth thinks it not improbable that owing to the prolonged frost some local pollution of the water-supply may here and there have occurred. There is in Marylebone a large number of workshops, and Mr. Blyth reports that it is impossible for all of them to be properly inspected with the staff at his disposal. He thinks it may be desirable to add a lady inspector to the staff as there are several places in the parish which cannot be conveniently or decently supervised by male officers. The supervision of the milk traffic in Marylebone seems of a very thorough nature, or at least so far as the present legislative interference goes. To prevent any evasion of justice lay agents have been freely used for the purchase of samples, which, by the way, are collected extensively in the streets on Sundays and holidays and at an early hour in the morning, while inspectors have, on complaint, attended at private houses and taken milk on delivery. Mr. Blyth points out that the greatest adulterators are not the residents or tradesmen of the district, but itinerant vendors who hawk milk about the poorer parts. The supervision which is exercised in Marylebone seems, however, to be driving this species of milk vendor to other districts where the officers are more lax.

Chelsea Urban District.—Dr. Louis Parkes reports that the general death-rate of this district for 1895 was 19·28 per 1000, as compared with a rate for London as a whole for the same period of 19·86. The Chelsea rate is in excess of that for 1894, and Dr. Parkes states that the excess is in large part attributable to the return of influenza and to diarrhœal diseases. The most noticeable feature in the sanitary history of Chelsea during 1895 was the prevalence of scarlet fever, the figures for this disease showing an excess of 30 per cent. over those for London as a whole. There were in all 623 cases notified, and of these 57 occurred in the Duke of York Royal Military School and 41 in the Chelsea Workhouse and Infirmary. Dr. Parkes alludes to the difficulty which arose in the removal of cases consequent upon the demand upon the accommodation of the Asylums Board, and he states that some secondary cases arose where there was delay in removing the initial cases or when removal did not take place; but he observes that the exceptional incidence of scarlet fever in Chelsea is not to be explained by this inability of the Asylums Board, inasmuch as other districts suffering under a similar disadvantage exhibited no such excess. Dr. Parkes makes an interesting comparison of the vital statistics of the Chelsea home district with the detached portion of Kensal-town, and he shows that in regard at least to the five years 1891–95 the average standard of public health in Kensal-town was superior to that of the home district. Both its general and zymotic death-rate are lower. During 1895 there was an increase of 10 per cent. in the number of houses on the constant water service, but, as Dr. Parkes remarks, the whole of the home district should be receiving a constant supply.

Thingoe Rural District.—Dr. C. S. Kilner reports that during the year 1895 he found two boys who were engaged in milking cows desquamating freely from scarlet fever, their parents being ignorant of the nature of the disease from which they had been suffering. It would have been interesting could the distribution of the milk drawn by these boys have been traced, as presumably they must have been engaged in milking on repeated occasions while undergoing desquamation. If the milk-supply from this source was a large one the evidence would have been of value, even if only from a negative standpoint. In reference to the subject of disinfection under the provision of the Infectious Diseases (Prevention) Act, 1890, Dr. Kilner states that for the future he will not consider a house to have been disinfected to his satisfaction unless the process has been carried out by a competent person such as the inspector of nuisances.

Westminster Sanitary District.—Dr. J. Norton supplies in his report a good example of the difficulties which are experienced in practice with respect to infectious diseases as conveyed by tramps. He states that in a case of small-pox which occurred in a common lodging-house in his district the patient had slept in no less than five different places since he had noticed the rash on his body; and in another instance the patient, after the rash was observed, ran away and was only captured with difficulty. Owing to some alleged overcrowding in one of the Peabody Buildings investigations were made into the matter, and although the allegation was apparently unfounded, inquiries in respect to some Salvation Army shelters in the same district led to the discovery of considerable overcrowding and defective ventilation. Dr. Norton bears testimony to the good spirit with which his suggestions were received and to the prompt manner in which they were carried out by authorities.

Whitechapel Sanitary District.—Mr. Joseph Loane refers to the difficulty of arriving at anything like an accurate estimate of the population of his district, owing to the disturbing influences of immigration, &c., which obtain in it. He, however, roughly estimates the population at 79,000. The birth-rate of the district for 1895 was 39·3 per 1000, as against a metropolitan rate of 30·4 per 1000. The general death-rate was for the same period 22·8, as against 19·7 for the metropolis. The infantile mortality was 154 per 1000 registered births, as against 165 for London. Referring to the delay which was experienced in July and in September in procuring the admission of patients into the hospitals of the Asylums Board, Mr. Loane observes that in 35 cases 3 applications were made, and in 25 cases 4, while in 1 case as many as 11 are recorded. At the same time, Mr. Loane wishes to emphasise the fact that the officers of the Board showed as far as possible every consideration for the necessities of the district. He suggests that an increased accommodation for convalescents would render the existing beds more frequently available for acute cases. In reporting upon the outbreak of small-pox which occurred in Whitechapel during the year under review Mr. Loane states that 50 per cent. of the cases were reported to have come from the Salvation Army shelters, 25 per cent. from private houses, and the remainder from registered common lodging-houses, the Whitechapel Infirmary, and outside philanthropic shelters. Mr. Loane, in referring to the registered common lodging-houses, draws attention to the very thorough manner in which their inspection is carried out by the London County Council. Whitechapel contains a large number of philanthropic shelters, there being four belonging to the Salvation Army and eight to other bodies. The common lodging-houses are registered to accommodate 5612 persons and the model dwellings in the district have a population of 13,778. Mr. Loane proposes to discuss in a subsequent report the public health aspects of these model dwellings.

Coventry Urban Sanitary District.—Considerable improvements in matters calculated to affect the public health took place in Coventry during 1895. A second source of water-supply was provided, electric light was installed, and the tramway system, which, as Dr. Mark Fenton observes, will tend to distribute the population over a wider area, was extended. There has been during recent years in Coventry a steady decrease in lung diseases other than phthisis, and Dr. Fenton considers the diminution in all probability due to an alteration in the character of the population rather than to meteorological influences. He observed that the operatives in the cycle industry, who have largely supplanted the weavers and watchmakers, are not employed under such untoward conditions as were the latter. Attention is drawn in the report before us to the dangerous practice of sending school children to inquire as to the absentees. Dr. Fenton states that he has known infectious disease to be contracted in this manner, and the practice, he adds, continues in spite of his having warned the managers of its dangers. The condition of urban populations as to vaccination is at the present time a matter of interest, and the figures embodied in Dr. Fenton's report are worth recording. In 1889 no less than 96 per cent. of the infantile population were vaccinated, but since that year the following percentages represent for each year the state of affairs—89, 39, 7·6, 7·2, 7·7, and 4·5. The Coventry guardians are at the present time, in common with not a few other Poor-law authorities, as Dr. Fenton remarks, awaiting the report of the Royal Commission, and a grave responsibility rests upon the members to complete their labours. It is, however, some consolation to learn from the Coventry report that Dr. Fenton has advised the erection of a separate small-pox hospital.

Surbiton Urban District.—In discussing the prevalence of diphtheria in Surbiton during 1895 Dr. Owen Coleman states that sanction was given him to arrange for a supply of antitoxin to all who might apply for it and also to provide bacteriological examination in cases where this was necessary in order to assist the diagnosis. Dr. Coleman supplies a table in his report showing that the fatality-rate of diphtheria in his district has during the last six years varied from 6·2 per cent. to as much as 47·6, facts which it will be well to hold in view in inferring the effect of any actual or

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supposed remedies. In the matter of scarlet fever Dr. Coleman gives some interesting instances of undetected and consequently unnotified cases of that disease which tend to show the limitations which with lay diagnosis must perforce obtain in practice to the advantage of compulsory notification. It would seem that the only means of reducing these cases is by educating the public as to the necessity of seeking medical advice and by instituting periodical examination of school children. Referring to the severe frost of February and March, 1895, Dr. Coleman draws attention to the fact that although in his district the absence of water led to numerous olfactory nuisances there was no excessive amount of illness due to this cause; there was not any increase of enteric fever during the period of frost. As Dr. Coleman observes, this absence from illness may possibly have been due to the fact that the excessive cold killed or at least arrested the activity of both putrefactive and pathogenic organisms.

Stoke-upon-Trent Urban Sanitary District.—Dr. Samuel Johnson records with satisfaction the fact that many important measures have been adopted for the protection of the potters. Overalls are now used by all workers in dust and glaze, and mess-rooms have been provided for those employed in the lead department, who are also compelled to wash before taking food. The use of respirators is still optional, but they are provided gratuitously.

Haydock Urban Sanitary District.—Dr. T. E. Hayward has estimated the population of his district by the three methods which may be employed for this calculation and the results are of interest. By the method adopted by the Registrar-General he estimates the population at 6843; by calculating the number of inhabited houses and the average number of inhabitants per house the figures 7791 are obtained; while estimating it upon the birth-rate the population is found to be 7884. It will be observed that the last two methods yielded nearly identical results, and Dr. Hayward has taken 7800 as the population. In reference to puerperal fever Dr. Hayward supplies figures to show that during the ten years 1885–94 the mortality-rate among women in childbirth in Haydock has been twice as great as for England and Wales. The township of Haydock is supplied with water direct from the Rivington reservoir of the Liverpool Corporation, but in the event of a breakdown in the main there are two storage reservoirs for supplying Haydock in the interval. Dr. Hayward states that as one of these reservoirs is uncovered and the ground in its neighbourhood is manured with privy midden contents pollution of the water in the reservoir is not altogether unlikely to occur. It seems, too, that the water during storage tends to deteriorate, and Dr. Hayward advises that when the direct supply from Rivington is cut off and it is necessary to use the water from the reservoir in question it should be boiled before use.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 7092 births and 3952 deaths were registered during the week ending April 18th. The annual rate of mortality in these towns, which had been 18·3 and 20·0 per 1000 in the two preceding weeks, declined again last week to 19·0. In London the rate was 19·4 per 1000, while it averaged 18·7 in the thirty-two provincial towns. The lowest rates in these towns were 11·1 in Swansea, 12·1 in Brighton, 12·8 in Croydon and in Preston, and 14·6 in Portsmouth; the highest rates were 21·2 in Bolton, 21·5 in Salford, 21·9 in Sunderland, 22·0 in Liverpool, and 25·2 in Birmingham. The 3952 deaths included 635 which were referred to the principal zymotic diseases, against 615 and 666 in the two preceding weeks; of these, 252 resulted from measles, 206 from whooping-cough, 66 from diphtheria, 48 from diarrhœa, 35 from scarlet fever, 27 from "fever" (principally enteric), and 1 from small-pox. The lowest death-rates from these diseases were recorded in Brighton, Swansea, Preston, and Huddersfield, and the highest rates in Bolton, London, Salford, Birmingham, and Birkenhead. The greatest mortality from measles occurred in London, Plymouth, Norwich, Oldham, Sunderland, and Birkenhead; from whooping-cough in Bradford, Cardiff, London, Birmingham, and Derby; and from "fever" in Wolverhampton and Salford. The mortality from scarlet fever showed no marked excess in any of the large towns. The 66 deaths from diphtheria included 42 in London, 8 in Birmingham, 4 in West Ham, and 3 in Manchester. One fatal case of small-pox was registered in Leeds, but not one in London or in any other of the thirty-three large towns. There were 16 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 18th inst., against 33, 23, and 21 at the end of the three preceding weeks; 4 new cases were admitted during the week, against 2, and 5 in the two preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2527, against 2744, 2676, and 2587 on the three preceding Saturdays; 201 new cases were admitted during the week, against 224, 186, and 226 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 270 and 301 in the two preceding weeks, further rose to 328 last week, but were 56 below the corrected average. The causes of 58, or 1·5 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Cardiff, Oldham, Newcastle-upon-Tyne, and in thirteen other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Norwich, Liverpool, Sheffield and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18·7 and 19·7 per 1000 in the two preceding weeks, declined again to 19·0 during the week ending April 18th, and corresponded with the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 11·2 in Leith and 11·8 in Greenock to 22·6 in Aberdeen and 24·3 in Paisley. The 554 deaths in these towns included 21 which were referred to whooping-cough, 11 to diarrhœa, 9 to measles, 7 to scarlet fever, 7 to "fever," and 1 to diphtheria. In all, 56 deaths resulted from these principal zymotic diseases, against 61 and 91 in the two preceding weeks. These 56 deaths were equal to an annual rate of 1·9 per 1000, which was 1·1 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 21 and 29 in the two preceding weeks, declined again to 21 last week, of which 10 occurred in Glasgow and 5 in Aberdeen. The deaths referred to measles, which had increased from 6 to 20 in the three preceding weeks, declined to 9 last week, of which 7 occurred in Glasgow and 2 in Dundee. The 7 fatal cases of scarlet fever showed a further slight increase upon the numbers recorded in recent weeks, and included 2 in Glasgow, 2 in Edinburgh, and 2 in Aberdeen. The deaths referred to different forms of "fever," which had been 4, 6, and 12 in the three preceding weeks, declined to 7 last week, of which 3 occurred in Glasgow and 3 in Edinburgh. The deaths from diseases of the respiratory organs in these towns, which had been 87 and 110 in the two preceding weeks, were 109 last week, and were 23 below the number in the corresponding period of last year. The causes of 34, or more than 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 25·5 and 25·4 per 1000 in the two preceding weeks, further declined to 20·6 during the week ending April 18th. During the past three weeks of the current quarter the death-rate in the city has averaged 23·8 per 1000, the rate during the same period being 19·2 in London and 16·6 in Edinburgh. The 138 deaths registered in Dublin during the week under notice showed a decline of 32 from the number in the preceding week, and included 6 which were referred to the principal zymotic diseases, against 8 and 10 in the two preceding weeks; of these, 4 resulted from scarlet fever, 1 from whooping-cough, 1 from "fever," and not one either from small-pox, measles, diphtheria, or diarrhœa. These 6 deaths were equal to an annual rate of 0·9 per 1000, the rate during the same period being 4·0 in London and 1·5 in Edinburgh. The fatal cases of scarlet fever, which had been 2 in each of the three preceding weeks, rose to

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4 last week. The mortality from whooping-cough and from "fever" corresponded with that recorded in the preceding week. The 138 deaths in Dublin last week included 17 of infants under one year of age, and 42 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a slight further decline from the numbers returned in recent weeks. Six inquest cases and 7 deaths from violence were registered; and 48, or more than a third, of the deaths occurred in public institutions. The causes of 5, or nearly 4 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-MAJOR KAVANAGH has been posted to the North-Western District. Surgeon-Major Fayle has been transferred from Canterbury to Shorncliffe and Surgeon-Major Harran to Tipperary. Surgeon-Major Braddell and Surgeon-Captain Harris have arrived in Egypt. Surgeon-Captains Josling and Hosie have embarked for the West Coast of Africa and Surgeon-Captain Lavie for Egypt. Surgeon-Captain Browning has been posted to Limerick.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Captain W. E. Jennings is appointed to act as Health Officer of the Port of Bombay pending the return of Surgeon-Major F. F. MacCartie. Surgeon-Major J. Crimmin, V.C., is appointed to act as Port Surgeon, Aden, vice Surgeon-Major W. P. Carson, proceeding on leave. Surgeon-Captain G. C. Hall (Madras) has been transferred by the Secretary of State for India to temporary half-pay subject to Her Majesty's approval.

NAVAL MEDICAL SERVICE.

The following appointments are notified: — Surgeons: E. E. Kershaw to Malta Hospital and R. H. Way to the *Howe*.

MILITIA MEDICAL STAFF CORPS.

Surgeon-Major Thomas William Richardson, late Norwich Company Volunteer Medical Staff Corps, to be Surgeon-Captain.

VOLUNTEER CORPS.

Rifle: 2nd Volunteer Battalion the Cameronians (Scottish Rifles): James Livingstone Loudon, M.B., to be Surgeon-Lieutenant. 2nd Volunteer Battalion the South Staffordshire Regiment: Surgeon-Lieutenant-Colonel J. Clark, M.D., resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the Battalion on his retirement.

THE MATABELE RISING.

The news from the Cape as to the extent of the Matabele rebellion and the perilous position of Bulawayo, the centre of the Chartered Company's possessions, is serious; and, looking to the nature and dimensions of the crisis, a determined effort will have to be made by the authorities in South Africa and in this country if peace and order are to be re-established in that territory. General Sir Frederick Carrington, who has had long experience of African warfare, has been appointed by the Home Government to command the forces in Matabeleland. There has already been a good deal of fighting, and the whole country around is in the hands of the Matabeles; Bulawayo is garrisoned by a small force, is badly provisioned, and not too well supplied with ammunition. There is plenty of excellent material in South Africa, accustomed to savage warfare, out of which a strong local force could be organised, but reinforcements of regular troops will, no doubt, have to be despatched from this country to take part in quelling the rebellion. Orders have been already sent to Aldershot to hold some troops in readiness for embarkation to South Africa, and there is much activity at Woolwich Arsenal in the preparation of supplies of warlike stores and ammunition. The *Spectator* makes a suggestion to philanthropists in regard to the supply of medical aid and material. Our contemporary recommends that half a-dozen picked surgeons should be sent to Bulawayo with antiseptic appliances, and implies that there is a deficiency in this respect, adding that if Bulawayo is really besieged half the wounded may die of infective wound diseases. We do not, of course, know whether our contemporary speaks from any special knowledge of the facts out there, and can only trust that the supply of surgeons with surgical and antiseptic material is ample, as should certainly be the case, to meet the indispensable requirements of modern surgery.

THE ARMY MEDICAL STAFF.

A correspondent who writes most temperately on the present unsatisfactory conditions under which the officers of the Army Medical Staff are now serving, and who draws our attention to the current rumour with regard to the revival of the regimental system and the abolition or reorganisation of the Army Medical Staff, suggests that the following lines should be followed by the authorities when the question again comes to a head. They are, he says, the expression of the feeling of a large body of the best medical officers now serving in Her Majesty's Army. The suggestions are as follows: 1. The establishment of a royal corps of surgeons to be called the corps of "Royal Surgeons" and to be recognised by the letters "R.S." after the titles of the different ranks. The corps to consist of the officers of the Army Medical Staff and the non-commissioned officers and men of the Medical Staff Corps. 2. The amalgamation of the Army Medical Staff and the military division of the Indian Medical Service. 3. If thought necessary the attaching of young officers of the Royal Surgeons to regiments for definite periods. Our correspondent reminds us that the Royal Engineers were years ago in much the same unhappy state as the officers of the Army Medical Staff are at present, and that the honourable position now accorded to the officers of the former service is chiefly owing to the formation of their Royal Corps.

THE NILE CAMPAIGN.

There is but little to chronicle this week in regard to the progress of the Nile Expedition and the late attack at Suakin. It appears that some friendly Arab tribes have recently made a demonstration on the Nile beyond Dongola in the Monasir district, and that this, combined with the defeat of Osman Digna in the Suakin district, has somewhat disconcerted the Dervish leaders. The Dervishes are stated to patrol the neighbourhood of Akasheh every night, and it is alleged that Osman Digna is at Harasab, and that he is receiving large reinforcements, but that the adequate provisioning of his army is a source of difficulty. Great activity still prevails in the transport department of the expedition at Wady Halfa and elsewhere, and in planning and arranging the hospitals and transport for the sick and wounded. Bearer companies will be stationed at Sarras, Ambigole, and Akasheh. It is understood that a considerable force from this country will, later in the season, proceed to Egypt to take part in the Anglo-Egyptain campaign up the Nile. It is currently reported in Cairo that Sir Redvers Buller will arrive there in August in connection with the Dongola expedition.

THE GOVERNMENT OF INDIA AND THE HEALTH OF THE TROOPS.

A severe epidemic of enteric fever is reported to have broken out in the Norfolk Regiment stationed at Allahabad. Since March 1st 20 deaths have occurred out of 47 cases. The *Times* says:—"An important step is about to be undertaken by the Government of India with the view of reducing the amount of sickness from cholera, enteric fever, &c. A special sanitary officer of proved bacteriological knowledge is being appointed to each large cantonment. These officers will be charged with the care of the general health of the troops, so far as it is possible to secure this by careful sanitary precautions. Their duties will include the conducting of full inquiry into the causes of outbreak of all epidemic diseases."

THE RUSSIAN RED CROSS EXPEDITION.

The Red Cross expedition to Abyssinia is under the command of General Shoedoff, and comprises some thirty medical men and nurses, with fifty assistants. Some difficulty has arisen, as we have already intimated, with the Italian Government in connexion with this mission to the Abyssinian forces, and it is understood that the expedition will not be allowed to proceed *viâ* Massowah. From whatever cause this has arisen—and we can only suppose that it has occurred from some doubts being entertained on the part of the Italians as to the purely philanthropic nature of the expedition—it is, on the score of humanity, to be regretted.

HEALTH OF CALCUTTA.

Dr. W. J. Simpson in his report on the health of Calcutta for December, 1895, states that there were 80 deaths from

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cholera against 144 in the previous month. The figure is lower than all of the corresponding figures of the past ten years, excepting 1892, 1893, and 1894, and is lower than the average of the decade by 41.

BUBONIC PLAGUE AT HONG-KONG.

The outbreak of plague in this colony still continues. Mr. Chamberlain has received telegraphic intelligence from the Governor of Hong-Kong that sixty-four further cases occurred in the week ending the 21st instant.

Surgeon-Major-General William R. Rice, M.D., C.S.I., Bengal Retired List, has been made Honorary Physician to the Queen, vice Inspector-General Sir W. MacKenzie, K.C.B., C.S.I., Retired List, deceased.

The post of Professional Assistant at Headquarters, which will become vacant on the appointment of Surgeon-Major-General Jameson to the office of Director-General, has been conferred upon Surgeon-Major-General W. Taylor.

Correspondence.

"Audi alteram partem."

THE REGISTRATION OF MIDWIVES.

To the Editors of THE LANCET.

SIRS,—The writer of the very interesting and able article on Midwives Bills in THE LANCET of April 18th has fallen into one very curious error, to which, I am sure, he will forgive me for calling attention. He says: "The General Medical Council suggested the substitution of the title of 'Midwifery Nurse' for that of 'Midwife.'" By a reference to your report of its proceedings[1] it will be seen that, so far from this being the case, the General Medical Council, after fully considering the suggestion to that effect, rejected it. The error, no doubt, arose from the circumstance that the title of the Bill as sent up by the General Medical Council to the Privy Council contained the words "midwifery nurse," although by special resolution it had been decided not to recommend the introduction of these words into the clauses of the Bill itself.

In respect to the suggestions of the General Medical Council having been ignored in the present Bill the writer says that their omission throws on its promotors a great responsibility. So it would if the omission were the act of the promoters, but it is not. It was the Privy Council that rejected these suggestions. The rejection embraced the entire series with one single exception, and that exception was made at the instance of the promoters. The alterations made in the Bill during its progress in the House of Lords were all made by the Privy Council. In one or two instances the alterations were undoubted improvements, but the majority of the alterations were, in the opinion of the promoters, the very reverse of improvements. As an example may be mentioned the omission of the clauses that provided for the efficient control of the practice of midwives. The promoters are quite prepared to support the reinstatement of these clauses. With regard to the suggestions of the General Medical Council your article specities one or two that, in the opinion of the writer, ought to have been adopted, particularly the suggestion that before existing midwives be allowed to register evidence should be produced as to their character and capacity. It must not be forgotten that on this very question of requiring evidence of moral character a former measure was wrecked. The Bill was "talked out" by the late Mr. Bradlaugh, on the ground that it was monstrous to demand evidence of moral character in the case of midwives seeking to be registered when it was not demanded under similar circumstances in the case of medical practitioners. The promoters of the Bill have, indeed, encountered great difficulties in connexion with this part of the question. They consider it very reasonable to ask that existing midwives should be required to produce evidence of being respectable and competent before being admitted to the Register. But they are told that they must be satisfied with the fact that registration can be refused to any woman who has been shown to be guilty of acts which, if they had been proved against her after being placed on the Register, would have afforded sufficient grounds for her removal from it. The Dentists' Register and other registers are, much against the will of their promoters, burdened with the names of undesirable and incompetent persons. It was found impracticable to avoid it then, just as it is now. To most of the points which the writer of the article mentions as desirable the promoters of the present Bill have not the slightest objection.

Will you allow me, as one possessing some claim to a special acquaintance with the subject, to make a few observations on the other Bills you mention? The adoption of the term "midwifery nurse" has been stated by Sir Walter Foster, M.P.,[2] to be the preliminary to placing the midwife under the direct superintendence of a medical practitioner, and the term was avowedly coined with this intention. Both the Bill drafted by the Parliamentary Bills Committee of the British Medical Association and that drafted by the Lancashire and Cheshire branch of the same association adopt the term "midwifery nurse," presumably with the object above mentioned. Now, in the report which prefaces the latter there is the following remarkable statement: "Your committee have fully considered the question of the attendance on cases of midwifery by persons other than registered medical practitioners, and are unanimously of opinion that the proposition that it be made compulsory for every woman to have a registered medical practitioner in attendance at confinemant, or that no persen other than a registered medical practitioner, or a person acting under the direct or personal supervision of such, be allowed to attend any case of midwifery is, however desirable, impracticable." The object for which the term was coined is, therefore, stated by its originators to be unobtainable. Further, it has been overlooked by the promoters of these two Bills that if the term "nurse" be applied legally to a class of women who attend cases on their own account it at once establishes a "nurse" as a person who may be in attendance without a medical man—namely, as, in a very real sense, a "new class of practitioner." The promoters of these two Bills distinctly state that they do not expect every case of confinement attended by a "midwifery nurse" to be attended by a medical man too. They acknowledge that the "midwifery nurse" must act without the direct supervision of a medical practitioner—that is, as a midwife—yet without any solid reason they want to exchange for the well-known and well-understood term of "midwife" a term which no one knows and which does not mean what its constituent words would seem to imply.

Sir Walter Foster, M.P., states that he would have no objection to the Bill now before the House of Commons if the change of term were made. He agrees with the promoters of the Bill that the present state of affairs in regard to attendance in childbirth amongst the poorer classes is scandalous and cannot be allowed to continue. Yet he, with others, insists upon an alteration which, if adopted, would be useless in regard to the attainment of its avowed object, and which is interpreted outside the profession as the expression of a desire on the part of the medical profession to have all the midwifery of the country in its own hands. I have had ample opportunity of studying the attitude of the non-medical public towards this question, and I can testify that there is a steadily increasing impression abroad that the medical profession, in these various Bills for the registration of midwifery nurses, is trying to get into its own hands that large proportion of the midwifery practice of the country (amounting to some half-million of cases per annum) now in the hands of the midwives. It is absolutely necessary that the public should be disabused of this erroneous idea, or it will, I am assured, bear very disagreeable fruit in the not far distant future, when it will take the shape of opposition to medical interests in any future sanitary or other Bill affecting medical practice or in the promotion of our interests. The only way in which this impression can be effectually removed is by united action in the profession itself in support of the general principal of legislation. Let us agree to let the present Bill pass its second reading, reserving our differences for adjustment in the committee stage. Medical interests will be much more likely to receive proper consideration. Do not let us cut our own throats by stickling for meaningless alterations of title, or, still worse, for the insertion of clauses that, however desirable from a

[1] THE LANCET, June 8th, 1895, p. 1474.

[2] THE LANCET, June 8th, 1895, p. 1474.

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medical point of view, can be shown to threaten an interference with that very liberty of the subject which it is one of the main functions of the House of Commons to protect.—Apologising for the length of my communication,

I am, Sirs, yours faithfully,

ROWLAND HUMPHREYS, L.R.C.P. Lond., &c.

Fellows-road, N.W., April 18th, 1896.

GASTRO-ENTEROSTOMY: TWO INTERESTING CASES.

To the Editors of THE LANCET.

SIRS,—In THE LANCET for Jan. 20th, 1894, at p. 148, is reported a case of gastro-enterostomy which occurred in the Peterborough Infirmary. The writer of the introductory remarks, alluding to the risk of contraction of the opening after this operation, says: "What the result of suturing the edges of the opening in the manner adopted by Dr. Walker may prove remains to be seen. It is important that the result should be recorded." I now give the result. The patient was operated upon on May 18th, 1893; she died on May 20th, 1895; in the interval she looked after her family and assisted to maintain them by going out washing, &c.; she remained perfectly free from symptoms of obstruction to the passage of food from the stomach, dying from the effects of secondary growths which formed in the lower part of the abdomen and elsewhere. I adopted the same method in a case in which I operated on Sept. 3rd, 1894. The patient made an excellent recovery, dying on Oct. 30th, 1895, with secondary deposits in the liver and elsewhere, having been free from sickness and able to eat solid food without discomfort from the time of the operation. Post mortem the artificial opening between the bowel and the stomach was found quite patulous, admitting my forefinger up to the second joint. The specimen is now in the Pathological Museum of Cambridge. The perfect result in these two cases must, I think, be partly, at least, due to the method of suturing the margins of the openings before approximating them, described in the report of the first case in your columns. I am, Sirs, yours obediently,

THOMAS JAMES WALKER.

Westgate, Peterborough, April 21st, 1896.

*** We are indebted to Dr. Walker for this important addition to the notes of the case which was published in the Mirror of Hospital Practice. Our records are much increased in value by such contributions. That they are required is proved by the hesitancy which some physicians still have in recommending this operation at the right stage even in suitable cases. We congratulate Dr. Walker on the success of his operations. The method of suturing in these cases was as follows. The peritoneal and mucous edges of the opening in the stomach were stitched together with the idea of preventing contraction. The jejunum was opened and the edges were treated in the same way. Senn's plates were introduced, but before drawing the silk tight the peritoneum of the stomach and that of the jejunum near the posterior edges of the plates were united with silk, thus forming a semicircle of stitches guarding the opening posteriorly; the plates were then drawn tightly together, and an anterior semicircle of stitches was then inserted, thus completing the circle of guarding stitches.—ED. L.

"THE EFFECT OF MUSCULAR WORK UPON THE ALKALINITY OF THE BLOOD."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of April 11th Mr. W. B. Fotheringham has pointed out a contradiction which exists between the views of Dr. Haig on the above subject and those which were expressed by myself in an article published in THE LANCET of March 7th of this year. Mr. Fotheringham rightly insists that the credibility of Dr. Haig's theory of the cause of fatigue stands or falls with the correctness of his view as to the effect of muscular work upon the alkalinity of the blood. According to Dr. Haig the effect of such work is to increase the alkalinity of the blood. In my article the diametrically opposite statement was made. The evidence for the truth of that statement I did not give in detail, but as Mr. Fotheringham has raised the question as to what is really the effect of muscular work upon the alkalinity of the blood it is only right that I should furnish some proofs of the correctness of my statement. The subject has been investigated by Geppert and Zuntz[1] in rabbits. They found a reduction of alkalinity in the proportion of 106 to 248, or to more than one half the normal. Drouin, in the thesis to which I referred, obtained a similar result in rabbits. Pelper,[2] employing the titration method, confirmed these observations in the case of the human subject, the reduction he found being in the proportion of 182 to 218. The most recent and complete investigation of the subject, however, will be found in the article of Cohnstein.[3] He has clearly shown that the effect of muscular work is always to reduce the alkalinity of the blood. In vegetable feeders, for reasons which I have not space to discuss here, this reduction is more marked and lasts longer than in animal feeders, but even in the latter it can always be observed. I further stated that lactic acid was probably responsible for the reduced alkalinity. The evidence for this statement is that lactic acid is always found to be increased in amount in the blood after muscular exercise. Experimental proof of this will be found in the papers of Spiro[4] and of Werther.[5] In the light of the above evidence I think Mr. Fotheringham will agree that I was fully warranted in my assertion that the effect of muscular work is to reduce the alkalinity of the blood. I had at one time intended to refer to the relationship of some facts in the chemistry of the blood to the theories advanced by Dr. Haig, but I refrained from doing so in order to avoid controversy. I would only point out here with reference to the point under discussion: (1) that normal sweat is not acid and therefore cannot be regarded as a channel by which acid in the blood is eliminated; and (2) that it is possible that the immediate fall in the excretion of urea which Dr. Haig has shown to follow exercise is to be explained, in part at least, by the elimination of some of the nitrogen which should appear as urea in the form of compounds of ammonia, these ammonia compounds being required to neutralise the acids produced by the excessive muscular metabolism.

In conclusion, I would only say that no one is more sensible than myself of the value and importance of Dr. Haig's contributions to our knowledge of the physiology and pathology of uric acid, but at the same time I cannot help thinking that he is in error in regarding muscular work as tending to produce an increase in the alkalinity of the blood.

I am, Sirs, yours faithfully,

ROBT. HUTCHISON, M.B. Edin.

Physiological Laboratory, University of Edinburgh, April 16th, 1896.

THE BRONCHITIS KETTLE.

To the Editors of THE LANCET.

SIRS,—It is akin to presumption to adventure a word of criticism on Dr de Havilland Hall's remarks respecting our old and tried friend, "the kettle," in THE LANCET of April 18th, but surely it is impossible to "practically banish" it from the sick room. The whole of my experience is in its favour in those urgent laryngeal and bronchial cases of very young children, not to speak of the more grave respiratory affections of children of a larger growth, including the dread pneumonias of heads of families, where we are often at our wit's end with a temperature of 103° F. or more, respirations 62, and pulse 120 per minute. On such occasions my advice would be, Exclude the fresh (cold) air and saturate the air of the sick room as speedily as possible and keep it so. "Dry bronchitis" and pneumonias so frequently occur in dry, cold weather as to make the rest exceptional, and to exclude the kettle or its equivalent would be disastrous to the patient. Even chronic catarrhal conditions are frequently benefited by the inhalation of medicated vapour. As to poultices, I have no objection to the exhibition in such cases of an occasional turpentine stupe and a jacket of wadding or other heat retainer, but frequent and good feeding are essential if we are to maintain the patient's strength in the

[1] Geppert and Zuntz: Über die Regulation der Athmung. Pflüger's Archiv, Band xlii., p. 233, 1889.

[2] Pelper: Virchow's Archiv, Band cxvi., p. 337, 1889.

[3] Cohnstein: Über die Aenderung der Blutalkalescenz durch Muskelarbeit. Virchow's Archiv, Band cxxx., p. 332, 1892.

[4] Spiro: Zur Physiologie der Milchsäure. Zeitschrift für Physiologische Chemie, Band i., 1878.

[5] Werther: Pflüger's Archiv, xlvi., 63, 1890.

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presence of the increased tissue change accompanying the high fever and hurried respiration.

I am, Sirs, yours faithfully,

April 20th, 1896. ALEX. MCCOOK WEIR, M.D. R.U.I., &c.

To the Editors of THE LANCET.

SIRS,—I have read with much interest Dr. de Havilland Hall's instructive and highly practical article on the Bronchitis Kettle, Poultices, and Over-feeding in Acute Lung Affections, published in THE LANCET of April 18th. Writing on the question of poultices in the pneumonia of infants and young children Dr. Hall says "that the drawbacks inseparable from the use of poultices are not compensated for by the amount of benefit that can reasonably be expected to result from them," condemning especially the heavy linseed poultice. I have frequently seen that old-fashioned and simple contrivance, the hot bran bag, secure all the advantages of a poultice in such cases of pneumonia as alluded to without any of its disadvantages. It retains the heat for many hours if previously heated in the oven, and, being light, imposes no heavy weight upon the little patient's chest. Those of us in general practice have occasionally to respect the time-honoured beliefs of many of our patients, these beliefs in some cases—I do not say in this—having little foundation in fact; and to many of these patients who do not live "in mansions of the blest" the thought of "inflammation of the lungs" brings the thought of the application of heat to the chest inevitably in its train. To ignore this routine treatment in favour of a cotton-wool jacket involves no loss of prestige to "the doctor" if a successful issue result, but if the contrary be the case I imagine he would think it had been at least advisable to combine a line of treatment from which undoubted benefit accrues with a respect for the popular prejudice. Apologising for trespassing at such length,

I am, Sirs, faithfully yours,

C. HAROLD DYER, M.B., C.M. Aberd.

Clarendon-villa, Cleckheaton, Yorks, April 20th, 1896.

"THE NEW INFANTRY SWORD EXERCISE."

To the Editors of THE LANCET.

SIRS,—To an old swordsman cognisant of the fact that the questions at issue between the French and Italian schools have again and again been thrashed out to the *n*th term, THE LANCET of March 28th supplies some curious reading on the subject. Certainly no swordsman educated in the schools of Western Europe would dream of placing himself extended on the lunge in the hopelessly dangerous position depicted by your correspondent. In case of an unsuccessful lunge, if a parry of the ensuing riposte were deceived by a disengagement, anyone in the Italian position would be straight on his adversary's point without the slightest chance of recovery. Mr. Dent well points out that the Italian extension only has to be a little further exaggerated to bring the whole thing to a *reductio ad absurdum*. I know not why this over-extension should be dignified with the title of "Italian method," for in any school, if the fencer be foolish enough to so choose, he may thrust his head forward and over-extend himself. But expert fencers are prepared for this sort of thing and know how to deal with it. In actual warfare—i.e., on rough ground—the probability is that a combatant over-extended on the Italian method would lose his balance and fall over either to one side or the other. As to any previous straightening of the arm on the lunge, however much it may be needful to warn beginners to straighten the arm previously to extension in order to avoid the fatal habit of lunging with bent arm—and to such merely initial practice I presume Mr. Dent alludes—in advanced practice the extension of the arm and advance of the body and lower extremity merge into one combined movement. I can imagine the grim smile that would illumine the countenance of Roman Schweizer—if he were still living—or that of any other great swordsman of the last forty years as he exclaimed, in reference to this wonderful extension: "That is just the position in which I should like to see my adversary so as to knock his head all to little pieces." When the members of the British army have perfected themselves in the Italian practice, by all means let them send another invitation to "Point du Jour," and ascertain whether they can lower the magnificent record of the French fencers exhibited on the occasion of their last visit to Islington.

I am, Sirs, yours very truly,

April 20th, 1896. GEORGE BARRACLOUGH, M.R.C.S. Eng.

"THE QUESTION OF MEDICAL DEFENCE."

To the Editors of THE LANCET.

SIRS,—Your correspondent, Dr. L. Drage, advocates the absorption of the Medical Defence Union by the British Medical Association solely on the ground of economy. If the Medical Defence Union were living up to or exceeding their receipts this might be a reasonable plea, but when the financial statement contained in the annual report shows there was a balance left for the year of £316, which, added to the balance of £325 remaining from the previous year, makes a total of £641 in hand, this cry for economy is manifestly a false one. The main object of his letter is to endeavour to make the British Medical Association a gigantic trades-union for the medical profession by compelling every medical man to join the Association, and then will come the tyranny of the few over the many. I admit there may be occasions when medical men ought to join together and stand firm for their just rights, as they are doing at Cork, Lincoln, Portsmouth, and other places, but they know well what they are fighting for and are continually in counsel together. But to propose that the whole medical profession are to be ruled by the clique that forms the Council of the British Medical Association is most objectionable. The Medical Defence Union is doing its work well and to the satisfaction of the members. As I said at the annual meeting, why not leave well alone? The president, secretaries, and the solicitors seem to thoroughly understand the special work required of them, and surely a subscription of 10*s.* a year is little enough to pay to insure yourself from false charges and the worries of a lawsuit. Mr. Felce stated that the name of the Medical Defence Union was sufficient to stay an action very often, and, if so, why alter it? I heartily thank you, Sirs, for the able articles in which you have opposed the absorption of the Medical Defence Union into the British Medical Association, and I believe this is the general opinion of the members. Let the last annual report of the Medical Defence Union be well circulated among all members of the profession and many more will be glad to join such a successful union.

I am, Sirs, yours faithfully,

Highbury, April 20th, 1896. GEORGE T. KEELE.

MICROSCOPICAL EXAMINATION OF PLACENTAL TISSUE.

To the Editors of THE LANCET.

SIRS,—I remember a case which impressed me somewhat at the time it occurred and which may interest some of the readers of THE LANCET.

When I was attending the lectures on midwifery at St. George's Hospital my father directed me to ask the curator of the museum to examine the substance which passed from the bowels in the case of a woman who had married about two years before. Instead of being confined as was expected at the usual time nothing occurred, but she remained with all the symptoms and signs of pregnancy. After several months this material from the bowels began to escape, but the question whether it was or was not placenta was not decided by our curator, good microscopist though he was.

The end of the case was that one night my father bade me be ready early before lecture to call in Park-lane and make a post-mortem examination. I did this and found a fully developed infant in the abdominal cavity and the remains of a placenta adhering to the intestine. It was clear that the substance which had been passed before death was placental tissue. I am afraid that the microscopical examination of placental tissue at almost all stages is not as conclusive as one would wish or can claim for it.—I am, Sirs, yours, truly,

West Kensington, April 14th, 1896. ROBERT LEE.

VENTRO-FIXATION.

To the Editors of THE LANCET.

SIRS,—*Apropos* of your report of the discussion on Ventro-fixation at the British Gynæcological Society on the 9th inst.

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one is very much struck with the great diversity of opinion as to the result and consequent advisability or otherwise of performing the operation. It appears to me that the great cause of this disparity of results is due in a large measure to the fact that most, if not all, of the operators speak of retroflexion and retroversion as one and the same disease requiring the same treatment. It is easy enough to understand that if one hangs up to the abdominal wall a retroverted uterus a practical cure may be expected; but very different indeed is the case with a retroflexed uterus, for here one has a flexion as well as a prolapse to overcome; therefore, it follows that relief is afforded so long, and so long only, as the tension between the fixation point on the abdominal wall and the attachment of the posterior wall of the vagina about the sphincter vaginæ is sufficient to straighten the flexion; hence it is that failure follows some operations from the first and others at various periods. It would be interesting to know the proportion of failures from operations undertaken for retroversion as compared with those undertaken for retroflexion.

I am, Sirs, yours faithfully,

Peckham, April 19th, 1896. ROBERT HUGH HODGSON.

1828—A PALEOLITHIC FRAGMENT.

To the Editors of THE LANCET.

SIRS,—In Chapter XV. of the very interesting Biography of the Founder of THE LANCET, published in your issue of April 11th, the causes which led to the action for libel brought by Mr. Bransby Cooper, Sir Astley Cooper's nephew, against Mr. Wakley are reviewed. After the operation of lithotomy performed by Mr. Cooper had ended so disastrously the following epigram, which may amuse some of your readers, went the round of medical circles in the metropolis:

"When Astley's 'nevvy' cut for stone
His toils were long and heavy,
The patient quicker parts has shown—
He soon cut Astley's 'nevvy.'"

The verses, perhaps, fall into the category of neither good nor bad (the "sunt quædam mediocria" of Martial), but they appear to have been greatly relished in 1828.

I am, Sirs, yours faithfully,

April 20th, 1896. W. W. J.

"PUBLIC HEALTH APPOINTMENTS AND THE 'LOCAL' CANDIDATE."

To the Editors of THE LANCET.

SIRS,—As a medical officer of health of ten years' standing and an applicant for public health appointments in various parts of the country I can corroborate every word written by "Semper Vigilans" in THE LANCET of April 18th. I had some time since written a somewhat similar letter to his to draw the attention of the profession to this injustice to a large number of well-qualified members of the public health service. When a vacancy is advertised in the medical papers everyone naturally concludes that it is a *bonâ-fide* vacancy. Many men, misled by the appearance of genuineness, go to the expense of having testimonials printed and sending these and copies of their applications to a large number of members of town or district councils. These men are not aware that in 999 cases out of 1000 the post is virtually filled up before the advertisement appears and that the advertisement is put in the papers simply to comply with a by-law of the council which directs that the post shall be advertised vacant. A man's qualifications for the post, no matter how good they may be, are as nothing compared with a little local influence. Through these spurious advertisements men are dragged sometimes from long distances to some of the most outlandish places simply to be made fools of. Then, again, the advertisements frequently state that canvassing will disqualify, but this applies only after the advertisement appears and after the local man has been all round and secured his votes. In many cases, too, even after the appearance of the advertisement the local man goes on quietly with his canvass. The councillors wink at this, but let an outsider attempt the same thing and their righteous indignation (!) bursts forth in an instant and knows no bounds. To prove what I say I will give only one example from among many that I know of personally. This example is by no means an isolated one, for such things are of almost daily occurrence.

An advertisement appeared in the medical papers last autumn for a medical officer of health to the rural district council of ——shire. Eleven men applied from all parts of the country, with, of course, the inevitable "local" man. *There was no selection of candidates.*

Candidates were told in the advertisement to attend and ten of us did. The outsiders were men with good public-health qualifications—D.P.H., B.Sc., &c.—and their experience of medical officer of health work extended from one to ten years. The local man was almost unanimously appointed. Now this I consider a gross injustice to the ten outsiders, who were trusting to their qualifications for the post and were expecting to be judged on their merits. The payment of third-class railway fare does not compensate a man for the loss of a day's work, much less for the annoyance of being fooled. Then, again, it is an injustice to the ratepayers of the district. The cost to the ratepayers of the rural district named in this case was about £10, a totally unnecessary and unwarrantable expense to them. In my opinion it would be far more honest either to not advertise at all or to add a postscript to the advertisement stating that there is a local candidate in the field. Surely one has a right to ask for common-sense and justice to be exercised in all cases of this kind. This injustice and many others to which we have at present to submit are potent reasons why the supervision of the nation's health should be in the hands of men who are State appointed instead of being in the hands of men appointed by any little local body who have failed to grasp the importance of the duties they have undertaken to perform. Trusting that this matter will be thoroughly discussed, I am, Sirs, yours faithfully,

April 21st, 1896. DECENNIUM.

VACCINATION: A SUGGESTION.

To the Editors of THE LANCET.

SIRS,—As small-pox now appears to be so prevalent in many districts, and so many people evade the law, I think if boards of guardians, instead of appointing a public vaccinator for a district, would allow parents to take their children to the medical man of their choice, the board to pay for each successful vaccination the sum of 2*s*., there would not be any excuse for parents failing to fulfil the vaccination laws. I always vaccinate free all children whose births I attend and never now find any opposition from the parents.

Yours faithfully,

April 21st, 1896. VACCINATOR.

THE BATTLE OF THE CLUBS.—XXVIII.[1]

(FROM OUR SPECIAL COMMISSIONER.)

(Continued from p. 1026.)

WALSALL:—FORMATION OF A MEDICAL UNION.—THE MEDICAL PROFESSION AND THE FRIENDLY SOCIETIES.—TRADE AND MEDICINE.—THE FAMILY CLUBS.—WOMEN'S PUBLIC-HOUSE CLUBS.

THE Battle of the Clubs is no new cry in Walsall. It is a subject which has attracted the attention of the public and the profession for many years. There have been any amount of disputes, public meetings, discussions, controversies

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Aug. 24th, 1895, Brussels; (2) Aug. 31st, 1895, Brussels; (3) Sept. 21st, 1895, Portsmouth; (4) Sept. 28th, 1895, Portsmouth; (5) Oct. 5th, 1895, Eastbourne; (6) Oct. 12th, 1895, Lincoln; (7) Oct. 26th, 1895, Lincoln; (8) Nov. 2nd, 1895, Grimsby; (9) Nov. 9th, 1895, Bexhill-on-Sea; (10) Nov. 16th, 1895, Hull; (11) Nov. 23rd, 1895, Hull; (12) Dec. 7th, 1895, York; (13) Dec. 14th, 1895, Northampton; (14) Dec. 21st, 1895, Fermanagh Medico-Ethical Association; (15) Dec. 28th, 1895, Northampton; (16) Jan. 4th, 1896, Birmingham; (17) Jan. 18th, 1896, Birmingham; (18) Jan. 25th, 1896, Club Practices in Rural and Mining Districts; (19) Feb. 1st, 1896, The Formation of a Provident Medical Association at Folkestone; (20) Feb. 8th, 1896, The Manchester Medical Guild and Medical Aid Associations; (21) Feb. 15th, 1896, The Leicester and Leicestershire Provident Dispensary; (22) Feb. 22nd, 1896, The Organisation of the Profession at Leicester; (23) March 7th, 1896, Loughborough: Local Efforts Defeated by Consultants from Neighbouring Towns; (24) March 14th, 1896, Medical Aid Societies in Small Heath; Medical Clubs at Stockport; (25) March 21st, 1896, General Meeting of the Profession and the Formation of a Union at Nottingham; (26) April 4th, 1896, Nottingham; the London and Manchester Industrial Assurance Company, Limited; the Public-house Medical Aid Clubs; United Action at Lincoln; (27) Leicester and Wolverhampton; a Hastings Dispensary wound up.

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in the press, and even lawsuits on the subject. The principal cause of the quarrel was the formation of the Walsall Amalgamated Friendly Societies' Medical Association, now more than ten years ago. The medical men in the service of the various benefit societies at that time were naturally not a little annoyed to find that the members they were in the habit of attending in their own surgeries would be taken away from them and placed under the care of the stipendiary physicians the association was about to employ. The organisers of the movement, however, persuaded the members of the friendly societies that it would be much better if they had a medical officer who would be exclusively at their service. They said all they could against the old system, so that when the association began its work there was no disguising the fact that it was run to the detriment of the local practitioners. The latter on their side did not fail to show a marked aversion to the newly-formed institution. Not a few members of the friendly societies were pained to find that the medical attendants to whom they had been accustomed all their lives no longer recognised or saluted them. Many members hesitated to join the association; they felt that if it failed they could expect but small mercy from their former medical men if they were forced to return to the old system. Thus the formation of the Friendly Societies' Medical Association set up a state of enmity between a large section of the community and the local practitioners. So marked was this unhappy state of affairs that when it was proposed to establish a similar institution in the neighbouring town of Bloxwich the president of the Walsall association warned the friendly societies of Bloxwich to be very careful and not to proceed further with their scheme unless they were sure of success, as they could not expect much kindness from the local practitioners if, after acting against the interests of the medical profession, they were to fail in establishing their association. As a consequence of these hostile feelings the patients of the Friendly Societies' Medical Association did not care to call into consultation local consultants, and therefore sent to outlying towns for consultants, and this entailed much extra and unnecessary expense. The same argument applied to cases of emergency when the members of the association wished to call in a private practitioner and yet feared to do so. Under these circumstances the association found itself in difficulties. It had not many members, and to increase the number of members it tolerated all manner of abuses. Rich persons were allowed to join, and some laxity was shown with regard to the granting of medical certificates to malingering members. If the medical man, as a matter of conscience, refused such certificates complaints were lodged against him, he was brought up before the committee, and the latter, instead of supporting him in the execution of his duty, inflicted a reprimand. "Anything to oblige" was the policy they enforced on their "paid and humble servant" the medical officer. One of the Foresters' Courts, "Garibaldi," however, complained through the secretary of the court of the excessive amount of sick allowance that had been paid to the members. Another club also protested; members were constantly ill when they wanted a holiday or were out of work. The clubs therefore complained because medical certificates were too easily granted. On the other hand, if the medical officer showed a little independence and refused a certificate when he saw that it was not really required the disappointed member at once sought, and often with success, to form a party which acted against the medical officer, created imaginary grievances and sometimes even obtained his discharge.

In respect to the granting of medical certificates of illness I found at Walsall plenty of evidence that this, though a difficult matter in all practice, is fraught with more than usual perplexity for the unfortunate stipendiary medical servant of a friendly societies' dispensary. If a private practitioner refuses to give a certificate to a patient he may vex and even lose his patient, but nothing worse than this can happen. The club medical officer runs the risk of losing not one but all his patients. Yet if he gives certificates too freely he increases the calls upon the sick fund and thus again exposes himself to blame. His position is far from enviable.

In spite of these obstacles the Walsall Amalgamated Friendly Societies' Medical Association in the course of time managed to make considerable progress. Though this success was undoubtedly in a great measure due to the skill and devotion of the medical officers, these latter were not allowed to share in the profits that accrued. A letter dated Oct. 25th, 1892, appeared in the columns of THE LANCET written by Dr. D. Riordan, who was medical officer to the association when it had only 1800 members. He then received £180 with the promise that the pay should be raised to £200 as soon as the Association proved a success. This was done in the course of a year, but no further advance was ever granted, though the number of members ultimately reached the figure of about 4500. The adults paid 3*s*. 6*d*. per annum, the juveniles 2*s*., and out of this sum the medical officer only received 10¾*d*. It is not surprising that Dr. Riordan gave in his resignation. Dr. Riordan found that he lost much time in attending to chronic cases, or to malingerers, or to persons who came simply for the purpose of obtaining a little instruction and seemed to imagine that because they paid 3*s*. 6*d*. a year, of which the medical officer only received about 10*d*., they had the right to come and question him on scientific or health topics whenever they felt themselves studiously disposed. As a result the medical officer had not sufficient time remaining to attend properly to the serious or genuine cases of illness. Then there was always a tendency on the part of ignorant, inexperienced committee men to become tyrannical. They would take up all complaints and think they were showing their zeal by abusing the medical man. It is true that, in time, the committee realised the error of their ways and made inquiries before they summoned their medical officer to appear before them. As these committee men are, for the most part, workmen who only earn from thirty to forty shillings a week, they look upon the £3 or £4 a week given to their medical officer as a princely income and that no service can be too great in exchange for such a large sum. Yet some of their members are in receipt of much larger incomes. A town councillor for instance, belongs to the Friendly Societies' Medical Association. He pays 3*s*. 6*d*. a year for himself, 3*s*. 6*d*. for his wife, and 2*s*. each for his children. He drives to town in a carriage. He owns house property to considerable value, employs many workmen, and makes a large income. On one occasion he had a dispute with the medical officer of the association, so he took his sick child to see a physician at Birmingham. Then he brought back the prescription and expected the Walsall Association to make up the medicine free of charge.

A great reform would be accomplished if medical aid was given only to the *bonâ fide* full members of the friendly societies. But the canvassers of these societies do not confine their action to the *bonâ fide* members. They include in their canvass the wives of members, the relatives, and perhaps even the mere friends of the real member. All these latter are brought in only for medical benefits. Therefore it is very easy to get on the medical officer's list of a benefit society, for it is not necessary to join the benefit society in any other respect than that of paying the medical aid subscription. Consequently when people find that their medical attendant charges them the ordinary fees they complain, threaten to join a friendly society, and this threat is often realised. The medical aid organisations are spreading all over the country, breaking new ground every day, and, if we note what the effect has been in Walsall, it will not be difficult to realise that, unless the profession are able to resist this movement, medical men will soon be crushed and driven down to a much lower social stratum. The change that has come over Walsall is very marked. The big practices that existed some twenty years ago and were worth from £1000 to £2000 a year have now gone. When the owner of such a practice dies the practice dwindles, it cannot be revived. If a medical man has no private means or a rich wife to help him he can no longer keep up the old social status of the profession.

Apart from the friendly societies, there are any number of insurance companies at work here which organise medical aid. As a result there are entire streets where not a single private patient can be found. These streets are never visited by other than club practitioners. Two-thirds, if not three-quarters, of the population of the town are members of some sort of medical aid society or else become hospital patients when ill. The result is that the great majority of the practitioners at Walsall must have clubs or starve. Now club practice must be a question of quantity, not of quality, and, if club practice is the main source of income, then an immense number of patients must be seen in an incredibly short time. This again must lead to errors of diagnosis,

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prejudicial to the preservation of public health. In no case is the ability or the qualifications of the medical men who committed these errors subject to any sort of question or doubt. No one is to blame, the blame rests entirely with the system which does not give the medical man sufficient time to examine the patient. A Walsall practitioner informed me that, when doing similar work at Birmingham, he was allowed just one minute to see club patients, and if he exceeded the regulation minute a loud knocking at the surgery door brought the consultation to a close. These are facts on which it is impossible to lay too much stress, for they concern the public at least as much as the profession. They clearly show that if medical men are driven to rely on club practice alone the public will and must suffer. The clubs themselves do not seem to understand that the greater the number of members the worse must be the medical attendance, unless the number of medical officers employed is proportionally increased. At Walsall the Friendly Societies' Medical Association paid their medical officer the same salary when he had to attend to 4000 members as they had given him when there were only 2000 members, and they even refused to allow an increased expenditure for cab fares.

Dr. Riordan was succeeded by Dr. Lynch, who certainly proved one too many for the friendly societies. First he spread terror in their ranks by ordering expensive drugs which they had never heard of before. When the committee complained he appealed to the members, quoted the rule which said they were to have the best medicines, and pointed out that he was obeying their own rules and this in their own benefit. Many members of the society rather approved of this sort of reasoning and when the committee compelled Dr. Lynch to leave some 1800 of the members followed him and established a Walsall Medical Association No. 2. Then the remnants of the old society attacked him for breach of contract because he had pledged himself not to establish a rival practice in the immediate neighbourhood. To this he objected that association No. 2, being composed of members of association No. 1, could not be considered as a rival body. He had as much right to serve the one as the other; both had been his employers. Association No. 2, it is true in the course of time became, practically speaking, a private club in Dr. Lynch's hands; and though he had to pay damages to association No. 1, nevertheless the advantage of independence and of managing his own affairs amply repaid the cost and loss of the lawsuit. This split has taught wisdom to the Walsall Medical Association No. 1. Their present medical officer has not the same grievances as his predecessors. He declared to me that during the two years he had been in their service he had had no complaints to make; he had received no reprimand, and there had been no disputes. His salary had been increased from £168 to £180, and he was under the impression that it would continue increasing as the number of members augmented. Actually there were 2588 members. During the year ending 1895 he had paid 6115 visits and given 13,025 consultations—total, 19,140. For this enormous amount of work he had been paid £168, or on an average a little under 2*d*. per visit or consultation. Even if to this we add the value of house, taxes, gas, &c., provided for the residence of the medical officer, it scarcely brings the average up to more than 2½*d*. per patient seen. Of the 3*s*. 6*d*. paid by adults and the 2*s*. by juveniles as their annual subscription, the medical officer received 1*s*. 1*d*. Of course, when there is such an amount of work for so little pay it is not surprising that complaints should arise of neglect.

Of late years there has been a great increase in Walsall of what are called family clubs. These are to a large extent organised by the collectors of the insurance companies. The collectors of the ——— Company are particularly active in this respect, though the superintendent of the company is altogether opposed to the practice. Nevertheless, most of his agents while collecting the premiums for life insurances persuade the people on whom they call to join the private family club of some private medical man. The general charge is 4*d*. per week for the whole family. The medical man has to give the agent a commission of 25 per cent. and the first four premiums paid. It ominously and often happens that when the family has paid for four or five weeks or so they quarrel with the agent, so that the medical man gets nothing at all. Then the canvasser will set some other agent on to the same family, who in his turn pockets four weeks' premiums; thus the people pay for eight weeks, and during that time the medical officer must attend them if they fall ill though he receives nothing whatsoever for his services. Then, again, the rule is that the family must be in good health when insured, but it is suggested that if there is anybody ill the agent takes them all the same, makes them pay a month's subscription, antedates the receipt, and declares that they had joined before the illness commenced. Thus the agent pockets at once his 1*s*. 4*d*., and the medical man has a sickly family thrown on to his hands which he must attend for 4*d*. per week, minus 25 per cent. or a penny per week commission to the agent. Nevertheless, if this is worked on a commercial basis with the aid of assistants qualified and sometimes not qualified and done in a wholesale manner a comparatively large income can be obtained. Of course it means cheap medicine, scant attendance, and occasional errors of diagnosis, due not to ignorance, incapacity, or obscure symptoms, but simply to the excessive hurry of such work. There is one Walsall medical man in particular who has an enormous practice of this description. Some of his colleagues assured me that it was their conviction that he must have in all something like 10,000 club-members on his books. During the influenza epidemic the road in front of his house was blocked with patients and their friends trying to gain admittance into his surgery. On calling upon this gentleman I found that he had little or nothing to complain about. He maintained that a sort of wage limit, so far as family clubs are concerned, had been established. No family living in a house of a yearly rental exceeding £14 or £15 was accepted. Then he rejected persons suffering from chronic illness and would not attend to accidents or confinements. He further declared that, for the principal clubs, members were examined before they were admitted, and finally maintained that Walsall was "a town of daily bread," so that it was impossible to obtain the usual medical fees from such a population.

There are also in Walsall a number of private individuals who run a variety of businesses with the aid of medical men. For instance, the Walsall Good Samaritan Medical Aid Society, established in 1879, is managed by a Mr. Brookes, who qualifies himself as a "life, fire, plate-glass, and accidental assurance agent." He has no less than six local practitioners in his service and collects 1*d*. per week per member or 4*d*. per family. Another ingenious individual combines the sale of mangles with the providing of medical aid in case of illness. The "Minerva" of Birmingham, which is also a private speculation, employs five medical men at Walsall; in fact, it seems as if the services of medical men are to be used as a bait for any sort of business, but the most scandalous of all are the public-house women's clubs. These are far worse than the slate clubs of Grimsby and the public-house "sick and annuals" of Nottingham. The principal object of several of these clubs is to provide for funerals; a gloomy subject for which drink is a natural antidote. In any case, and for fear doubts should be entertained as to the efficacy of such an antidote, a special rule provides that the members must drink. The printed rule of one public-house club says that the members of the society shall meet at the public-house in question every fortnight, and the members must then "pay sixpence contribution money and three halfpence for ale." Those who are in arrears are to be fined. I was informed that ninety women belonged to this club. They have thus guaranteed the publican a minimum sale of ninety tankards of ale once a fortnight. Those who do not attend have to pay all the same and the beer is served. Therefore those who are present drink not only their own share but the share of the absent members. This naturally leads to a great deal of drunkenness among these women. As one of the objects of these public-house clubs is to provide not only funeral expenses but medical aid, the medical officers attached have a choice supply of alcoholic patients. Considering the rule quoted above, there can be no doubt that they lend themselves to provoke the intemperance which causes the diseases they are subsequently called upon to treat. By these means women are enticed and encouraged to frequent public-houses. Under the pretext of thrift, armed with the plausible excuse of providing for a rainy day, they meet a crowd of boon companions in a public-house and egg each other on to drink.

Mr. Willmore invited all the members of the profession to meet so that I might relate what had been done in other towns and so that some effort might be made to form a medical union. Twenty-five invitations were issued and

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sixteen local practitioners were able to attend. Mr. Willmore opened the proceedings by explaining that this was but a preliminary meeting convoked for the purpose of seeing whether any sort of action was possible. Even if for the moment nothing very startling could be done, still it would be a good thing if the members of the profession could arrange to meet each other on certain days. This would help "to rub off the corners" and lessen much of the animosity and asperity which were so detrimental to the interests of the profession. At the new hospital, which would be completed in the month of May, there was a board-room where, if a medical society was formed, meetings could be held. There were many grievances to be dealt with. Clubs might be necessary, but touting was not necessary. Then there were the herbalists who had not the qualifications of dispensing chemists and yet they gave consultations, prescribed, and made large incomes out of the practice of medicine. Druggists were also very prone to prescribe, but if such abuses were to be abolished there must be cohesion among the members of the profession. Mr. Willmore then called upon me to address the meeting. After giving what information I could crowd into a short speech dealing with the grievances that prevailed and the remedies that had been attempted, I insisted on the necessity of forming at once a medical union to deal with ethical and economical questions. Some amusing though somewhat despondent speeches followed. One speaker thought union was impossible because ethics in Walsall were an unknown quantity and nothing could be worse than the actual condition of the personal relations between the local practitioners. The general tone of the speeches clearly showed how low the profession had fallen. There was a general cry of "stinking fish." One speaker complained that touting had been set up and organised by medical men who employed insurance canvassers and outbade each other by offering larger and yet larger commissions so as to secure the services of the best canvassers. Competition had become an excuse for every iniquity and it had stamped out all sense of medical etiquette. One practitioner explained how, on arriving at Walsall, he had stoutly refused to have anything to do with the clubs; then, finally, he took people at 10*s.* a year. The result was that about three persons joined his private club, but, as during the first three or four months they did not happen to fall ill, they concluded that they were paying too dearly, so they left him and went to an institution where the subscription was not more than 3*s.* 6*d.* a year. At last he found that he must do what all the other medical men did and take what clubs he could get at the terms currently paid. Nor would it be easy to ask the local practitioners to give up clubs that brought them in £100 or £200 merely on a question of principle. Whatever clubs one medical man might throw over other practitioners would gladly take up. Yet everyone acknowledged that club work was ruining private practice.

From all this it would seem as if the cause of unionism has but poor prospects of success at Walsall. This is not the case. The medical men who attended the meeting were suffering from angry feelings too long pent up. Having now at last had their say they felt wonderfully better. No prescription ever effected a more rapid cure. Practitioners who had not so much as bowed to each other for two years were now found cordially shaking hands, and after some little hesitation and some desultory conversation, with one abstention and no hostile vote, a resolution was carried that a committee of six members should be elected then and there for the purpose of taking the initiatory steps necessary for the formation of a medical union to deal with ethical and economical questions. The meeting also unanimously adopted a resolution expressing its thanks to THE LANCET for the service rendered in raising the whole question. The committee was elected by ballot and then the meeting adjourned. In subsequent conversations I found that some of the speakers who at first deprecated the idea of forming a union had become quite enthusiastic in the cause. It was pointed out that three of the medical men who had not attended were partners and therefore constituted but one firm, and their position was such that even if they did not join the union they would not act against it. Others were the salaried officers of friendly societies and scarcely free to act, so that the number who actually attended and voted for the formation of the union was much larger than could reasonably have been expected for a first effort. The chances of success were, therefore, greater than had been anticipated, and it would be strange if with so fair a beginning good results did not accrue.

THE ASHANTI EXPEDITION.

(BY OUR SPECIAL WAR CORRESPONDENT.)

III.[1]

The Water-Supply of the Troops.

VARIOUS, indeed, have been the causes adduced for the production of malarial or coast remittent fever. For instance, some have suggested "planetary influence," others "want of elasticity in the air"; not a few have thought "withdrawal of elasticity from the human body" had something to do with it, whilst the majority believe the disease has its origin in decomposed organic animal and vegetable matter and general impurity of the water, the last of these coming in for the lion's share of professional suspicion. It was at one time thought that sulphuretted hydrogen gave rise to the complaint, even so celebrated a traveller as Humboldt to a certain extent favouring this idea; but various expeditions sent to the west coast of Africa since his time have in no way helped to solve the problem or done anything to satisfy us on the point in dispute. The ablest scientific researches, carefully conducted by medical officers sent out for the purpose of recording their observations, have one and all rather disproved than otherwise the accuracy of any single suggestion. Whatever may be believed about the admixture of salt and fresh water being capable of producing a special form of fever at the deltas of rivers, the same cause ceases to operate at any distance from the coast or at places away from the direct influence of the sea, such as at Ashantiland, where remittent fever of a virulent character exists probably in an endemic form the whole year round.

Recognising, however, the very great importance attached to a proper supply of good wholesome water for the use of our troops engaged on an expedition such as that to Kumasi, I took care to make a careful chemical examination of nearly all the sources—from Cape Coast Castle to Kumasi—from which a supply had been obtained, and with only two exceptions did I discover *en route* any positively bad water or see the fluid in such an impure condition that it could not, after boiling or filtering, have been partaken of by the men with impunity. Of the two places referred to where the water was qute unfit for use even after precautions had been adopted, one was at Yacumba on this side, and the other at Akusirem, on the further side, of the Prah. Moreover, I thought it best to corroborate my qualitative examinations by sending some specimen water carefully obtained from a river at the rest camp called Mansu to England, so that it might be subjected to a qualitative and quantitative analysis in THE LANCET Laboratory. This said sample, a very fair all-round specimen of what was drunk by the troops out there, has turned out to be quite usable after boiling, for, as the report from THE LANCET Laboratory says: "The water submitted for examination contained a marked amount of organic matter held in solution, yet it was less open to objection because there was no indication that these matters were of animal origin or derived from animal excreta. It was slightly turbid, containing a deposit which, on microscopical examination, proved to consist of vegetable débris. The sample only measured 10 oz., so that it was not possible to make a very exhaustive analysis. On withdrawing the cork a distinct smell of sulphuretted hydrogen was evident, proved by the blackening of a slip of lead paper introduced therein. The presence of this sulphuretted hydrogen, however, could easily be attributed to a reduction of sulphates during transit in a closed bottle by the vegetable matters held in solution, for the water in its original state does not appear to contain any trace of this gas whatever. The total amount of solid matter amounted to 11·9 grains per gallon. On ignition charring occurred and a smell was evolved of vegetable but not of animal matter burning. The reaction for phosphates in the residue was hardly perceptible. There

[1] Nos. 1 and 2 were published in THE LANCET of April 4th and 11th, 1896, respectively.

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was an entire absence of chlorides. The free ammonia amounted to 0·028 grain per gallon and the albuminoid ammonia, which came off very slowly, to 0·042 grain per gallon." The report concludes: "As might be expected in the presence of sulphuretted hydrogen, neither nitrites nor nitrates were to be found." These views correspond with those expressed by myself after examination of the water at the various rest camps, and must go a long way to show that the water-supply has not proved nearly so impure as was expected, and that the bulk of the water after boiling or passage through a filter might be partaken of without fear of unpleasant results.

At Yacumba, the first halting station, only some seven miles distant from Cape Coast Castle, the supply of water had to be brought to our camp from a sluggish stream some two miles distant from our camping ground. Its colour was of a reddish brown. Moreover, it was quite devoid of transparency and possessed a disagreeable fœtid odour. The rivulet ran through a sort of glen, and its bed was probably some thirty or forty feet below the higher land on which the native huts were erected. Into it several surface drains evidently emptied their contents by a common duct, which could be traced to and communicated with the native township above. Hence the source of native pollution could without difficulty be most easily accounted for. Chemical tests gave positive evidence of its impurity and clearly showed its unsuitability for either drinking or culinary purposes. Major Sinclair, R.E., lost no time in communicating these facts to the headquarters' staff, so as to avoid the use of it by the troops on coming up.

At Akusirem, another rest camp on the other side of the River Prah, matters were even worse. This halting place was selected by one of the colonial authorities, and the camp dwellings were erected by an officer in their employ. Of all the camp sites selected *en route* to Kumasi, this one without a doubt was the very worst selection. To commence with, it was approached and surrounded by a succession of wretched, dismal, offensive-smelling, malarial-reeking swamps. The site was very low, and, to crown all, possessed no proper water-supply whatever. True, on its northern side there existed a sort of mud hole containing a collection of dark-coloured, offensive-smelling fluid which by no stretch of imagination could ever be called usable water, for it consisted simply of drainage percolating through loose sand from an old plantain garden (very possibly a disused native burial ground) above it. To all tests it gave unanswerable results. When seen its impurity was recognised by the principal medical officer, and on his suggestion the desertion of the camp was determined on by the staff as soon as they had arrived on the ground; but this decision was arrived at some time after my own report regarding the character of the water and the other insanitary conditions of the *locale* had been telegraphed back by an officer. Why any delay at all should have occurred in deserting it after the receipt of that telegram by the executive remains yet to be explained, considering that two white officers were then very ill in bed with severe attacks of remittent fever. I am not prepared to say what definite position the civil medical profession held with reference to the military out there; but this I do know, that many of the surgeons in the employ of the colony (in fact, I was told so by them) looked principally for instructions issued by the head of their own department, and scarcely considered themselves in a position or at liberty to act under any other authority. There is a trite saying, "'Between two stools one is apt to come to the ground," and this is particularly applicable to military medical organisation. In the field there should be only one responsible head of the department—the principal medical officer, and his position should be unquestioned and his orders unhesitatingly carried out by the civil as well as the military element acting in concert under him.

Barracou village is situated higher than any of the rest camps this side of the Prah, being some 500 ft. above sea level. Its surroundings are free from objectionable swamps, while the water procured from a running stream near the native village proved excellent on examination. This place was a rest camp during the previous Ashanti War, but was not used as such in the later expedition. Its exclusion from the number of sites chosen probably arose from mileage considerations, the *locale* not dovetailing in with the requisite length of marches decided on. Be that as it may, Barracou is an excellent site for a rest camp and much more suitable from a sanitary point of view than Assin-Yankumasi, which had been selected in its stead, possibly because it is a few miles more distant from the Prah.

At Assin-Yankumasi the water was obtained from a stream, and although not quite so transparent as one could wish, it nevertheless gave negative results with nearly all the tests employed except Nessler's solution, which showed a slight colouring of the fluid when compared with a tube full of distilled water.

During my stay at the Prah River the Pasteur-Chamberland filters, six in number, were brought up. Their arrival was hailed with considerable satisfaction, because it was hoped that the officers and men who had up to that time been forced to drink (previously boiled) river water would now be supplied with a purer and much more wholesome fluid. Being present when their component parts were being put together by the man in charge I had an opportunity of judging of their suitability for the rather rough use incidental to a campaign like that on which we were then engaged, and I must frankly admit that the parts seemed to me to be too numerous and the internal fittings too complicated and likely to get out of order for the rough-and-tumble work to which they were inevitably to be subjected.

To begin with, each of the large galvanised cisterns, supposed to contain many gallons of water, is supported by three long, round, half-inch metal legs. More than one of these bent under the superimposed weight when the tank had been filled with water, or perhaps sank deeper into the earth than its two fellows, and by reason of the list given to the cistern was apt to throw the whole apparatus out of working order. Then, again, there was considerable delay as well as difficulty experienced after getting the bougies into position to secure the lids properly. The rubber bands did not appear to fit in the grooves as neatly as they might be expected to do. Vulcanised material, as everybody knows, perishes or becomes unfit for use very soon after exposure to air in a tropical climate, and its adaptability for the exclusion of air in an apparatus of this kind was not by any means satisfactorily shown as far as I could see. It took some hours before one of these filters could be brought into anything like working order, and when this was accomplished the supply of filtered water fell considerably short of what was expected. After some trials it was found absolutely necessary to do away at once with the useless metal tripods. A more solid foundation for the cisterns in the shape of wooden trestles was supplied. The metal tanks were placed on these supports and relays of natives requisitioned to turn the handles and keep the supply of water up, but in spite of all efforts the result was unsatisfactory, only some forty gallons of filtered water being the result of over six hours' work. Naturally such a result was extremely disappointing. During my stay of some days at the Prah these several filters were more than once taken to pieces—overhauled and carefully cleansed—in order to ascertain if any accumulation of dirt or débris interfered with the working of them, but all to no purpose in effecting any decided improvement in their efficiency, for instead of turning out a sufficient supply of purified water for some 300 or 400 soldiers, as they were expected to do, they failed to afford a third of the amount required for the daily consumption of our men. The result of this failure was that an order had to be issued by the headquarter staff that all the filtered water was to be reserved for the use of the sick, and the healthy had once more to return to the drinking of what was collected by the riverside. Not only were our filters at Prahsu breaking down, but we learnt that at Fosu, where two filters had been left, the authorities were complaining of their inefficiency. "One worked very indifferently and the other not at all." Need I add what a disappointment this proved to us all, who had been led to expect so much from the Pasteur-Chamberland filter? An expert who had been summoned from Cape Coast Castle with a view of setting matters right told me they were larger cisterns than he had been accustomed to. If this be so or not I am unable to say; but all I can vouch for is that they in no way accomplished what was expected of them. The principle (hydraulic pressure) upon which the Pasteur-Chamberland filter is constructed is unquestionably a good one. No one having seen the apparatus in operation can doubt this for a moment. However dirty or discoloured the water may be on introduction, whatever quantity is passed through the filter comes away as bright and clear as possible, every impurity is arrested and may easily be seen and scraped off the surface of the bougies when the lids are removed and the candles are unscrewed for the

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A waterfall in a pretty glen near the Monsi Hill, where the water was tested by the Special Correspondent of THE LANCET whilst on the road towards Kumasi. The spring was found situated just abreast of the tent shown pitched near the centre of the illustration. To the left the stream is represented running down to the Kwisa camp, the tops of all the trees in the background being hidden in a dense white fog.

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purpose of cleaning them. The failure that occurred out in Ashanti was, therefore, one concerning quantity more than quality, and a little more care in their construction may possibly obviate this defect in the future. All use of vulcanised rubber should be avoided, and, if it were possible, automatic rather than manual power should be employed for their operation. In war time, especially during the forward march of troops, it may be rather difficult at times to secure sufficient men to turn the handles of these filters, which manipulation must be provided for if a proper supply of pure and wholesome water has to be kept up. Speaking one day to Surgeon-Colonel Taylor about the unsatisfactory working of the filters that had been supplied for the use of the expedition, he happened to remark that "he had noticed a small narrow stream crossing the road about half a mile out of camp and had seen natives collecting water thereat," and "he wondered whether this was of better quality than that obtained from the river," and "could I trace it up to its source?" Of course I consented, and left him with the determination of searching for the spring of this rivulet as soon as I could. The opportunity for starting on this search presented itself very early the following morning. About 4 A.M. I left camp and came upon the stream in question about three-quarters of a mile on the Barracou road. It was scarcely six inches in breadth. Tracing it in a north-north-east direction for some half a mile or so I found it divided, one branch, the north-east portion, running to the River Prah, while the other coursing but a short distance seemed to be joined by another little rivulet down which water very clear and bright seemed to be coming from a south-south-east direction. I had much difficulty from the immense amount of tangled undergrowth that lined its banks in tracing this stream up to its source, some four hours being occupied in the endeavour, but its spring was at last discovered and I had the satisfaction of bringing back to camp a bottle of the clearest and best water that was ever secured *en route*. Surgeon-Colonel Taylor was delighted with the pure supply that I had through his hint been enabled to discover. From this time no more river water was required during our stay at Prahsu.

Across the Monsi Hill I had another opportunity of testing a spring of really excellent water, which coursed down and supplied the troops at the rest camp of Kwissa (vide illustration).

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester and Salford Sanitary Association.

ON Sunday evening a sermon was preached in the Manchester Cathedral on behalf of the above association by the Rev. C. V. Gorton, Vicar of Morecambe. His subject was "The Laws of Health, the Laws of God." He said that in the Scriptures the word cleanliness was synonymous with holiness, and that the Mosaic priest was really the medical officer of health. The old Greeks, whose aim was the physical perfection of the man, deemed sanitary law a portion of the moral code. He quoted Xenophon as giving one of the best descriptions of the officer of health: "When people are sick, physicians cure them; they are menders of old garments. But your care is to be of another kind: it is for you to prevent the army from becoming sick." (If our military authorities looked at matters more like Xenophon, there would be less cause for discontent in the Army Medical Service.) "It was strange," he said, "that in the early days of the development of Christianity and after the fall of the Roman Empire we looked in vain amongst European peoples for that regard for the law of God. The Church prayed, 'From plague and pestilence, good Lord, deliver us,' but was content to remain unmindful that national judgment was a natural consequence of national negation of the law of God." He reminded his hearers of Lord Palmerston's reply to a deputation requesting the appointment of a day of humiliation and prayer on the outbreak of cholera about the middle of the present century from the neglect of sanitary law: "When man has done his utmost for his own safety then is the time to invoke the blessing of heaven to give effect to his exertions." It was, he said, a good thing that the Manchester Sanitary Association was doing its best to improve all this. "It would be still better if the society were so supported that it could inaugurate branches in every town in the country which would investigate the physical causes of disease, note the rise of epidemics, educate public opinion, and organise the working classes to demand pure air and pure water, and not only a grave to be buried in, but sufficient space in which to properly live." It might have been as well if he had suggested to the "working classes" that when they got their pure air they should not do all they can, as is too much the case at present, to pollute or exclude it from their dwellings.

Our Milk-supply.

Under the auspices of the Milk Dealers' Protection Society of Manchester, Salford, and Surrounding Districts, a lecture was given on April 20th by Mr. W. Cox on Milk as Food in relation to Health. The chair was taken by a member of the city council, who said "the association existed for the purpose of protecting from undue interference a trade in an article that was indispensable to health. It had no sympathy with any milk dealer who violated the rules that were necessary for safeguarding the public health." He considered that the association was right in suggesting that the work of the corporation inspectors should not be confined within the city, but should be extended to the shippons and dairies from which the milk came; and in this we should all agree. Mr. Cox in his lecture did not speak from the standpoint of the man of science, and he would apparently laugh to scorn the patient labours of the bacteriologist, for he is reported as follows: "The idea that the germs of disease were spread by milk he described as 'a craze.'" Save in exceptional cases, in which the germs of scarlet fever or typhoid fever had been directly communicated to the milk by the persons manipulating it, milk had never proved injurious. These are pretty considerable exceptions to start with. He then contended that the facts disproved the idea that the "tubercle bacteria" could be communicated from the affected animal through the milk to the consumer of the milk. May it be inferred from this that Mr. Cox would advise the giving of milk from tuberculous cows to delicate children so long as the poor creatures were able to supply it? "He believed that such infantile diseases as were often attributed to milk were due either to the lack of milk or to the insanitary condition of the houses of the poor; and he said that the healthiness of the children of farmers and dairymen was the best answer to those who said that milk was not healthy." He believed that greater attention should be paid to the periodic inspection of shippons and dairies but apart from that "everything that was necessary was at present one to ensure the purity of our milk-supply." The retail dealers are, of course, immaculate and always take the most scrupulous care to avoid contamination by any even of those "germs" which Mr. Cox holds in such contempt. It is a pity that anyone should discourage the efforts made to secure good quality and purity in a food of such importance as milk, and especially that such discouragement should come from a member of the veterinary profession.

Ancoats Healthy Homes Society.

This society, of which Mr. Aldred is president, gave the last lecture and entertainment for the season on Thursday evening last, when Mr. W. P. Montgomery, assistant surgeon to the Ancoats Hospital, addressed about 800 people on Exercise and Training. The primary object of the society is to give instruction of a useful kind, and this work has been carried on for several years amongst the poorest people of the working-class district of Ancoats; but in order to bring together those who without some such attraction would not attend the additional bait of musical performances, between which the lectures are sandwiched, has been found very successful. The young people in Manchester as elsewhere are open to this influence, and these combined attractions have been successful in securing an average attendance of 650 people at the twenty-nine lectures given during the last session. The lectures and the services of the musical helpers are entirely gratuitous and admission to the entertainment is free. Useful information is given and something done to brighten what to most of us would seem the dull monotony of the daily life of these poor mill hands.

The Manchester and Salford Reformatory.

The fortieth annual report of this institution contains a very important little point. Referring to the falling off in the number of admissions, the report says that if this were due to a diminution of crime it would be a subject for congratulation, but "the governors desire deliberately to place

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on record their conviction" that it is due to the magistrates committing boys of twelve and over, who have been convicted of crime, to industrial instead of to reformatory schools. The governors think this probably a mistake as regards the boys themselves, and "surely it is a wrong to the other inmates of the industrial school who are not criminals, and some of whom are committed for very different offences, that they should be compelled to associate with convicted thieves." They think the two classes should be kept separate, and earnestly commend this subject to the careful consideration of magistrates and of all interested in the reformation of juvenile criminals.

The Medical Guild.

The quarterly meeting of the Medical Guild was held on April 14th in the Victoria Hotel. The chairman (Alderman Walmsley, J.P.) presided. A discussion took place on midwives registration and afterwards on professional advertising, and the following resolutions, previously passed by the council of the guild, were adopted:—

I.—As regards midwives registration:—

1. That it is the duty of the profession to defend and maintain the Medical Acts.
2. That it is advisable that constructive legislation (defensive is understood) upon the midwives question should be undertaken by the medical profession.
3. That legislation should follow the lines of local registration and sanitary regulations.
4. That the minimum training should be six months' obstetric nursing in a public lying-in hospital or union infirmary, where the pupil shall be present at not less than thirty labours, in every case under the direct supervision of a registered medical practitioner.
5. That no examination should be required and no diploma issued, the sole guarantee of proficiency to act as a midwifery nurse being the certificate from the medical officer of the lying-in hospital or union infirmary, which enables her to be placed upon the local register.

II.—Professional advertising:—

1. While appreciating the legal grounds on which the verdict in Kingsbury *v.* Hart was given, the council expresses confidence in the editor and reference committee of the *British Medical Journal* in their action in the matter referred to in the libel.
2. That this council is of opinion that the evidence having reference to the ethical aspects of the case, Kingsbury *v.* Hart, indicates the distinct necessity which exists for the question of medical ethics being placed upon a firmer basis and dealt with in a manner satisfactory to the profession.

In dissenting from the views expressed by the plaintiff's witnesses in this matter the council suggests the desirability of more stringent and definite rules of medical ethics being authoritatively laid down for the guidance of the profession at large.

April 21st.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh University: New Regulations for Graduation in Medicine.

THE Edinburgh University Court at its meeting last week approved the following resolutions regarding the requirements for degrees in medicine under the new ordinances:—A. Every candidate shall be required to attend in addition to present requirements: 1. A course of instruction in mental diseases consisting of not less than six class-room meetings for lectures and demonstrations and ten meetings in the wards of a recognised asylum for the insane. 2. Post-mortem examinations in a recognised hospital for a period of at least three months, during which practical instruction is given in the methods of making post-mortem examinations and in framing reports. 3. A course of clinical instruction in infective fevers given at not less than twelve meetings in the wards of a recognised hospital where clinical instruction is given on cases of infectious diseases. 4. Instruction in diseases of the eye at not less than twelve class-room meetings and twelve meetings for clinical instruction in the wards of a recognised hospital or in a hospital and dispensary, the course to include efficient practical instruction in the methods of examining the eye. 5. A course of operative surgery conducted by the professor or a recognised teacher. B. Every candidate shall also be required to attend any one of the two following courses: 1. Clinical instruction in children's diseases at not less than four lectures and ten meetings for clinical instruction in the wards, together with four meetings in the out-patient department with attendances at post-mortem examinations. 2. Instruction in diseases of the larynx, ear, and nose at not less than six class-room meetings and twelve meetings for clinical instruction. In connexion with the above it was resolved that no fee should be charged for attendance on post-mortem examinations and clinical instruction in fevers; that the fee for operative surgery be £3 3*s.*; for children's diseases, £2 2*s.*; and for mental diseases and diseases of the eye, £2 2*s.* each. The court also received a report by a committee appointed to consider the question o mixed classes in connexion with the medical education o women, and agreed to require that classes shall not be mixed classes except on special cause shown. The court recorded its deep sense of the munificence of the gift of £20,000 left by the Earl of Moray, and determined that it should be called the "Earl of Moray's Endowment."

Milk Prosecutions.

At the Dunfermline Sheriff Court three farmers were convicted of selling milk which on analysis was found to have had from 13 per cent. to 21 per cent. of normal fat abstracted from it, and were fined from £2 10*s.* to £5 for so doing.

Hospital for Infectious Diseases for Berwickshire.

The east district committee of Berwickshire have resolved to erect a hospital for infectious diseases at Ayton. The hospital is to be an iron structure and is to cost about £1000.

Glasgow University.

The formal closing of the winter session took place on the 14th inst., though the classes in the medical faculty ceased at the end of March. The graduation ceremony was presided over by Lord Kelvin, and though the degrees conferred were for the most part in arts, divinity, or law, a few medical graduates were also to be found. The following gentlemen received the degree of M.D.:—W. C. Allardice, M.B., John Donald, M.B., J. C. Robertson, M.B., R. T. Marshall, M.B., the latter being awarded "commendation" for his thesis on "The Mild Malarial Fevers and their Microbes." Mr. D. G. Carmichael was "capped" M.B. and C.M., and the same degrees with "commendation" were conferred on Mr. J. M. W. Morison. After the ceremony the honorary graduates lunched with the Senate, and Professor Gairdner, who presided, proposed the health of Mr. John Ure on whom the degree of LL.D. had just been conferred. Mr. Ure was the chairman of the first health committee in the days when Dr. Gairdner was medical officer of health of the city.

Tuberculosis in Cattle.

A conference of Scottish butchers to consider this subject was held in Glasgow on the 16th inst. The chairman in his opening address contended that butchers were being unfairly dealt with by many local authorities and medical officers of health insomuch as carcases purchased in good faith at the highest market price and in markets under the supervision of the authorities themselves were frequently ordered to be destroyed and yet no compensation was offered. He questioned the necessity for this procedure in cases of well-nourished carcases with a merely localised tuberculosis, but in any case if the interests of the community demanded it the loss should fall upon the public purse. Resolutions defining these views were afterwards passed and were ordered to be sent to the members of the Government.

Microscopical Society, Glasgow.

At the usual monthly meeting of this society on the 16th inst. Dr. T. H. Bryce, lecturer on anatomy, Queen Margaret College, gave a demonstration on "The Development of the Chick," illustrated by lantern slides and microscopic sections.

Medical Appointments.

Dr. John Brownlee has been appointed to take charge under the medical officer of health of the Parliamentary-road Fever Hospital, Glasgow. The vacancy was due to the resignation of Dr. F. Dittmar.—The directors have appointed Dr. A. L. Pentland-Smith to be assistant medical superintendent to the Westgreen Asylum, Dundee.—The Edinburgh parish council last week appointed a resident medical officer to the Craiglockhart Workhouse. Three candidates were nominated for the office including a lady. The result of the first vote was that Miss Lillias Thomson, L.R.C.P. & S. Edin., received nine votes, Mr. George J. Jenkins, M.B., C.M., eight, and Mr. J. J. Hewison, M.A., M.B., C.M., five. The second vote resulted in thirteen votes being given to Dr. Jenkins and nine to Miss Thomson.

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Ambulance Inspections.

Favourable repcrts after inspection have been made upon the condition of the ambulance companies of the 3rd Battalion Highland Light Infantry and the 4th (Volunteer) Scottish Rifles. The inspecting officer in each case was Surgeon-Lieutenant Browning, A.M.S.

A Fortunate Village.

Dr. Duncan Love of Cumbernauld, a village with a population of 1000, reports that the village has not had a single case of infectious disease for a period of twelve months.

Casualty Surgeons, Glasgow.

The Police Commission has decided to increase the salary of Dr. Chalmers, casualty surgeon to the Southern District, from £70 to £100 per annum. There is a vacancy in the Western District in consequence of the appointment of Dr. Boyd to be surgeon to the police force.

Aberdeen University.

Twenty-four candidates passed the April medical preliminary examination at the University of Aberdeen.—The University Council has appointed a committee to keep alive an interest in the wants of the university as to new chairs, additional lectureships, and the provision and maintenance of fresh museums and laboratories. Among the "pressing wants" embraced in the recommendations approved of were botanical gardens and residential halls for male and female students.

Hospital Saturday in Aberdeen.

The Aberdeen Town Council has agreed to the request of the committee appointed by the friendly societies by granting the use of Duthie Park on Saturday, June 27th, for a gala. There will be a monster procession through the streets of the city and various sports in the park. The whole proceeds will go to the Royal Infirmary, and given good weather it is expected to raise about £1000.

Corporation Balnearies, Aberdeen Sea Beach—Marine Aquarium.

The new bathing station erected by the town council on the Aberdeen sea-beach, from designs by the city architect and at a cost of between £3000 and £4000, will be opened on May 1st. The building has a frontage of 111 ft., and the external walls are of compressed red brick from Ruabon with white fire-brick facings. The main block, 40 ft. by 35 ft., has open verandahs both on the front facing the Links and that facing the sea, and there is a tower 37 ft. high in each corner, with a water tank in the top of each tower. There is also a central ventilating tower, rising to a height of 44ft. above the ground level. In the basement are the kitchen, laundry, boiler-room, engine-room, pumping apparatus, servants' w.c., &c.; and on the ground floor a large refreshment-room, 35 ft. 9 in. by 17 ft. 6 in., waiting-rooms, the superintendent's room, and the office. Each of the two wings measures 35 ft. by 28 ft. 6 in., and contains eight finely fitted bathrooms, lavatory accommodation, &c. There are four water-supply pipes for each bath—hot sea-water, cold sea-water, hot fresh-water, and cold fresh-water. Behind the old bath-house is an open gymnastic ground fitted with horizontal and parallel bars, vaulting horses, giant strides, &c. In the refreshment room in the former bathing station is to be provided—on the suggestion of Mr. H. Alleyne Nicholson, M.A., M.D. Edin., D.Sc., Professor of Natural History in the University of Aberdeen—a marine aquarium, while in an adjacent room will be a tank for the scientific observation of sea animals during life. The aquarium will be under the scientific direction of Professor Nicholson and assistants. It will be on a small scale at first, the cost being £60, but it is hoped that it will form the nucleus of a valuable marine zoological observatory. All the inside baths, bathing coaches, and bathing arrangements on the sea beach are under the direct management of the municipal corporation.

April 21st.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Health of Dublin.

AT the last meeting of the Public Health Committee on the 15th inst. Sir Charles Cameron reported that during the first fourteen weeks of the present year the death-rate was 7·3 per 1000 below the mean rate for the corresponding period in the previous ten years. During the week ending April 11th, 1896, there were but 12 deaths from zymotic diseases, while in the corresponding week of last year the number was 23. During that week one case of typhus fever was notified under the provisions of the Infectious Diseases Notification Act. It is now quite an unusual thing for even one case of typhus fever to be notified in Dublin or to be received into the Dublin hospitals, where some twelve years ago typhus fever was almost as common in the wards as typhoid fever. At the annual meeting of the supporters of the Adelaide Hospital, on the 15th inst., the medical report, signed by Dr. James Little and Dr. Wallace Beatty, contained the remark, "It is interesting to note that but seldom now do we see typhus, no case of this formidable disease having been admitted to the hospital for years. The disease has ceased to prevail in Dublin." Now this remark applies to practically all the general and even fever hospitals of Dublin, and it is not alone interesting but very satisfactory to note that a disease which was more than once so widely epidemic as to constitute a plague in Ireland has now become so rare that the occurrence of one case in the person of a woman living at the north side of the city has become a notable circumstance.

Automobiles or Horseless Carriages.

On April 16th, at a meeting of the Belfast Natural History and Philosophical Society, Mr. John Brown (the honorary treasurer) gave a most interesting lecture before a crowded house on horseless carriages. The Lord Mayor presided, and a great many members of the medical profession, to whom these methods of locomotion may eventually be of the utmost value, were present. Mr. Brown has for some time given great attention to this subject and during a recent visit to France purchased an automobile, which is said to be the first introduced into Ireland. It is driven by a Serpollet steam motor and was on exhibition in the hall in which the lecture was given. In addition to the carriage itself, Mr. Brown employed to illustrate his lecture a numerous collection of lantern slides showing the history and development of this recent application of mechanical ingenuity. At the end of the lecture, which was received with great enthusiasm, the following resolution was passed: "That this meeting approves of the proposed modification of the Locomotive Acts so as to promote the use of mechanically propelled carriages on public roads, subject to suitable provisions for the safety and convenience of the public." The Lord Mayor, who is one of the partners in the great shipbuilding firm of Harland and Wolff, said it was a matter of extreme regret that while great developments had taken place during recent years in mechanical contrivances for a variety of purposes, in one particular—that of horseless carriages—British skill and enterprise had not only been discouraged, but positively checked and thwarted by an antiquated Act of Parliament that should have been repealed long ago. It is hoped that at the next agricultural show in Belfast, at the end of June, we may have an exhibition of these horseless carriages.

The Abuse of Hospitals.

I understand that the secretary of the Belfast Hospital for Sick Children has sent a letter to the members of the medical profession in Belfast stating that as it has been reported that cases unsuitable for treatment at that hospital from time to time present themselves the medical staff will feel obliged if the name and address of any such cases will be reported to him so as to assist the medical officers in preventing abuse of the charity. The extern department of this hospital has of late increased to a very great extent and there can be no doubt that numbers of patients receive advice and medicine who could quite well pay a small fee to the hardworking medical men of whom there is such a large number in Belfast.

The Proposed New Derry Asylum.

With reference to the proposed erection of a new asylum at Londonderry at a cost of about £20,000, one of the Limavady guardians, at the last meeting of that board, held on April 20th, introduced the subject by stating that if this new building were erected the cost would fall entirely on the agricultural community of the county Derry and would mean an increase in the rates of from 4*d.* to 5*d.* in the pound, which was a very serious matter and of great importance to them all. He said the present Derry Asylum had cost a great deal, and during the last eleven years there had been in all £29,066 expended on it, which amount, repayable in fourteen years,

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meant £2652 annually. He suggested that arrangements should be made to reduce pressure on the present asylum by distributing all the harmless lunatics over the different workhouses in the county, and so to obviate the necessity for incurring the enormous expense of building a new asylum. They might easily find room in the Limavady Workhouse for 100 or 150 of the harmless lunatics at present in the Derry Asylum. After some discussion a resolution was passed to the effect that, owing to the existing agricultural distress and the additional expenditure that it would entail in erecting a new asylum, all action in that direction for the present be suspended, and that the Limavady board of guardians offer to give accommodation for 100 to 150 harmless lunatics in their workhouse. It was suggested that other unions in county Derry might join with the Limavady guardians with a view to reduce the present pressure on the Derry Asylum.

Belfast District Lunatic Asylum.

From the sixty-sixth annual report of the resident medical superintendent (Dr. Merrick) of the Belfast Asylum I find that during the year the daily average number resident has been 782, an increase of 59 over that of the preceding year. During the year 240 patients were admitted, the highest number of annual admissions recorded in connexion with the asylum. On Dec. 31st, 1895, there were 698 cases in the asylum, while the normal accommodation is 400; hence the difficulty of proper treatment and classification is apparent. It is curious that melancholia figures largely in the admissions, there being 78 cases suffering from this condition. Of these, 11 had made suicidal attempts and 53 were noted in their admission forms as having suicidal tendencies, thus needing special supervision. Eight cases required forced alimentation due to voluntary abstinence. There has been a larger proportion on the sick list than in previous years. Forty males and fifty females were discharged recovered, and forty cases were sent out improved during the year. There were 44 deaths. The general health of the patients, excepting delicate cases, was most satisfactory, and no case of contagious or infectious disease occurred. Regarding the great overcrowding of the asylum Dr. Merrick urges the completion of even two blocks in the County Antrim Asylum, which would provide accommodation for 200 county patients, and if this were supplemented by the erection of the proposed buildings at Purdysburn to accommodate 300 chronic patients the present overcrowding would not only be relieved, but improved classification of the patients could be adopted, their condition made more comfortable, and better opportunity afforded for improved treatment. The gross expenditure of the asylum for the past year was £18,307 10*s.* 10*d.*, and if £7236 1*s.* 4*d.*, the amount of the Government grant received, and £1043 18*s.* 2*d.*, the amount received from miscellaneous sources, paying patients, farm and garden, &c., be deducted, it will give £10.027 11*s.* 4*d.* as the net amount chargeable to the rates of the district, or £12 16*s.* 5*d.* per head. The net yearly cost per head (including every charge of management) was for the past year £22 1*s.* 6*d.* The inspector of lunatics and commissioner of control (Mr. G. R. O'Farrell), in his memorandum of inspection on Nov. 1st, 1895, says he believes that no public institution in the United Kingdom is at the present time more overcrowded than this asylum; yet he found every department orderly and clean, while its bill of health was favourable and its mortality-rate very low. Certainly, as the inspector says, "With such perilous surroundings, with dormitories so full that there is scarcely space for beds, the resident medical superintendent deserves the greatest credit for his good and careful management of the institution. Dr. Merrick is ably assisted by the assistant medical officer, who shows much energy and practical zeal in the discharge of his duties."

The Mitchelstown Union Hospital: Alleged Ill-treatment of Patients.

About two months ago a trained nurse was appointed to take charge of the Mitchelstown Union Hospital. She had been there only a few weeks when she sent in her resignation and alleged that some of the patients had been beaten by one of the nurses. The guardians held an investigation, and if the statements made by some of the inmates be true a very serious state of affairs must have existed for some time. An old man eighty years of age told the chairman that he had been struck, and that on asking the nurse to allow him to remain in bed she dragged the clothes off him and left him naked. It was also stated that the same nurse had struck another old man when in bed with a poker on the knees and afterwards thrown him down stairs. It was also alleged that she had knocked down a patient and kicked him. The resigning nurse stated she had endeavoured to put an end to such conduct, and as she had found things so generally unpleasant she had finally decided on leaving. Many of the guardians considered they owed a debt of gratitude to the nurse, and a resolution was passed calling on the Local Government Board to hold a sworn investigation with a view to thoroughly sifting the matter.

Triennial Visitation at the Queen's College, Cork.

A triennial visitation will be held at the Queen's College, Cork, to-morrow. It is expected that the Presidents of the Royal Colleges of Physicians and Surgeons will be present and that Mr. Justice O'Brien will preside. A Medical Students' Association has been recently formed at the College, and the association has requested the College council to make certain alterations in connexion with the medical school. It is stated that some of the requests have been granted and others are still under consideration, but with the impetuosity characteristic of youth the students think that their views should have been adopted by the council at once, and accordingly they intend applying to the visitors, who form a court of appeal, to issue a direction to the council with regard to any of the requests which have not been acceded to. The students have engaged the services of a solicitor, and in medical circles the proceedings are looked forward to with interest.

April 21st.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Castration in Egypt.

M. LORTET recently exhibited before the Société de Médecine of Lyons the skeleton of a eunuch of Cairo, which skeleton measured 1 metre 96 centimetres. The thorax appears very short as compared with the exceptional length of the legs. This phenomenon is quite in accordance with what is met with in the lower animals. Thus, while the wings of a capon are no more highly developed than those of a cock, the long legs impart to the emasculated fowl a peculiar appearance. This same lengthening of the hind limbs in the ox corrects the sloping of the back-line which is so characteristic of the bull. M. Lortet furnished some interesting if not very savoury details concerning the operation of castration as currently practised on Egyptian boys from seven to ten years old. One method consists of the amputation of the penis and scrotum close to the pubis by one sweep of a razor. The poor child is then plunged up to the neck in fine dry sand, the compression thus brought to bear on the wound contributing to arrest the hæmorrhage. At the end of four or five days the patient is removed from his sand-bed and the wound is dressed with rags soaked in oil. Another method employed is the application around the spermatic cord and the penis of a very fine, strong ligature tightly tied. The sufferings of the unfortunate victim can easily be imagined, but hæmorrhage is less to be feared than by the cutting method. The subsequent burying in sand is in this case dispensed with, the only dressing applied being the bark of acacia rich in tannin. But whichever of the two barbarous proceedings be adopted it is said that two-thirds of the children succumb. The suppression of such a cruel practice will in time constitute one of the numerous blessings accruing to this ancient race from the British occupation of the country.

The Sero-therapic Treatment of Puerperal Fever.

Readers of THE LANCET will probably remember that on Feb. 23rd, 1895, M. Marmorek communicated to the Société de Biologie his discovery of an antistreptococcic serum, and that on the same occasion M. Roger and M. Charrin made a similar communication, besides reporting a case of puerperal fever said to have been cured by their serum. M. Roger afterwards reported a second successful case, and later still the cure of a case of erysipelas of the new-born and of a case of streptococcic tonsillitis by injection of his serum. Then M. Marmorek announced the successful treatment by his serum of 45 adult cases of erysipelas. M. Charpentier[1] has collected 40 cases

[1] Société Obstétricale de France, April 10th.

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of puerperal septicæmia treated by serum in the different maternity departments of Paris hospitals and in private practice. The results were 22 recoveries and 17 deaths, or a mortality of 42·5 per cent. Deducting 5 cases treated *in extremis* and 1 where the result was vitiated there still remains a death-rate of 35·29 per cent. Bacteriological examination was conducted in 25 instances, the streptococcus being discovered in 16 cases (9 recoveries and 7 deaths), and the streptococcus associated with the staphylococcus or the bacterium coli in the remaining 9 cases (4 deaths and 5 recoveries). The dose of serum injected varied within wide limits. In no instance was the serum treatment trusted to exclusively, intra-uterine medication being also employed. Urticaria, erythema, pruritus, and divers symptoms of a nervous order were frequently noted as the result of the injections. M. Gaulard of Lille attributes one death in his practice to the serum. M. Budin is inclined to deny the utility of the method, and M. Charpentier states that the high hopes inspired by the discovery have not been fulfilled. M. Bar and M. Tissier have treated 19 cases with Marmorek's serum with 10 deaths and 9 recoveries. Eliminating 3 cases where the treatment was instituted *in extremis* and 3 in which no bacteriological examination was made, there remain 13 well-studied cases with 6 deaths. In 6 cases treated by serum prepared by M. Roger and M. Charrin, and eliminating 1 case not examined bacteriologically, 4 out of 5 died. Four cases of erysipelas in the new-born died in spite of the employment of the serum. The serum appears to be too weak to neutralise the toxines in cases of general infection, although in ordinary cases of adult erysipelas it is efficacious. M. Bar thinks that the injections are commenced too late in puerperal cases. The strange recommendation of M. Marmorek to refrain from all intra-uterine medication has been discarded by all practical gynæcologists. M. Bar has never seen albuminuria occasioned by the serum, but other symptoms more or less grave have been noticed. Once an abscess formed and, strange to say, large numbers of streptococci were discovered in the pus. A woman treated at St. Louis Hospital received about 100 c.c. of serum in twenty days. Four days after the last injection the temperature diminished gradually, and debility finally induced a fatal result. It is evident that once puerperal fever has made any progress we cannot count upon the serum any more than we can upon other better-known methods of treatment. M. Charpentier wound up the discussion by remarking that when intra-uterine treatment was applied at the very commencement a good result invariably followed. All this is disappointing, but it only means that the serum, if it is to justify the expectations promised by its discoverers, must be made more active and safer to manage. It may, after all, be *the* remedy of the future.

April 21st.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Alleged Fatal Injection of Diphtheria Antitoxin.

A GREAT sensation has been caused by the recent announcement in the births, marriages, and deaths columns of the principal Berlin newspapers that a child, one and a half years of age, had died "from inoculation of diphtheria antitoxin"; the same subject was moreover continued on the following day by an intimation of the burial of the "poisoned" child. As the father, who had inserted these paragraphs, was a very well known medical man, Professor Langerhans, prosector to the Moabit Hospital and a former assistant to Professor Virchow, the public naturally became alarmed, and the lay press discussed the matter in detailed articles, of course before any particulars were known. By order of the legal authorities a post-mortem examination of the body was made by two medical officers attached to the law courts, but the cause of the death could not be clearly defined. As already mentioned in your columns,[1] the serum was seized by the authorities, but I learn that it was ascertained to be of normal quality and that it had been already used for other patients without any accident. It is now stated that the injection was made for prophylactic reasons because a servant of Professor Langerhans had been attacked with alleged diphtheria and admitted to the Moabit Hospital. The injection was performed by the father himself, and the child died from asphyxia three minutes afterwards. It is, of course, quite impossible to attribute this sudden death to the serum, as hardly any poison except hydrocyanic acid can destroy life so promptly. The complications hitherto described as resulting from antitoxin have always happened long after the injection, and no permanent ill-effect from it has hitherto been recorded. The abdomen is stated to have been the site of the injection, and very probably death was due either to entry of air into a vein or to thrombosis. The whole proceeding was subsequently proved to have been quite unnecessary as the servant's illness was found at the hospital to be simple tonsillitis and not diphtheria. Professor Eulenburg, the editor of the *Deutsche Medicinische Wochenschrift*, has given his opinion in most energetic terms both in his own journal and in a widely read non-medical weekly paper. The medical profession is unanimous in blaming Professor Langenhans's course of action, which can only be explained on the ground of his mental anguish.

[1] THE LANCET, April 18th, p. 1081.

Medical Courts of Honour in Prussia.

In THE LANCET of June 1st, 1895 (p. 1404), an account was given of a Bill brought before the Saxon Parliament relating to ethical misdemeanours committed by medical men. Prussia, the greatest of the German States, now has a Bill very like that of Saxony, but much more stringent. Its principal feature is that every provincial medical board shall elect four of its members who, together with a learned judge, will form the "court of honour." They will inquire into alleged contraventions of medical ethics and will also act as mediators in disputes between medical men. A Government lawyer will act as public prosecutor, whilst the defendant is entitled to be legally represented. The court of honour is invested with the same privileges as an ordinary law court; it may, for instance, compel the attendance of witnesses, but the proceedings are not public, only the members of the medical board being entitled to be present. The penalties are either simple warning, reprimand, or a fine not exceeding 3000 marks (£150). A court of appeal is, moreover, to be instituted in Berlin, consisting of the director of the medical department of the Home Office as president, three other members of this department appointed by the Crown, and three representatives of the medical boards elected by its members. The subject of ethical misdemeanours has for long been an anxiously discussed question at medical gatherings, but nothing was done, as the Government refused to allow the courts to have jurisdiction over the medical officers of the army and civil service. The invidious exemption of these medical officers, which is maintained in the new Bill, together with the introduction of the official element in the shape of the public prosecutor and the court of appeal, is looked upon with distrust, and it is the opinion here that medical men should be entitled to settle questions of etiquette and ethical misdemeanours among themselves without the intervention of Government officials. Some of the sections of the Bill will possibly be altered by Parliament, but the principal points, especially the exemption of the medical officers of the services, will certainly become law.

The late Dr. Baum.

Dr. William Baum, chief surgeon to the General Hospital in Dantzic, Western Prussia, died in that town on April 13th. As a military surgeon he took part in the wars of 1864, 1866, and 1870–71, and on the conclusion of his military service, in which he distinguished himself by his great ability, he was elected surgeon to the Dantzic Hospital. He not only conducted a very extensive practice, but wrote on many subjects, including ovariotomy, cancer of the uterus, resection of the nerves, emphysema, &c. He was universally esteemed by his fellow-citizens and the profession.

April 21st.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Kassala and the Rumoured Prevalence of Malaria.

ONE must take with a good many grains of salt the "intelligence" that appears from French sources as to the Anglo-Egyptian, and more especially the Italian, movements in the Soudan or in Abyssinia. According to the *Italie*—French in language and aspiration though published here—

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Kassala is a centre of malarial infection and the Italian soldiers which garrison it are attacked with the fever at the rate of 500 a week. In these circumstances the Dervishes have only to wait a little and their malarial auxiliary will do for them what their siege operations have hitherto failed to accomplish—effect an evacuation of the stronghold. Information, however, from the commandant of the Italian force quartered at Kassala, communicated on the eve of the battle of Abba Carima and since then confirmed, gives a totally different account. The hygienic conditions of the garrison differ in no respect—certainly not for the worse—from those prevailing at other centres of the Colonia Eritrea. I may add that its defensive resources are still unimpaired, which cannot be said of the offensive power of the enemy.

Dr. Baccelli's Return to the Chair of Clinical Medicine.

The ex-Minister of Public Instruction resumed his professional duties on the 13th inst. in the clinical amphitheatre of the Santo Spirito Hospital before a brilliant audience. Besides the 500 students for whom it is seated the amphitheatre contained many physicians and consultants of the city and province, to say nothing of distinguished medical visitors, mostly German, on their way through Rome. Dr. Baccelli always shines on these occasions, and his ἔπεα πτερόεντα (winged words) found their way to every heart as he described his two years' Odyssey on the troubled waters of political life and his finding himself once more in the academic Ithaca of former and better days. Passing in review the advances made by medicine since their last meeting, he once more warned his young hearers not to be seduced by scientific research, however fascinating, from their proper place at the bedside, where alone the "diagnostic eye" and the "tactus eruditus" can be trained, till disease surrenders itself unconditionally to the physician who can read its "expression," run it down through all its protean shapes and compel it almost to suggest its proper treatment and cure. Not that he depreciated the knowledge and the mental discipline gained in the *palæstra* of the laboratory. Far from it. "La medicina è un' arte che deve essere illuminata dalla scienza" (medicine is an art which ought to be lighted up by science), but an art it will always remain, and its most successful practitioner an "artist" in the highest and most ideal sense of the word. From this he passed to the evil which seems to beset practice at the present moment—the "polifarmacia" (the excess of reliance on "remedies"), which has usurped the place of the equally objectionable "nihilismo" ("do nothing" system). Having illustrated the evils of both and vindicated the *via media* of an enlightened caution, he proceeded to the clinical business of the day—the diagnosis and treatment of abdominal abscess, particularly when affecting the parietes. At the close the repeated rounds of applause evoked from him a few supplementary words, not less felicitous than those of the preamble, on the conduct of pupils of the Roman school in recent hours of danger and death on the stricken field, conduct worthy of the best days of the Mistress of the World.

April 18th.

Obituary.

MARIANO SEMMOLA.

THE profession in Italy, and, indeed, throughout the world, has lost an able and exemplary investigator, teacher, and consultant in the Professor of Clinical Medicine in the Neapolitan School. Mariano Semmola is no more. He died in Naples on the 5th inst. of a second apoplectic seizure, the first having overtaken him on March 8th. From this he had made a partial recovery. The intellect continued intact, the hemiparesis confined to the right arm had disappeared, but the aphasia was persistent. On the 29th ult. the hemiparesis recurred, involving half the right side and the bladder; but all the skill of his colleagues failed to alleviate the symptoms. He steadily grew worse, though the mental faculties remained clear and the spirits serene to the end, which supervened, as stated, on the early morning of the 5th. He came of a medical family, and particularly in his illustrious father, Giovanni Semmola, he had an ideal of what the hard-working, sagacious physician can do. There was no branch of the healing art in which the elder Semmola did not leave a memorable impress, and his son proved what he aspired to be, a worthy professional heir. Born at Naples on Jan. 31st, 1831, he passed through a brilliant curriculum, literary, philosophic, and medical, under teachers like Guarini, Gasparrini, Tenore, and Palmieri, distinguishing himself in the weekly *résumés* of work when student was pitted against student in competitive exposition, and impressing his clinical chiefs with his powers of getting at "the root of the matter." When twenty years old he presented to the Accademia di Medicina di Napoli three papers on Bright's Disease and Albuminuria, and brought out in a striking manner the great influence of the azotized and non-azotized regimen on the quantity of albumin eliminated by the kidney in the twenty-four hours by sufferers from morbus Brightii. Proceeding to Paris he plunged into steady work, experimental and clinical, under Rager, Trousseau, and Bernard, and earned the plaudits of a distinguished auditory at the Institut for a monograph on Pathological Glycogenesis. On his return to Italy he resumed, with increased knowledge and unabated ardour, his studies in albuminuria, a subject with which, from 1861 to 1893, his name has been identified by numerous papers read before scientific bodies and medical congresses, national and international. In 1883 he had so favourably impressed the Paris school by what he had contributed to the pathology and therapeutics of the subject that at its instance the French Government decorated him with the "Legion of Honour" and the Académie de Médecine elected him corresponding member. Controversy was not spared him in this arduous field of research, and his findings were contested by Senator of Berlin and Labadie-Lagrave of Paris, but not without ample recognition on their part of the independence and sagacity of his work. His ambition was to revive the mediæval pre-eminence of Italian medicine, and with that view he founded the Archivio Medico Italiano, in which all research and observation, clinical and therapeutic, was welcome on the one condition that it was national in its authorship and independent in its tenour. In 1869 he gave to the world his "Terapia Empirica e Terapia Scientifica," and in 1877 his "Medicina Vecchia e Medicina Nuova," the latter so bright and attractive a piece of exposition that it was speedily translated into most European languages, including English, German, French, Portuguese, and Greek, while as late as 1891 his permission was asked and given for his coöperation in rendering it into Russian. In 1890 appeared at Berlin the German translation of his "Prolegomeni di Farmacologia e di Terapia Clinica," preceded by a brilliant preface from the pen of Professor Nothnagel of Vienna. His was one of the few sceptical voices that broke the outburst of enthusiasm with which Koch's experiments on the bacillus of tubercle and its counteracting lymph were hailed, his attitude towards sero-therapy as a whole being one of approval, vigilant indeed and cautious.

Academic employment came to him early and in abundance. In 1865 we find him in the chair of Pharmacology and Therapeutics in the University of Naples, to which he attracted crowds of students; and in 1866, at the instance of Baron Ricasoli, then Minister of the Interior, he took part in the Royal Commission charged with the new Codice Sanitario Italiano, in which his coadjutors were Cannizzaro, Bô, and Burci. In 1874, on the invitation of the Italian Government, he represented Italy at Vienna in the International Sanitary Conference convened to revise the recommendations of the previous conference held at Constantinople, and to formulate measures of international application for the averting of cholera and other Eastern epidemics. His participation in the discussions was marked by such knowledge, discrimination, and expository power that his speeches were reproduced *in extenso* by the leading scientific journals, and the further honour was conferred on him of knightly decorations at the hands of foreign Powers, including Russia, the Czar *proprio motu* and with an autograph letter bestowing on him the badge of Grand Officer of S. Stanislaus. On his return from Vienna he was nominated Member of the Consiglio Superiore di Sanità of the Italian kingdom and afterwards be became President of the Croce Bianca, in which capacity his exertions during the great cholera epidemic in Naples were second only to those of the King, by whose side he worked night and day. For this service he received the gold medal of Valore Civile. He represented Italy at the International Medical Congress held at Brussels (1875), Amsterdam (1879), London (1881), Copenhagen (1884), Rome (1885), Washington (1887),

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and Berlin (1890). In 1883 the then Minister of Public Instruction, Signor Coppino, founded the chair of Clinical Therapeutics, of which he became Professor, and in 1888 his lectures so impressed Don Pedro, the Emperor of Brazil, then a casual auditor, that when his Imperial Majesty fell ill the same year at Milan he would have no other consultant than Dr. Semmola, who remained in attendance for two months. In one of the graver crises of that memorable illness Dr. Charcot was summoned by telegraph from Paris, but on examining the illustrious patient and finding what had been done he declared that his presence was not required, every available means having been adopted by Semmola, whom he congratulated on the skill and success of his treatment. The Emperor, re-established in health, showed his gratitude not only by one of the handsomest *honoraria* on record, but by conferring on the Neapolitan physician the Grand Cordon of the Imperial Order of the Rose, while the municipality of Rio de Janeiro presented him with a gold medal specially struck for the occasion and also with an address of congratulation. In 1890 he was called in consultation at Constantinople by the ex-Khedive of Egypt, his Imperial Highness Ismail, remaining in attendance three weeks, during which he availed himself of his presence in the Turkish capital to deliver before its Academy of Medicine a memorable discourse on Albuminuria and Nephritis. This he followed up at the "Syllogos Litterarius" of Constantinople by a lecture on the Physiological Cure of Diseases, in consideration of which the Sultan decorated him with the Grand Cordon of the Osmanlie.

In Parliament he represented Caserta in the Liberal interest, and was always heard with equal interest and profit on questions of public health and public instruction. In 1886 he was nominated Senator of the kingdom. With all this professional and public activity he was a prolific writer, his publications (to say nothing of contributions to medical periodicals) including treatises on Diabetes Mellitus, on the Calabar Bean, on Addison's Disease, on Gastropathia Nervosa, on Cardiac Neuropathy, on Iodoform and its Uses, on "Saturnismo Cronico," and on Hydatid Cysts of the Liver. In THE LANCET of Sept. 14th 1895, appeared his paper on "The Antisudorific Properties of Picrotoxine." His funeral, on the 6th, was a public one, the chief commercial houses in Naples suspending business for the occasion, and a vast multitude of mourners, including every class of society, accompanying him to the grave. *Oraisons funèbres*, eloquent and touching in their tenour, were delivered by his surviving colleagues, among whom may be mentioned Professor Armanni, Professor Vizioli, and Dr. Renzi, while Dr. Ferrara, Dr. Matoni, and the Senator Dr. Martini spoke for the profession and the Legislature with equal power and effect. Telegrams of condolence with his family continued to arrive from all parts of Italy and from most of the European capitals, unanimous in deploring the loss of one of the greatest of Italian physicians and teachers, whose professional enthusiasm was hardly more conspicuous than his sense of public duty and his exemplary virtues as a citizen.

JOHN GASON, B.A. DUB., F.R.C.P., L.R.C.S. & L.M. IREL.

FOR more than fifty years this active and philanthropic practitioner divided his professional year between Rome and the Baqui di Lucca, practising in the Italian capital during the winter and spring and in the Tuscan health resort during the summer and autumn. Born in the county Wicklow he proceeded, at the early age usual in Ireland, to Trinity College, Dublin, where he completed his education in arts by graduating B.A. in 1836. He thereafter enrolled as a student of medicine in the Dublin school, took the Licentiateship in surgery and midwifery at the Royal College in 1839, and five years later the analogous qualification at the Royal College of Physicians, of which in 1863 he became Fellow. In 1845 he repaired to Rome and in the Anglo-American colony there continued to practise till well past his eightieth year, not only attending to his private *clientèle*, but interesting himself in the medical charities under British support. Among these he was consulting physician to the Anglo-Italian Protestant Dispensary and medical director of the Protestant Hospital, both of which institutions owed much to him, not merely for professional attendance unremittingly bestowed, but also for effective support, pecuniary and other. The British Relief Fund also could invariably count on his coöperation, medical and philanthropic; while among other services to the English-speaking colony he was mainly instrumental in erecting Trinity Church in the Piazza di San Silvestro—the first place of worship for members of the Church of England opened within the city walls. As the dean of the English-speaking practitioners and consultants in Rome he had many opportunities of showing kindness and hospitality to professional brethren from Great Britain, America, and the colonies—opportunities by which many profited, particularly during the Cholera Conference of 1885 and the Eleventh International Congress of Medicine and Surgery in 1894. Up to within the present year he continued in his customary vigorous health, till within the last few days he succumbed to an apoplectic seizure. He was interred on the 17th inst., by his special desire, at the Baqui di Lucca, where, no less than in Rome, he has left the English-speaking public indebted to him for kindly and valuable services extending over half a century.

WILLIAM SQUARE, F.R.C.S. ENG., L.R.C.P. LOND., L.S.A.

THE death is announced of Mr. William Square, whose name for many years has been prominently identified with the medical profession at Plymouth, Devon. He died on Saturday, April 18th, after an extremely short illness. He was educated at Rugby and the Baptist College, Regent's-park, London, and matriculated when he was sixteen years of age at the University of London. He commenced his medical studies at the South Devon and East Cornwall Hospital and continued them at St. Bartholomew's Hospital, where he took several prizes and was senior scholar for the year 1866. He became M.R.C.S., L.S.A. in the same year, L.R.C.P. in the following year, and F.R.C.S. in 1871. He was elected a Fellow of the Royal Geographical Society on the nomination of Sir Leopold McClintock and General O'Connor. For a number of years, and up to the time of his death, he held the position of surgeon to the South Devon and East Cornwall Hospital, having been appointed to that position on the retirement of his father. He was also senior surgeon to the Plymouth Royal Eye Infirmary. Last year he filled the presidential chair of the Plymouth Medical Society, one of the oldest societies of its kind in the kingdom, it having been established in 1794. For twenty-five years he was honorary surgeon to the Plymouth Fire Brigade. The deceased gentleman was a great traveller, one of his latest expeditions being to the Pyramids of Egypt. He was gifted with an extraordinary memory and was a genial companion and a versatile conversationalist. Although a very good *raconteur* he never told a story against anyone or uttered an ill-natured expression. He was an ardent sportsman, and claimed to have taken part in the first swimming match in Plymouth, whilst as a fisherman, and more recently as a cyclist, his imprudent disregard for the safety of his own health proved a constant source of anxiety to his friends. To give pleasure to others was his greatest delight, and for this he would sing a song, tell a tale, work up a lecture and spare neither time nor money in arranging some theatrical performance or in arousing interest in some philanthropic movement. He was an enthusiastic horticulturist. Mr. Square, who was for a short time a Plymouth town councillor, was only fifty-two years of age, and his untimely death will be greatly mourned.

EDWARD DAY MCNICOLL, F.R.C.S. EDIN., L.R.C.P. EDIN.

A FEW months ago Mr. McNicoll was apparently in perfect health. He was then attacked by pain, at first put down to sciatica, which kept him to bed for a short time; but he was soon again visiting his patients. Before long, however, it was evident that something more serious existed and he was found to be suffering from sarcoma. His painful and hopeless illness was borne with cheerful fortitude and a marvellous patience, and all that skill and kindness could suggest was done by medical friends to relieve his sufferings until his death, on the 14th inst., at the age of fifty-one. He was born in 1844, and was the second son of the late D. H. McNicoll, M.D., of Southport, who was a man of considerable and varied attainments. It was at first intended that Edward McNicoll should be an engineer, but towards the close of his apprenticeship to a firm at St. Helens he decided to follow his father's profession. In

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1873 he became L.R.C.P. Edin., and some years later the Fellowship of the College of Surgeons, Edinburgh, was conferred upon him. He practised for twenty-three years in Southport and for some years was in partnership with Sir George Pilkington, now retired from practice. He had a large general practice, was an honorary medical officer of the Southport Infirmary, which benefited much from his untiring exertions on its behalf, and at one time was resident medical officer to the Southport Convalescent Hospital. He was always a kind friend to the poor, and the extent of his benefactions will never be known. His busy life allowed little time for literary work, but he was an occasional contributor to the medical journals, and some years ago edited a new edition of his father's "Handbook to Southport," which contained valuable information as to the fauna and flora of the districts. Mr. McNicoll never married, but leaves an aged mother and two unmarried sisters in the home of which he was the brightness and the stay. His death is much mourned in Southport, where he was universally esteemed, and indeed beloved, for his was a singularly winning nature, and no one could see his open ruddy face, with its genial expression, without feeling that he was in the presence of a kindly, unselfish, and honest man. His medical brethren in large numbers and a great concourse assembled round his grave. Mr. Wm. Heath, Dr. Baines, and Dr. Baildon were unwearied in their attention to their friend, and he was seen also by Mr. Banks and Mr. Paul of Liverpool and Dr. Bill of Edinburgh, who could only endorse the unfavourable prognosis already given.

ALFRED GEORGE ROPER, F.R.C.S. ENG.

ALFRED GEORGE ROPER of Croydon passed away at Croydon at the age of seventy-seven years, on April 13th. He was educated at Guy's Hospital and obtained his M.R.C.S. and L.S.A. in 1840, and became a F.R.C.S. in 1875. For forty years he was in practice in Croydon, and was held in high esteem by all his fellow practitioners. For thirty-one years he was surgeon to the Croydon Infirmary and did much towards the arrangement of the present infirmary, receiving a suitable acknowledgment from the guardians for his valuable services. In 1867 he promoted the Croydon General Hospital, and acted as its senior surgeon and honorary secretary for some years, and in 1875 received a handsome public testimonial in appreciation of his honorary services to this institution which through his energies has become what it is. He leaves a daughter and three sons, one of whom is in the medical profession.

CHARLES HIGHETT, M.R.C.P. EDIN., L.S.A.

MR. CHARLES HIGHETT, M.R.C.P. Edin., L S.A., died at his residence, Field House, Montpelier, Bristol, on April 20th, aged eighty-four years, having been for some time in a delicate state of health. Mr. Highett was educated at the Bristol and Middlesex Hospital Medical Schools, and took the L.S.A. in 1840, the L.R.C.P. Edin. in 1860, and the M.R.C.P. Edin. in 1865. He was descended from an old Huguenot family, and married the eldest daughter of the late Dr. Spencer, ex-Mayor of Wells, who died many years ago. Mr. Highett settled as a medical practitioner in Bristol fifty-four years ago, but did not remain long in active practice. It was not until comparatively late in life that he took a prominent part in municipal matters. In 1881 he obtained a seat for the district ward, and attended regularly to Council work, being an active member of the Sanitary Committee and also of the Finance and Library Committees. He was elected Mayor in 1891 and most efficiently discharged the duties of this office. During his mayoralty Mr. Highett was elected to a vacancy on the aldermanic bench. He was an earnest Churchman, of a kindly and courteous disposition, and a good friend to the poor. His fellow citizens held him in the highest esteem and much regret his death.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Constantin Paul, *Professeur Agrégé* of Therapeutics and Member of the Paris Academy of Medicine. He was President of the Therapeutical Society and an accomplished clinical physician. His works, which are numerous, are largely devoted to the subject of the effect of treatment on cardiac disease. — Dr. Pietro Gamberini, Emeritus Professor of Dermatology and Syphilis in the University of Bologna.—Dr. Ramakers, Assistant Professor of Anatomy and Physiology in the Algiers Medical School.—Dr. Luton, Professor of Clinical Medicine in the Rheims Medical School.

THE

INTERCOLONIAL MEDICAL CONGRESS OF AUSTRALASIA, 1896.

FOURTH SESSION.

(FROM OUR SPECIAL CORRESPONDENT.)

(*Continued from page 1107.*)

THE SECTIONS.

PUBLIC HEALTH.

PRESIDENT'S ADDRESS.

THE presidential address in this section was delivered by Mr. SPRINGTHORPE, and he took for his subject a Physician's View of the Battle of Life. The battle itself, he said, has to be waged man against man, man against other forms of life, and man against himself. The domain of the strife of man with man was well recognised and there was no escape from the law of the struggle for existence. Spinoza reminds us, he continued, that the big fish were created to swallow the little fish, and the incessant border warfare of savage tribes shows how well man fulfils his destiny. The civilised man follows the same law, though in different manner. Society, to quote again from Spinoza, is simply an organisation of the little fishes to protect themselves, and the strife continues between individuals, classes, and races. Against such natural law the decrees of statecraft and the educated selfishness of coöperation are but partial and temporary expedients, and, fortunately perhaps, the physician is called in simply to help the fighter to fight better; whilst in the "battle of the clubs"—the struggle for practice—he himself experiences its keenness. Will competition, then, never be restrained except by self-interest? Not, perhaps, from the material and vital sides, but surely by the development and spread of those higher considerations which some think are foreign to those lower relationships and depend entirely upon man's peculiar moral endowment. Man's conflict with other forms of life, however, is a subject more pertinent to the physician. As we have seen, the great law of the struggle for existence rules not only individuals but species, genera, classes, and kingdoms. For his sport, use, or food man preys upon the lower animals, and wherever practicable the latter returns the compliment. In parasiticism we find an even closer interdependence and strife, each harbouring at its own risk certain organisms which may affect the other; they may be air, food, or drink. It would surprise many who have not carefully studied the question to find how numerous and important are the diseases thus produced and how large the number of human beings thus affected. For the present, putting on one side the question of germ diseases, man acts as the host of eight protozoa, fifty-one helminths, and twenty-one arthropods. There are reasons, more or less strong, for associating cancer with protozoic invasion. The common round worm, the guinea worm, the ankylostoma, and the megastoma are all found in the intestines of other animals as well as man and are undoubtedly interchanged from one to the other. In the different tapeworms—the beef tapeworm, the pork tapeworm, and the hydatid—we have alterations of form and effect with the difference of habitat, the mature forms inhabiting the intestine and the larval condition being assumed in the internal organs. The trichina again, which is the real cause of many epidemics variously described as poisoning, rheumatics, typhoid fever, typhus fever, and formerly as black death and English sweat, exists in man in both developed and undeveloped states, whilst the hog is its peculiar and original host. The disease thus produced is both extensive in amount and varied in manifestation, and though some of the forms at least are well recognised there is often need of special inquiry as to their possible presence in all obscure cases of nervous or intestinal disorder attended with anæmia and emaciation.

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Not unnaturally, perhaps, it has become too much the custom to regard all microbes as injurious, forgetful of the fact that there is another side to these activities, as is exemplified in their being Nature's scavengers and earth's fertilisers, bakers of man's bread, brewers of his beer, makers of his vinegar, and flavourers of his wine, butter, and cheese; indeed, without the presence of friendly germs in his intestinal flora his food would not be peptonised and in the midst of plenty he would starve. Another common error is the supposition that the invasion of the germ necessitates the production of the disease. This is no doubt true in certain cases, such as anthrax and certain pyococci, but it is generally the constitutional state rather than the presence of the germ which determines the extent of infection, the issue of the fight; hence, while doing all that is possible to prevent invasion, and even attempting to kill the germ so far as is possible without injuring the combatant tissues, it is still more important to fortify the outposts by promoting the healthy condition of the mucous membranes and bathing them in healthy secretions, and to build up the natural resisting power of the organism as a whole. And as the resisting power varies so also does the virulence of the germ, both towards aggravation and towards attenuation. Nor is the struggle simply between man and germ; it rages equally between germ and germ, and mixed infection is by no means uncommon. As Dr. Lauder Brunton graphically reminds us: "Even amongst these minute organisms the struggle for existence and the survival of the fittest exists. When two microbes are growing together one may choke or destroy the other, just as weeds in a garden may choke the flowers. On the other hand, successive generations of the microbe may render the soil unsuitable for another, just as decaying algæ and mosses may furnish mould in which higher plants can grow. The struggle takes place also between the disease germs and the cells of the organism which they have invaded. This has been beautifully shown by Metchnikoff in the Daphne, where the process of the cells eating up the microbes or the microbes destroying the cells can be actually observed under the microscope. It is impossible to see one part of a microbe half digested whilst the part outside remains unaltered without believing that the process of phagocytosis is one of great importance. At the same time it bears about the same relationship to the total struggle that a bayonet charge bears to a modern battle. The main part of the fight is really carried on at some distance by deadly weapons, by bullets in the case of the soldier and by ferments, poisonous albumoses, and alkaloids on the part of cells and microbes." Even this description by a master hand is not altogether complete. It says nothing of the immunity that may be artificially built up for a limited period by various manipulations of the germs themselves and of the antitoxins which the system throws out in its hour of peril, which, strength for strength, are the exact chemical antidotes to the toxines, and the recent application of which in various disorders has been the crowning therapeutic triumph of the century. We are thus prepared for the perhaps surprising fact that it takes two factors—germ and susceptible organism—to produce the disease, and that the germ alone may be present in mucous membranes, tissues, air, food, or drink without any necessary appearance of the disease. On the contrary, there cannot be the disease in the absence of the germ. The list of diseases thus produced is a long and weighty one. The bacteriologist is thus an essential assistant to the physician, and the help of the skilled veterinary surgeon cannot be overlooked without serious danger to the public health. Is there, then, any prospect of the sanitary millennium, when infectious disease shall be no more? We must first have dealt satisfactorily with all disease germs without; we must be able to control entrances and exits; or we must have become able to confer racial immunity. Then, and not till then, will the plague be stayed. Ignorance is without doubt the mother of an untold amount of preventable disease. Such portions, therefore, of the sanitary domain as are matters of individual action should be made matters of primary education and be included in the curriculum of study by every boy and girl. How much longer shall such be taught the heights of mountains of no importance to them and parts of speech that are dead, but unfortunately not buried, and yet be left ignorant of the importance of heredity, the requirements of sound development, the dangers to health and how to avoid them, and similar every-day health factors? In addition, the creation of a sanitary atmosphere that will surround individuals and permeate households is a matter of scarcely less importance. To this end the initiation and combined activity of such bodies of earnest and trained sanitarians as constitute health societies, the St. John Ambulance Association, sanitary associations, and the like, become hygienic duties and privileges. With the spread of sanitary knowledge there is needed also a widening of the sphere of the physician's influence, for extended professional performance must accompany the broadening of public conception. The physician's usefulness must necessarily extend far beyond the remedial treatment of the sick. It will be more and more recognised that he is the trained servant of nature, able to do more preventatively than curatively, and more valuable by his advice than his drugs. Dealing with State sanitary control, he continued: "And since *Salus populi suprema lex*, it is not too much to say that the State which neglects to deal officially with these matters fails to perform one of its fundamental protective duties. To my mind the proper attitude to take up was well exemplified at the International Sanitary Exhibition just closed at Paris. In proposing the health of the President of the Republic the Dean of the Faculty of Medicine referred to faulty sanitation as a public danger and urged the passing of a Public Health Act. The President of the Cabinet Council, in reply held that it was the duty of the State to say to sanitarians, 'Show us what to do and we will do it.' And as an instance of a great community now prepared to act upon such expert advice I can refer you to the proposed sanitary reforms in India which seemed destined to create a new era in sanitation in that vast and densely populated peninsula. Enough has been said to show that the part that may be taken by our profession in the extension of knowledge, the creation of a sanitary atmosphere, the imparting of specific advice and administrative or scientific work, is a noble and inspiring one. And amidst all the drawbacks and disappointments which at times press so heavily upon us it is more than probable that, with Sir James Paget, we can claim for our calling from amongst all the sciences 'the most complete and constant union of those three qualities which have the greatest charm for pure and active minds—novelty, utility, and charity'; and that we can compete with the world, not where wealth is the highest evidence of success, but 'in the nobler ambition of being counted among the learned and the good, who strive to make the future better and happier than the past.' Thus it is granted us by our labours to promote the gradual approach of that sanitary millennium when heredity shall be counterbalanced, development progress harmoniously, external attack cease from troubling, and internal disquiet be at rest, until, in the fulness of time, there shall be left only that last enemy whose name is death. Then, were man only the perfection of the vital, the coping stone of the material, naught, 'tis true, would remain but the redistribution of atoms, the reincarnation of the vital, and the oblivion of personality. But such negation neither scientific leader nor scientific laureate finds himself compelled to accept. On Huxley's tomb is deeply graven the trust that survives a true agnosticism, and from Tennyson's grave still breathes the century's crowning message of hope and faith."

Mr. MASON (Otaki) introduced a discussion on Rural Hygiene, and Mr. A. G. KIDSTON-HUNTER read a paper on an Examination of Potable Water from Bacteriological and Chemical Points of View.

The Contagious Diseases Act.

This was the first subject taken in the Section, the memorial from the Women's Christian Temperance Union of Victoria having been referred to the Section with a view to discussion.

On the motion of Dr. KNAGGS (Sydney) the following resolution was carried unanimously: "That the question of the Contagious Diseases Act be referred to the next congress for discussion."

The PRESIDENT intimated that it was proposed to ask Mr. Grace to introduce the subject of the Contagious Diseases Act, and the section could then deal with it in some shape or form. His own opinion was that they would not be able to agree on the subject.

Mr. H. A. DE LAUTOUR (Oamaru) contributed papers on the Distinction between the Appearance of Razors, &c., in cases of Homicide and Suicide, and on a Simple Method of fixing and preserving Imprints of Foot or Finger-marks.

The Public Health Aspect of Alcohol.

Dr. CHAPPLE (Wellington) read a paper on the Public

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Health Aspect of Alcohol. It was, he said, no part of the duty of medical men or medical societies as such to deal with the various ways suggested by social reformers and politicians of dealing with the liquor traffic. For the sake of their honour as a profession, however, and for the sake of their fellow men—accursed, diseased, and dying under the influence of alcohol—they could not afford to have done with the subject, however well worn it might be. For the sake of their honour as a profession—for nearly every popular belief in the efficacy and virtue of alcohol was false, and their high authority was claimed in support of the allegations that it increased the body heat, that it added strength and endurance to the muscles, that it was necessary to health, that it controlled hæmorrhage, that it was a disinfectant and protected from infection—and it was their duty to themselves and to the public to correct these beliefs, or at least to say that they had not their authority, for the sake of their fellow-men—for it was as much their duty to save them from the ravages of alcohol as from the ravages of cholera or any other preventable disease. He thus summarised his conclusions about alcohol taken as a beverage in health in varying quantities from physiological moderation to excess: (1) alcohol is a poisonous drug whose special action in the body is a brain cell paralysant, destroying these cells in the inverse order of their development; (2) alcohol disturbs the circulation, leading to a loss of body temperature and an accumulation of waste products in the blood, accompanied by great depression and muscular weakness; (3) alcohol tends to produce in all, proportionate to the quantity taken, cirrhotic diseases of all the tissues and organs of the body; (4) alcohol tends to produce an irresistible craving for itself; (5) alcohol predisposes to all infectious and many organic diseases; (6) alcohol diminishes the chances of recovery in those attacked by any diseases other than those resulting from its use; (7) alcohol increases the sick-rate and shortens life; (8) alcohol predisposes to phthisis and all tuberculous diseases; (9) alcohol increases lunacy and crime; (10) alcohol is absolutely unnecessary to health; (11) alcohol promotes hæmorrhage and does not check it; and (12) alcohol adds no muscular strength to the body—at most it encourages the expenditure of its force in the shortest possible time. If these were the true facts about alcohol taken as a beverage in health, they were as medical men, individually and collectively, in duty and in honour bound to make them known to the public.

Mr. SYMES (Christchurch) thought their efforts should not be so much directed towards preaching prohibition as towards reforming the system that existed. That reform would, he thought, have to be brought about in many ways. The beer supplied in the public-houses at the present day, particularly in the colonies, was not wholesome. The use of sugar and glucose in the manufacture of beer was most injurious to health. Some improvement might be made in the present system of supplying unwholesome and intoxicating beer.

Dr. OGSTON (Dunedin) could not agree with Dr. Chapple's statements with regard to the comparison between the abuse of alcohol and its moderate use. Alcohol was useful in small doses and harmful in big doses, but the same argument might be made to tell against tea.

Mr. SPRINGTHORPE said that as lecturer on Hygiene to the University of Melbourne he naturally had to go into this matter very carefully. It was a matter of great complexity, and although they all saw the evil effects of excess in the use of alcohol he did not think Dr. Chapple had gone deep enough down. The fact was that the human race in civilised parts was not absolutely and permanently healthy. Every race on the globe seemed more or less irresistibly drawn to a stimulo-sedative of some sort—if it was not alcohol it was some other stimulant. It was not merely a question of craving, it was an absolute instinct. They might prohibit a man's liquor and he would go in for stimulants in some other form. In Ireland they went in for ether drinking, and there were cocainists, morphinists, and all sorts of "'ists." He regarded it as a matter of the first importance to keep drink as much as possible from the young, to make its form as suitable as possible to the individual and his environments, and to see that a thoroughly sound article was obtained. This was, he thought, the direction in which legislation should tend.

Dr. STENHOUSE (Dunedin) said Dr. Chapple seemed to imagine that his case was true if he could show, on the one hand, that a moderate consumption of alcohol was not necessary to the health of the body, and if he could also show, on the other hand, that the consumption of alcohol in excess was detrimental to the body. But that was not sufficient, because if it could be shown that the moderate consumption of alcohol added somewhat to the pleasures of life, if it diffused happiness among mankind to some extent without being injurious, that was a great matter, seeing that we were not living in an ideal world and that the world was full of ups and downs, of anxieties and sorrows of one kind and another. He (Dr. Stenhouse) was sure, from his own observation, that the moderate and occasional use of alcohol was beneficial and that it enabled many a man to tide over a period of depression which otherwise might prove very disastrous. He had not the slightest doubt that the moderate consumption of alcohol after middle life was of considerable benefit and that it was advantageous to the prospects of longevity.

Mr. H. A. DE LAUTOUR (Oamaru) said that it was not his experience that alcohol-takers were more liable to typhoid fever than water-drinkers were, and he thought the statement was hardly reasonable, for they knew that typhoid fever was far more prevalent in children than in adults, and children were not drinkers.

Mr. MASON (Otaki) said that he enjoyed a glass of beer and thought it did him good, and he had no doubt that it was only when alcohol was taken in excess that the verdict could be given against it. Speaking from the physiological point of view, he thought there was no question that the teetotalers had "the best end of the stick."

Dr. MICKLE (Christchurch) had come to the conclusion in regard to alcoholic beverages that all healthy people did not require them and were better without them; but a very large minority of the population were undoubtedly benefited by their use. The reform he would like to see would be the establishment of a licence allowing the licensee to supply alcohol only as a beverage at meal times.

Hygiene as a School Subject.

The PRESIDENT moved: "That, in the opinion of this Congress, elementary hygiene should form a subject for instruction in all State-supported schools, and that where practicable teachers in such schools should be required to undergo a course of instruction in the same subject previously to their being licensed to teach."—The motion was carried.

Sanitary Administration.

The PRESIDENT also moved: "That this Congress respectfully beg to draw the attention of the different colonial Governments to the scheme by which the authorities of British India propose to deal with sanitary administration and the public health, with a view to the local adoption of a portion thereof as may be suitable to their respective requirements; and that they be respectfully asked to authorise a conference of their medical advisers empowered to report as to the best manner in which sanitary progress may be furthered."—The motion was carried.

Other Matters.

Papers by Dr. MULLINS on Death Certification and Registration in New South Wales and by Mr. MCDOUALL on Insanity from Association were received.

MIDWIFERY.

The address in the Section of Midwifery was read by Mr. MORIER, in the absence of Dr. WAY, the President of the Section. It dealt chiefly with the old maxim that "Cleanliness is next to godliness" and the bearing of the adage on puerperal fever.

Papers were read on Puerperal Eclampsia, with Special Reference to Urea Excretion, by Dr. W. W. R. LOVE, of Brisbane; and on a New Clamp, designed on an entirely new principle, for securing the broad ligament in vaginal hysterectomy, by Mr. J. H. TOWNEND of Christchurch.

GENERAL MEETING.

THE DISCUSSION ON TUBERCULOSIS.

The meetings of the various Sections were suspended in the forenoon of Wednesday, Feb. 5th, to enable a general meeting of members of the Congress to enter fully into the discussion of the principal topic set apart for the Congress—viz., Tuberculosis in Man and Animals.

Professor WATSON (Adelaide) opened the discussion and pointed out that it was meant to awaken the public

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to the fact that tuberculosis is an infectious and therefore preventable and (under favourable circumstances) a curable disease. Living as they did in colonies where pastoral interests are paramount they had been wise in calling in to their assistance their best allies—the veterinary surgeons—men who had had ample opportunities of becoming conversant with the diversified manifestations of tuberculosis occurring in the domestic animals. It had been said that tuberculosis is Nature's method of working off the weak—a disease of degenerate tissues in a degenerate race. Tubercalisation of an individual did not appear to confer immunity in the same way as an infectious fever, such as small-pox, after it had run its course appeared to do. As regards South Australia, apart from alcohol, hydatids, and syphilis, the rapid extinction of the native race was due entirely to tuberculosis.

Mr. SPRINGTHORPE dealt with the more strictly medical aspects of the disease. He said: A disease like tuberculous disease—which, according to Hirschberger, kills one-fourth of all children dying under one year old; is responsible, according to Ransome, for one-half of all deaths during marriageable ages; is common, according to M'Lachlan and others, among the aged; and causes in all some 16 per cent. of the total mortality in civilised lands—merits special attention at a medical congress. Nor have we in Australasia any relative immunity from this universal scourge. Dr. M'Laurin's statistics show that it is the greatest single cause of death throughout Australasia, and that it is already as common in our large cities as in their European compeers. Our peculiarities, as Dr. Colquhoun, Dr. Corswell, and others have shown, are simply its comparative rarity in the young and frequency in the aged, and its later and slower affection of the middle-aged. It represents a great advance to be able to maintain that the disease is not possible in the absence of the tubercle bacillus. Gradually we are becoming acquainted with the life-history of this extraordinary germ. We have long known that it resists freezing, boiling, and putrefying, and have lately recognised that it is not an essential parasite in warm-blooded animals, but, under favourable circumstances, may pass a saprophytic existence in polluted environment. As to its frequency in man, the appalling death record may be taken as an incomplete illustration. Equally suggestive is its prevalence amongst the bovines. German and English statistics show a tuberculous infection of from 15 to 20 per cent. of the cattle slaughtered, and such Australian records as are available prove that our stock are affected in at least equal proportion. And as regards the extent of intermediate contamination of dwellings, buildings, conveyances, subsoil, &c., we have sufficient cause in the myriads of bacilli coughed up daily with tuberculous sputum, estimated at the Johns Hopkins University at hundreds and thousands of millions per patient, some no doubt dead, as Pfeiffer has shown, but many still living and virulent. The actual result is seen in the prevalence of the disease wherever people congregate together and take no care of the infected sputum. Unfortunately, in most cases, at least of advanced phthisis, the infection is not simple, but mixed. Antecedently to tuberculous infection frequently comes invasion by the influenza bacillus—the pneumococcus—the systemic weakness produced by zymotic and other diseases, and side by side with the tubercle bacillus itself are found a large variety of pyococci who now find a suitable nidus for their growth. It is to these indeed that, following good authorities as well as recording my own experience and opinion, I venture to think are to be attributed most of the septic phenomena which cast such a cloud over advancing phthisis—e.g., the hectic fever, the emaciation, the sweats, the profuse sputum, the "streptococcus curve," &c. And the recognition of this mixed infection is not only valuable pathologically—it is essential to a satisfactory therapeusis. Next to its recognition the important point regarding the bacillary factor in tuberculous disease is the understanding of the means of entrance and of exit. It is beyond question that environment may be polluted by tuberculous discharges, and that one serious source of tuberculous invasion lies in such polluted environment. Air and earth thus polluted are certainly frequent and extensive agents in the spread of tuberculous disease. Stop this avenue of invasion, and how much subsequent disease might not be prevented. Equally, if not more, important is the great question of tuberculous meat and milk. As regards dairy stock, statistics prove that it is far more common amongst aged milkers than in other classes of stock, with a greater tendency also to generalisation and thus to transmission through meat and milk. Systematic and skilled inspection of the food and milk supply thus stand out as among the most important of the hygienic functions of a government. It is to the credit of English medicine that it has persistently advocated the second factor in tuberculous disease—the constitutional weakness, itself a disease, upon which depends not only successful invasion, but rate and extent of spread. For the healthy human being possesses a resisting power which renders him practically immune against the bacillus so long as he remains healthy and though the disease cannot start without the bacillus, it cannot spread without the susceptibility. For the full understanding of the tuberculous question the English constitutional factor is as essential as the Continental germ factor. We require the union of the two. But whatever its inherent nature we find chemically that it varies wonderfully in degree and that the practical difficulty is to discover in what part of the scale the individual case is to be placed, a difficulty which is often insuperable, for there is absolutely no necessary relation between progress and extent. The fact is that the constitutional factor not only varies in different individuals, from nothing to infinity, but that it varies in the same individual according to the state of the constitutional health. Herein comes the value of the inflammatory origin of phthisis, once so much insisted upon; and hereon also hinges the possibility of reinfection at any subsequent time. The diagnosis of tuberculous disease is primarily bacillary and not histological. Yet how few physicians—I speak of English and Australian physicians, and am careful to exempt our Continental brethren—ever search for the bacillus or even make themselves competent to do so. Outside metropolitan hospitals it is the rare exception to find any such attempt made, and yet certainly a diagnosis, with all that depends thereon, is often only thus obtainable. The bacillary test, however, is defective. There may be no sputum, examination may give simply negative results, and the test itself gives no information as to the presence or extent of the constitutional factor. Hence it requires to be supplemented by clinical examination. Unfortunately neither constitutional weakness nor slight tuberculous infection is necessarily recognisable even by the most skilled clinician. Examination is often suggestive rather than conclusive, and this in the very cases where certainty is most desirable. Who, for example, has not met cases in which he found himself unable to be sure as to the tuberculous infection of fibroid phthisis, apical consolidation, apical pleural adhesion, pleural effusion, pleuro-pneumonia, chronic bronchitis, bronchitic asthma, or disease of bones, skin, &c.? As an invaluable aid in such diagnosis I venture strongly to recommend tuberculin. With Whittaker[1] I hold it established that a local reaction following injections of tuberculin is proof of the existence of tubercle at that point, and that a characteristic febrile reaction after injections of 0·005 or less may be taken as practical proof that tubercle is present somewhere in the system. After more than four years' continuous use of tuberculin I may perhaps claim to speak with some weight upon this point, and I venture to tell this Congress that I have always found tuberculin reliable diagnostically when used with discretion I place preventive treatment as incomparably before everything else. This includes the destruction of all approachable bacilli before their contamination of environment, the disinfection of infected environment, and the prevention of tuberculous infection through air, food, and milk. Some, at least, of these requirements demand State interference if they are to be satisfactorily performed; but it lies, in my opinion, at the door of our profession to do infinitely more than at present attempted. It is almost incredible—yet some years' continued inquiry have conclusively proved it to me—that scarcely a percentage of medical men give any instructions worthy the name for the destruction or disinfection of the sputum, and still less make any inquiry into the condition of the dairy from which the milk of their sick children is obtained, or direct that the unknown milk should be scalded before use. Who, again, pay attention to the killing of bacilli that must have collected in rooms and dwellings frequented by expectorating phthisical patients? And yet, in the absence of these essential precautions, we claim to be treating the case! And, worse still, we permit others—relatives, friends, and strangers—to run known risks of infection without word of warning or advice, with the frequent and unnecessary result of extension of infection

[1] Sajous' Annual of the Medical Sciences, 1892.

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to those who were previously free therefrom. If, therefore, we are to sensibly lessen its ravages the first essential, in my opinion, is the more general recognition that the disease is to some extent infectious, and the spread of information as to the precautions which must be adopted if infection is to be prevented. I am one of those who believe in placing tuberculosis amongst the infectious diseases.

[Mr. Springthorpe here dealt at length with the subject of Tuberculosis, and concluded:]

As regards drugs, I think a lecturer on therapeutics has little to add. We all know the place filled by cod liver oil, hypophosphites, arsenic, quinine, strychnine, iron, the mineral acids, &c. Few probably will deny that we have no specific, that creosote and its allies are of value against sepsis rather than against the bacillus, and that the different symptoms which may arise during the course of the disease require from day to day as well as from year to year all the different combinations of remedies that the greatest experience and the wisest skill can suggest. Symptomatic treatment is not what we should aim at, but in a disease such as tuberculosis is at present it is often our only resort, and from the palliative point of view it is gratifying to know that we can so frequently relieve, even though cure is out of the question. But it would be impossible, even if it were appropriate, in such a paper as this to attempt any particularisation in such matters. Let me end where I began. It is by our preventive measures rather than by our remedial that we shall check this fell disease, which is so widespread that, according to Lord Playfair, it is the only one above the horizon from which we may anticipate the extinction of our race.

Mr. G. A. SYME (Melbourne) followed, addressing himself to the surgical aspects of tuberculosis.

Mr. A. PARK, M.R.C.V.S., exhibited a number of specimens of diseased portions of animals.

Mr. MURRAY-AYNSLEY (Christchurch) thought that they should make a firm protest against persons being sent out from the old country when they were seriously affected.

Mr. GARLAND (Oamaru) brought to the notice of the Congress the results of his treatment of cases with creosote, and advocated that this should be coupled with residence at high altitudes. Patients would often improve in such places without any treatment, and with the creosote treatment many cases would be very hopeful indeed.

Mr. S. S. CAMERON, M.R.C.V.S., said he did not think sufficient emphasis had been laid upon the universality of the disease in all species. The only domestic animals that were comparatively immune were the goat and the donkey. The great trouble in the past had been the want of opportunity for medical men to trace the source of tuberculosis. He took the opportunity of correcting the statement that tuberculosis could not be detected in cooked meat.

Dr. CHAPPLE (Wellington) said that four years ago, when spending a holiday on the west coast of the north island, he was asked to look at some young stock that had been bought for the purpose of being killed and examined. They were what were called "wasters," and doubt existed as to the cause of the disease. So virulent was this disease that whenever farmers noticed that cattle on good pasture began to waste they were sent to the stockyards for sale. An examination proved that the intestinal canal of these animals was studded with tuberculous ulcerations. That opinion was confirmed by Dr. Roberts, and when it became known within a fortnight fifty head of cattle were slaughtered. It was simply want of knowledge that caused the settlers to traffic in these animals, and as soon as it was really understood they were suffering from an infectious disease they were destroyed, and since then there had not been nearly so much tuberculous disease in that part of the colony.

Dr. KENNY (Melbourne) gave instances in his experience of the singular virtue of tuberculin as a diagnostic agent and of its value in treatment.

Dr. LOVE (Brisbane) advocated the public abattoir system, thorough inspection of meat offered for sale, and supervision of dairies. Canada and America were far ahead of the Australian colonies in this respect. In Canada (Ottawa, at any rate) the dairy cattle were subjected to periodical examination by means of tuberculin. In Denmark the authorities had instituted the tuberculin test, and this had been supplemented by a vote of £10,000 from the Government funds for the compensation of owners whose cattle were destroyed. The Central Board of Health in Sydney had instituted an examination on similar lines, and he understood paid 30*s.* a head for every beast which was condemned as tuberculous.

Dr. LINDO FERGUSON (Dunedin) submitted for inspection under the microscope tuberculous matter taken from the eye of one patient and the nose of another.

Dr. A. MARTIN (Wellington) suggested that strong representations should be made to the Government to discontinue the issue of New Zealand bank notes and to close up old clothes' shops. Remarks were also made by other members and

Mr. SPRINGTHORPE, in replying, said it seemed to be thought that because he had shown what the tubercle bacillus could do he wished to sound a pessimistic note. Nothing was further from his thought. He was one of those who believed that more people recovered from tuberculous diseases than ever died from them, but tuberculosis was the biggest disease the profession had to cope with. With regard to the question as to whether tuberculin introduced a reaction in other diseases, he replied that it was considered to be established by Professor Whittaker and others that a local reaction was proof positive of tuberculous disease. So far as he knew there had been no actual case where no tubercle was present, but they must remember there were cases of mixed affection. He thought a local reaction was proof positive, but he said nothing about a general reaction. Under the condition in which bacilli occurred in milk it was found that boiling did destroy most if not all. It was found that for practical purposes boiling or even scalding the milk had the effect of diminishing the number of the bacilli and of reducing their virulence, so that they did not get the result from boiled milk that they would get from unboiled.

Preventing Incurables from Emigrating.

Side by side with the main question there were some important observations on the advisability of taking steps to prevent advanced cases from being sent to the colonies.

Dr. TAYLOR YOUNG (Grafton, N.S.W.), as one of those to whom their professional brethren at home had recommended Australia, said that when he came out he learnt for himself which part of Australia to go to, and thought the profession should try to find out not only how to prevent disease, but how to prevent the wholesale "dumping down" of phthisical patients in Australia. As a Congress they would do good to suffering humanity if they offered a united front and endeavoured to insist on their Legislatures doing something to prevent the introduction of these patients to the colonies. He had seen proof of the introduction of these sufferers on his way across from New South Wales to New Zealand. He found the shipping companies indiscriminately classing together in close cabins dying phthisical patients and young people in whom there was no trace of the disease. On the *Manapouri*, coming from Sydney to Auckland there were three persons all of whom had come out in the same ship of the Orient line for the benefit of their health. He did not wish to dishearten them, but he thought to himself that the medical men at home must have desired to get rid of them. He hoped the Congress would do their best to put before the world the fact that Australia was not the place for these patients; he meant, of course, patients in the later stages of the disease. He was aware that Mr. Sydney Jones of New South Wales was now on the right lines for the early treatment of cases, and he believed that the endeavour to form model farms in the interior for such cases would result in many receiving benefit in the same way as he himself had done.

Dr. LOVE (Brisbane) observed that the death-rate from phthisis in Victoria and Queensland averaged from 12 to 14 per 10,000 per annum; in Great Britain it was about 16; and in New Zealand, which, he was happy to say, was low on the list, it was 6 to 8 per 10,000. If the general public at home were made aware of these figures they would be less inclined to send subjects out. They should also be made aware of the fact that cases of phthisis were now just as numerous among native-born colonists as among foreign-born.

Dr. MULHOLLAND (Melbourne) said it was not the practice at home for medical men to send cases of phthisis to the colonies. It was done on the advice of friends and not on the advice of medical men. He had attended the hospitals in Glasgow and in London, and in no instance had he heard medical men say to their patients that they should go to the colonies. He had heard them tell patients not to go.

The PRESIDENT remarked that there was one point which had struck him in the discussion. There was a certain interesting Bill which had exercised the minds of the people in this colony named the Undesirable Immigrants Bill. He

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was not quite sure whether, if the Bill had been carried into law, they would have had the pleasure of seeing in New Zealand all who were present at the Congress; but it might be that after all there were some points in the Bill which would be of great value to the country.

The following motion was then carried unanimously:—"That a sub-committee be appointed, consisting of Dr. Ogton and Mr. Grace (of New Zealand), Professor Watson and Dr. Hamilton (of South Australia), Dr. Knaggs and Dr. Worrall (of New South Wales), Dr. Love (of Queensland), Professor Allen and Mr. Syme (of Victoria), with power to add to their number, to draw up and report to Congress for approval: (*a*) Printed slips of advice, suitable for general use by medical men in dealing with cases of phthisis; and (*b*) resolutions to be brought under the notice of the Governments of the different colonies, having as their object the general preventative measures deemed necessary for the prevention of the spread of tuberculous disease."

THE CLOSING MEETING OF THE CONGRESS.

The Next Congress.

The PRESIDENT (Dr. Batchelor) said the first business was the choice of the place of the next meeting of Congress. A letter had been received from the medical men of Brisbane inviting the Congress to meet in that city in 1899, and he moved that the invitation be accepted.

Dr. LOVE (Brisbane) supported the motion. The year 1899 had been proposed as the year of the next Congress and he would suggest that the time should be the winter. Brisbane had perhaps the finest climate in the world during the winter months, whereas the summer would, he feared, be found too hot for the comfort of visitors. Any month from May to October would do, and he should say that about July would be preferable. Fine weather could be pretty well depended on at that season.

The motion was carried unanimously.

Mr. GARDE (Brisbane) proposed that Dr. JOHN THOMSON of Brisbane be elected president.

The motion was carried *nem. con.*

Tuberculosis.

The sub-committee appointed to draw up resolutions recommended the approval of the following:—

"1. That this Congress expresses the opinion that it is unwise and cruel to recommend advanced cases of phthisis to seek Australasia as a health resort; that whilst there are many places in the different colonies of great climatic value in the earlier and curable stages the coastal regions generally are to be regarded as unsuited for almost all stages. (Copies of this resolution to be forwarded to the English medical press.) 2. That this Congress recommends for the use of medical men in their routine treatment of phthisis the printed table of advice and information originally drawn up by the Australian Health Society. 3. That recognising the serious extent to which tubercular disease prevails throughout Australasia, the fact that the disease is to some extent an infectious one, spreading through the medium of infected milk, meat, and air, this Congress begs respectfully to bring under the notice of the Governments of the different colonies the necessity which exists for the continuous and skilled inspection, veterinary as well as medical, of cattle and dairy stock of dairies, milk shops, and abattoirs; and for the proper disinfection of the public spittoons, conveyances, buildings, &c., known or suspected to have become infected. The Congress also strongly urges the general use of tuberculin as a test for the presence of tubercular disease in dairy and other stock."

Mr. SPRINGTHORPE moved the adoption of the resolutions. The sub-committee was representative of each colony and the resolutions were arrived at unanimously.

The motion was carried.

Testing the Vision.

The sub-section concerned with eye, ear, and throat diseases presented the following report:—

"1. That the Governments of the different colonies should take steps to ensure the proper testing of the vision of all men who are employed either at sea or in railway services whose duties are such that the lives of others depend on the acuteness of their sight either for form or colour.

"2. That all examinations of vision should be made by a properly qualified ophthalmic surgeon.

"3. That a high standard of vision and perfect colour sense should be insisted on for all men who are engaged as deck hands at sea and who have to undertake duty on the look-out or in steering. Also, that such a standard be fixed for those engaged in the engine-room as will suffice for their own safety and that of the ship.

"4. That a high standard be fixed for vision and perfect colour sense required in all deck officers of ships, that they be re-examined on each promotion, and after reaching the rank of master at intervals of five years.

"5. That the attention of the different Governments be called to the report of the Committee on Colour Vision presented to the Houses of Parliament in June, 1892, and to the report of the Council of the British Medical Association on the efficient control of railway servants' eyesight published in the same year, and that the standards recommended in these reports be taken as the basis on which the requirements of vision should be framed.

"6. That the attention of the different Governments be especially directed to the law passed in the State of Alabama in 1887 dealing with railway servants' eyesight, entitled 'An Act for the Protection of the Travelling Public against Accidents caused by Colour-blindness and Defective Vision,' as a model on which suitable legislation might be based.

"7. In order to put in a definite form the standard that should be aimed at the Congress suggests that no candidate be allowed to enter the dangerous services unless he is free from any chronic inflammation of the conjunctivæ or lids; he must be free from strabismus, and possess perfect equilibrium of the external ocular muscles; his distant vision must not be less than ⅚ in one eye and ⅚ with the other without glasses, the tests to be made with Snellen's types; he must have a perfect colour sense, tested both with Holmgren's wools and with distant colour tests under varying conditions; and he must also have a normal field of vision for both form and colour. Hypermetropia of more than one diopter should be a bar to entering the services."

Dr. LINDO FERGUSON (Dunedin) proposed the adoption of the resolutions. They were the result of a discussion, and it was thought that if they were adopted and forwarded to the various Governments they might pave the way to legislation which would lead to the greater safety of the travelling public. Some of the instances given during the discussion were enough to make one's hair stand on end.

The motion was carried.

The proceedings terminated with various complimentary votes of thanks to all who had taken part in what must be regarded on all sides as a most successful gathering.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen have passed the First Examination of the Board in the subjects indicated, under the "four years" regulations, at the April quarterly meeting of the Examiners, viz.,

Part I., Chemistry, including Chemical Physics:

Gould, Horace John, Middlesex Hospital.
Parlett, Frank, private study.

Part II., Materia Medica:

Abbott, Horatio White, Charing-cross Hospital.
Aldred, Fred Marsden, University College, Liverpool.
Beck, William, Aberdeen and Edinburgh Universities.
Beley, George, St. Thomas's Hospital.
Blackburn, Vernon Kent, Firth College, Sheffield.
Blackstone, Willoughby Arthur, University College, London
Campbell, Alfred, Sydney and Edinburgh Universities.
Cogswell, Philip Dare, St. Mary's Hospital.
Dunkin, Silas Ethelbert, Charing-cross Hospital.
Dury, George Kennion, Owens College, Manchester.
Dutton, William, Owens College, Manchester.
Foster, George Muir, University College, London.
Geach, Robert Neville, St. Bartholomew's Hospital.
Henchley, Albert Richard, Middlesex Hospital.
Millar, Alexander Fleming, St. Thomas's Hospital.
Moore, Eugene, Guy's Hospital.
Palmer, Charles John Linton, University College, Liverpool.
Preston, John Alexander, Queen's College, Belfast.
Provis, Cuthbert Howard Ralston, St. Bartholomew's Hospital.
Roberts, Harry Trist, Charing-cross Hospital.
Rooke, Frederick James Faulkland, Middlesex Hospital.
Salmon, Charles Arthur Craven, Guy's Hospital.
Stamford, Robert Basil, Guy's Hospital.
Treusch, John Benjamin August, Guy's Hospital.
Tucker, William Hancock, St. Thomas's Hospital.
Williams, Herbert Stephen Edgcumbe, St. Thomas's Hospital.
Wilson, Graham Lionel John, St. George's Hospital.
Worts, Charles Clifford, Guy's Hospital.
Young, Bertram Michell, St. Thomas's Hospital.

Part III., Elementary Physiology:

Alliott, Richard, Oxford University and St. Thomas's Hospital
Butler, Thomas Langton, St. Mary's Hospital.
Clemens, James Ross, St. Thomas's Hospital.
Duncan, John Marie Sloane Duncan, London Hospital.
Edwards, William Howard, Guy's Hospital.
Leathem, Alfred Newman, Charing-cross Hospital.
Molineux, Bernard Newmarch, St. Thomas's Hospital.
Nicholls, Ernest Albert, London Hospital.
Nicol, Burton Alexander, Charing-cross Hospital.
Pilcher, Cecil Westland, Oxford University.
Seville, George Edward, Owens College, Manchester.
Thompson, Arthur, St. Bartholomew's Hospital.
Widegren, Mathias Wilhelm Eberhard, St. Thomas's Hospital.

The following gentlemen passed the First Examination of the Board in the subjects indicated, under the "five years," regulations, at the April quarterly meeting of the examiners:—

Part I., Chemistry and Physics:

Ackery, Edward Faulkner, private study.
Adam, Thomas, Firth College, Sheffield.

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Bartlett, Basil Sorley, St. Paul's School, West Kensington, and University College, London.
Bennett, Francis Grey, Cambridge University and University College, London.
Clark, Harold Gordon, University College, Bristol.
Cohen, Edward, Guy's Hospital.
Coke, William Fran is Harriott, St. George's Hospital.
Compton, Spencer Langley, University College, Bristol.
Coombes, Henry Reginald, Westminster Hospital.
Dixon, Godfrey Brookes, Charing-cross Hospital.
Donaldson, Samuel, St. Mary's Hospital.
Drabble, Charles Clement, Firth College, Sheffield.
Duprey, George Perry, Middlesex Hospital.
Fagan, Horace Charles John, St. Paul's School, West Kensington.
Fenton, Thomas Gerald, St Thomas's Hospital.
Forshaw, William Herbert, Firth College, Sheffield.
Foulds, Matthias Frederick, Owens College, Manchester.
Griffith, Richard, London Hospital.
Hardenberg, Emile John Frank, Guy's Hospital.
Hobbs, Albert Remington, St. Mary's Hospital.
Holroyd, Benjamin, Yorkshire College, Leeds.
Hoyle, John, Owens College, Manchester.
James, Herbert, Merchant Venturers School, Bristol.
Jaques, Robert, University College, Liverpool.
Jellicoe, Stanley Coleman, Middlesex Hospital.
Jones, Ernest Guy, Owens College, Manchester.
Kelly, Thomas Thelwell, Middlesex Hospital.
Kilpatrick, James Armstrong, University College of South Wales, Cardiff.
Kroenig, Victor Richard Fowell, King's College, London.
Lawson, James Ward, Charing-cross Hospital.
Leach, Herbert, Yorkshire College, Leeds.
Lister, Walter, Yorkshire College, Leeds.
Littlejohn, Edward Salterne, St. Paul's School, West Kensington.
Meadows, Sydney Manvers Woolner, Middlesex Hospital.
Nicholson, William, Owens College, Manchester.
Pitts, Arthur Gentry, Charing-cross Hospital.
Pooley, John Milnes, St. Mary's Hospital.
Potter, Godfrey Russell, Yorkshire College, Leeds.
Reardon, Arthur Francis, St. Thomas's Hospital.
Reid, Douglas Harold, Otago University and St. Thomas's Hospital.
Robinson, James Frederick, Birkbeck Institute and Guy's Hospital.
Rogers, Edward Norman Tilly, Middlesex Hospital.
Sayer, Thomas, Yorkshire College, Leeds.
Seager, Frank Randolph, Mason College, Birmingham.
Sly, Alfred Victor William, University College, London.
Sodenberg, John Emil, Westminster Hospital.
Staniforth, Henry Edward, Firth College, Sheffield.
Stevenson, Francis Daniel, St. George's Hospital.
Terry, Reginald Herbert, Guy's Hospital.
Thomson, Allen Bernard, King's College, London.
Vores, Cyril Preston, Westminster Hospital.
Wakefield, Walter, Mason College, Birmingham.
Wood, Maurice Dunbar, Guy's Hospital.
Wynne, Graham Shaw Arnold Smith, St. Bartholomew's Hospital.
Young, William John, University College, Liverpool.

Part II., Practical Pharmacy:

Anderson, William Monro, Charing-cross Hospital.
Bannerman, Walter Biggar, London Hospital.
Cazaly, William Henry, St. Bartholomew's Hospital.
Chaplin, Henry Ayrton, St. George's Hospital.
Cohen, Edward, Guy's Hospital.
Cory, Samuel Henry Gilbert, St. Mary's Hospital.
Cruise, Richard Robert, St. Mary's Hospital.
Douglass, Percy Clarence, St. Mary's Hospital.
Douse, Thomas Alexander, Charing-cross Hospital.
Evans, Frederick Hudson, King's College, London.
Fowler, Edwin Samuel George, Yorkshire College, Leeds.
Francis-Williams, Cecil Hughes, St. George's Hospital.
Graham, Allan Gordon, St. Thomas's Hospital.
Hammerton, George Herbert Leonard, Firth College, Sheffield.
Harrison, William Walter, Guy's Hospital.
Hughes, Robert, Owens College, Manchester.
Hunt, Albert William Dunning, Middlesex Hospital.
Jones, Richard Arthur, Charing-cross Hospital.
Kirkconnel, Edward Birchall, Owens College, Manchester.
Lewis, Arthur Daniel, Guy's Hospital.
Mossop, Charles Henry, Guy's Hospital.
Newham, Hugh Basil Greaves, St Thomas's Hospital.
Newling, Harry Tudor, St. Mary's Hospital.
Outred, Charles Deane, Guy's Hospital.
Pearson, Thomas, Charing-cross Hospital.
Powell, John Edward, Guy's Hospital.
Richardson, Walter Silverwood, Guy's Hospital.
Scott, Aleck Lauriston, St. Bartholomew's Hospital.
Skevington, Joseph Oliver, St. Mary's Hospital.
Smallwood, Matthew Edmund, University College, Liverpool.
Smith, Ernest George, St. Bartholomew's Hospital.
Smith, Malcolm Arthur, Charing-cross Hospital.
Symes, Ernest, University College, Bristol, and St. Mary's Hospital.
Walker, Herbert John, King's College, London.
Walton, Henry Beckles Gall, St. Mary's Hospital.
Watt, James George, Guy's Hospital.
Wingate, Basil Fenton, St. Mary's Hospital.
York, Thomas, Westminster Hospital.
Young, William John, University College, Liverpool.

Part III., Elementary Biology:

Adams, Ernest Beadon Dixon, St. Bartholomew's Hospital.
Adams, Henry Cyril, St. Bartholomew's Hospital.
Adam, Thomas, Firth College, Sheffield.
Alderman, Harry Cole, Yorkshire College, Leeds.
Anderson, William Monro, Charing-cross Hospital.
Arch, Arthur James, Mason College, Birmingham.
Ascough, Matthew Thomas, Owens College, Manchester.
Ashley, Herbert Ernest, St. Bartholomew's Hospital.
Attwood, Richard Denton, Guy's Hospital.
Awdry, Arthur John, Mason College, Birmingham.
Aylen, Ernest Vaughan, London Hospital.
Bagge, James Charles, St. Thomas's Hospital.
Barrett, Henry Edward, St. Mary's Hospital.
Bartlett, Charles Eastty, Guy's Hospital.
Bartlett, John Allen, University College, Bristol.
Beale-Browne, Thomas Richard, Guy's Hospital.
Bennett, Kenneth Hugh, University College, London.
Bishop, Frederick Michael, St. Bartholomew's Hospital.
Blizzard, Walter Harry Stanley, Mason College, Birmingham.
Body, Thomas Munn, St. Bartholomew's Hospital.
Bond, Cecil William, St. Mary's Hospital.
Bostock, Arthur Hastings, St. Bartholomew's Hospital.
Bramsbury, Henry Arthur Bramsdon, St. George's Hospital.
Breeze, Joseph Ernest, Mason College, Birmingham.
Broomhall, Benjamin Charles, London Hospital.
Burd, Reginald Shirley, Mason College, Birmingham.
Butler, Archibald, St. Bartholomew's Hospital.
Chalk, Charles Launder, St. Bartholomew's Hospital.
Challans, Frank, London Hospital.
Chaplin, Henry Ayrton, St. George's Hospital.
Clark, John Wilders Hambly, London Hospital.
Clarke, Arthur Allen Foster, St. Thomas's Hospital.
Coates, John, St. Thomas's Hospital.
Cohen, Edward, Guy's Hospital.
Coke, William Francis Harriott, St. George's Hospital.
Compton, Alwyne Theodore, St. Bartholomew's Hospital.
Cory, Harold Myrie, Mason College Birmingham.
Cox, George Ralph, St. Mary's Hospital.
Cross, Francis George, Guy's Hospital.
Cruickshank, Alex Douglas Macdonell, London Hospital.
Curtis, Frederick, Guy's Hospital.
Da Silva, Joseph Clement, Guy's Hospital.
Davey, James, London Hospital.
Davidson, William Henry, London Hospital.
De Carteret, Sylvester, St. Bartholomew's Hospital.
Donaldson-Sim, Ernest Alfred, St. Bartholomew's Hospital.
Downton, Arthur Sydney, London Hospital.
Duigan, Victor John, St. Bartholomew's Hospital.
Duncan, Emile Horace George, St. Bartholomew's Hospital.
Dunstan, Robert, London Hospital.
Edwards, Arthur Baynes, St. Bartholomew's Hospital.
Edwards, Thomas Henry, St. Thomas's Hospital.
Ellis, Frank Heygate, St. Bartholomew's Hospital.
Enderby, Thomas Sidney Dawber, St. Thomas's Hospital.
Faber, Hamilton Stanley, St George's Hospital.
Felton, Edgar Hall, Guy's Hospital.
Forrest, Frank, Owens College, Manchester.
Fort, Percy Reginald, St. Mary's Hospital.
Foster, Edward Cecil, University College, London.
Foulkes, Samuel Newall, London Hospital.
Furley, George Frederic, St. Bartholomew's Hospital.
Gaitskell, Charles Edward, Guy's Hospital.
Garle, Robert Hubert Williamson, St. Thomas's Hospital.
Garstang, Walter, Owens College, Manchester.
Gauntlett, Owen Binns, St. Thomas's Hospital.
Gilbert, Walter Raleigh, St. Thomas's Hospital.
Gill, Clifford Allchin, University College, London.
Gleig, Percy North, Charing-cross Hospital.
Goodair, Percy Hamilton, St. Thomas's Hospital.
Gould, Alexander Cyril, St. Mary's Hospital.
Graham, Cecil Irving, St. Mary's Hospital.
Greaves, Ernest Walters, St. George's Hospital.
Green, Arthur Llewellyn Baldwin, St. Bartholomew's Hospital.
Griffin, Gerald, London Hospital.
Grimshaw, Charles Richard Atkinson, St. Bartholomew's Hospital.
Hagger, Roger Lionel, University College, London.
Hanbury, Langton Fuller, St. Thomas's Hospital.
Hanbury, Reginald Janson, St. Bartholomew's Hospital.
Hardenberg, Emile John Frank, Guy's Hospital.
Hay, Malcolm Bell, University College, London.
Haydon, Maurice Willoughby, St. Thomas's Hospital.
Haydon, Walter Turner, St. Thomas's Hospital.
Hayne, Percy Alfred, St. George's Hospital.
Hepper, Evelyn Charles, St. Bartholomew's Hospital.
Hertslet, Lewis Eccles, London Hospital.
Heseltine, Verner George, St Bartholomew's Hospital.
Hingston, Clayton Alex. Francis, Middlesex Hospital.
Hollick, Bernard Septimus, Mason College, Birmingham.
Holroyd, Benjamin, Yorkshire College, Leeds.
Horsey, Frederick Samuel, St. Mary's Hospital.
Hosford, Alfred Stroud, University College, London.
Hoyle, John, Owens College, Manchester.
Hughes, Leslie Edward, St. Bartholomew's Hospital.
Humphreys, George Jacks, St. Bartholomew's Hospital.
Hutchinson, Thomas, Mason College, Birmingham.
Inness, William James Deacon, St Mary's Hospital.
James, Herbert, Merchant Venturers School, Bristol.
James, William Warwick, Middlesex Hospital.
Jaques, Robert, University College, Liverpool.
Jellicoe, Stanley Coleman, Middlesex Hospital.
Johanson, Edward Georg, Westminster Hospital.
Johnson, William Gerold Greaves, St. Bartholomew's Hospital.
Jones, Ernest Guy, Owens College, Manchester.
Jones, John Pugh, University College of South Wales.
Jupp, Ralph Tennyson, Mason College, Birmingham.
Keigwin, George John William, London Hospital.
Kempthorne, Hugh Dorset, Guy's Hospital.
Kirton, David Henry, Mason College, Birmingham.
Kroening, Victor Richard Fowell, King's College, London.
Leach, Herbert, Yorkshire College, Leeds.
Leah, Frederick Arthur, Owens College, Manchester.
Leonard, Napoleon, St. Bartholomew's Hospital.
Lewis, William Spencer, Owens College, Manchester.
Lipscomb, Neil, St. Bartholomew's Hospital.
Lloyd, Robert Archer, St. Bartholomew's Hospital.
McBride, Charles Gordon, St. Thomas's Hospital.
Maitland, Vivian Gray, Mason College, Birmingham.
Marsh, Charles Alfred, London Hospital.
Marrett, Henry Norman, St. Bartholomew's Hospital.

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Mead, Edgar Preston, London Hospital.
Meadows, Sydney Nanvers Woolner, Middlesex Hospital.
Mence, William Charles, St. Thomas's Hospital.
Miles, Thomas George, Guy's Hospital.
Miles, William Percival, St. Bartholomew's Hospital.
Mitchell, Talbot Carter, Yorkshire College, Leeds.
Morcom, Theophilus William, London Hospital.
Moore, Leonard Augustine, University College, Bristol.
Muter, Charles William, King's College, London.
Newport, Harry MacGregor, Charing-cross Hospital.
Nicholson, William, Owens College, Manchester.
Norton, John Chalmers, University College, Bristol.
Oades, Geoffrey Smyth, Merchant Venturers School, Bristol.
Paget, Walter Gray, St. Bartholomew's Hospital.
Palmer, Charles Ambrose, St. Thomas's Hospital.
Parker, Christian, London Hospital.
Parker, Herbert Alban, St. Thomas's Hospital.
Pascoe, James Sydney, Charing-cross Hospital.
Peake, Sydney John, King's College, London.
Perkins, Eric McLeod, London Hospital.
Perkins, Philip Meyler, St. Bartholomew's Hospital.
Pern, Lionel, Guy's Hospital.
Petty, James Bertie, Charing-cross Hospital.
Pollock, Aubrey Kearinge Halliday, St. Bartholomew's Hospital.
Porter, Charles Robertson, London Hospital.
Potter, Godfrey Russell, Yorkshire College, Leeds.
Reid, Douglas Harold, St. Thomas's Hospital.
Reilly, Percy George, London Hospital.
Renshaw, William Cooke, Owens College, Manchester.
Rice, Frank Melville Pitcairn, St. Bartholomew's Hospital.
Richards, Ralph Conrad, University College, London.
Ridge, Edwyn Manners, London Hospital.
Roberts, Thomas Howard Frederick, Guy's Hospital.
Robertson, James Fenwick, St. Bartholomew's Hospital.
Rogers, Edward Norman Tilly, Middlesex Hospital.
Saunders, Leonard Douglas, St. George's Hospital.
Sayer, Thomas, Yorkshire College, Leeds.
Serpell, Hugh Hamilton, St. Bartholomew's Hospital.
Seagrove, George Mervyn, St. Bartholomew's Hospital.
Sich, Hugh Hamilton, St. George's Hospital.
Sime, Frank Wheler, Guy's Hospital.
Skelton, Dudley Sheridan, London Hospital.
Smale, Herbert, St. Mary's Hospital.
Small, Robert, St. Thomas's Hospital.
Smith, Ernest George, St. Bartholomew's Hospital.
Smith, George Percy, Mason College, Birmingham.
Smith, Robert Howard Newby, London Hospital.
Sodhi, Makham Singh, London Hospital.
Soper, Gerald Morgan, St. Mary's Hospital.
Spitta, Harold Robert Dacre, St. George's Hospital,
Staniforth, Henry Edward, Firth College, Sheffield.
Steele, William Lawrence, University College, London.
Steen, Wilfred Alexander, London Hospital.
Swindale, Henry Vernon, Middlesex Hospital.
Symons, Angelo Nelson, London Hospital.
Tayler, Frederick Ernest, St. Bartholomew's Hospital.
Terry, Reginald Herbert, Guy's Hospital.
Thomson, Frederic William, Firth College, Sheffield.
Thorne, Richard Thorne, St. Bartholomew's Hospital.
Tilbury, Robert, Guy's Hospital.
Tovey, Arthur Hamilton, St. George's Hospital.
Tordiffe, Arthur Murray Stewart, University College, Bristol.
Turle, James Evan, University College, London.
Turner, Douglas Duke, St. Thomas's Hospital.
Tweedie, Alexander Robert, St. Bartholomew's Hospital.
Upcott Gill, Geoffrey Allen, University College, London.
Wadmore, James Christopher, University College, Bristol.
Walker, Ernest, Charing-cross Hospital.
Walker, Frederick George, St. George's Hospital.
Wallis, Vernon Montague, Guy's Hospital.
Walters, Charles Ferrier, University College, Bristol.
Walters, Joseph, University College of South Wales, Cardiff.
Webb, Louis, Guy's Hospital.
Welch, Frederick Day, London Hospital.
Wellington, Arthur Robartes, St. Mary's Hospital.
Whitaker, Roy Henry Rollinson, St. Bartholomew's Hospital.
Willett, Edward Lightfoot, Owens College, Manchester.
Willey, Frederick, Yorkshire College, Leeds.
Williams, Arthur Harold, London Hospital.
Wilson, Frederick Ernest, University College, London, and Guy's Hospital.
Wilson, Richard Eldred, London Hospital.
Winder, Maurice Guy, St. Bartholomew's Hospital.
Young, Thomas, St. Bartholomew's Hospital.
Young, William John, University College, Liverpool.

SOCIETY OF APOTHECARIES OF LONDON, APRIL, 1896.—The following candidates passed in the undermentioned subjects:—

Surgery.—H. L. Billett, E. L. Colebrook, Royal Free Hospital; F. C. B. Gittings, Middlesex Hospital; W. A. Harmer, Aberdeen; C. G. Higginson, A. Hilton, Manchester; E. C. Hort, Cambridge and Guy's Hospital; C. E. Long, Royal Free Hospital; A. V. Moreton, Manchester; A. T. Morgan, Bristol; and S. F. Smith, St. George's Hospital.

Medicine, Forensic Medicine, and Midwifery.—E. C. Bond, A. M. Browne, E. L. Colebrook, Royal Free Hospital; L. F. Forbes-Winslow, Charing-cross Hospital; F. C. B. Gittings, Middlesex Hospital; and C. E. Long, Royal Free Hospital.

Medicine and Forensic Medicine.—C. A. K. Renshaw, Cambridge and Manchester; and W. L. Roberts, St. Mary's Hospital.

Medicine and Midwifery.—T. B. Bokenham, St. Bartholomew's Hospital; and M. Orange, Royal Free Hospital.

Medicine.—A. N. Clemenger, St. George's Hospital; and T. G. King, London Hospital.

Forensic Medicine and Midwifery.—W. A. Davidson, Birmingham and London; R. N. De Beauvais, Aberdeen and St. Mary's Hospital; H. Herbert, London Hospital; and C. N. Saldanha, Madras.

Forensic Medicine.—F. C. Collinson, Leeds; F. R. M. Heggs, Birmingham; and A. W. Shea, Dublin and Sheffield.

Midwifery.—H. L. Billett, Royal Free Hospital; and C. A. A. Coulthard, St. George's Hospital.

The diploma of the Society was granted to the following candidates, entitling them to practise Medicine, Surgery, and Midwifery:—E. C. Bond, E. L. Colebrook, F. C. Collinson, L. F. Forbes-Winslow, F. C. B. Gittings, W. A. Harmer, A. Hilton, E. C. Hort, C. E. Long, and A. T. Morgan.

LITERARY INTELLIGENCE.—Messrs. Frank Weir and Co., of New York, announce the first number of a monthly periodical, which will contain in the form of a classified subject-index the titles of all papers that have appeared during the previous month in the medical journals of the United States and Canada and in the published Transactions of the various medical societies of these countries.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on April 15th, Dr. Mutch, President, being in the chair.—Mr. Laws read a paper on Colour Vision, illustrated by pendulum apparatus and colour-top, of which an abstract will be found on p. 1125.—Dr. W. B. Ransom showed the Reaction to Iodine of several specimens of Gluten Flour from well-known manufacturers. All the specimens contained a considerable amount of starch except one of Soya flour.—Dr. Hunter showed a Stomach containing two Perforated Ulcers from the body of a young woman who had died after a short attack of acute abdominal pain. He also showed Enlarged Mesenteric Glands, presumably tuberculous, from a child two months old.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The seventh meeting of the session was held on April 8th in the Medical Library of University College, Bristol.—Dr. P. W. Williams mentioned that the Huxley Memorial Fund was now started and that he would be glad to receive subscriptions to the same.—Dr. P. W. Williams showed a patient with Cerebral Spastic Diplegia and a patient with Early Intrinsic Malignant Disease of the Larynx.—Mr. J. Swain made some remarks on the second patient.—Mr. F. W. Crossman (for Dr. Crossman) showed a specimen of Perforation of the Duodenum.—Mr. T. Carwardine read an interesting paper on Dermoid of the Neck.—Mr. Munro Smith, Mr. J. Swain, and Dr. Edgeworth commented on the paper.—Mr. Paul Bush read a paper on a case of Compression of the Brain due to Rupture of the Middle Meningeal Artery which he had treated by operation and which ended in complete recovery.—Dr. Michell Clarke remarked on the paper.—Mr. Munro Smith gave a Lantern Demonstration of Photographs by "x" Rays; and also of cases of Chancres on the Fingers, &c.—Dr. Shingleton Smith and Mr. James Taylor gave a Lantern Demonstration of some of the ordinary Human Parasites.—Dr. Michell Clarke and Mr. James Taylor gave a Lantern Demonstration of the Nerve Cells and Fibres stained by Golgi's method.

DIPHTHERIA IN LONDON.—The data for the third period of four weeks of the present year are now before us with regard to diphtheria in London. They are not very encouraging. It would appear that in the four weeks ended on March 21st the notifications of the disease in the metropolis amounted to a total of 1009, or an average of 252 weekly, and that all but two of the sanitary areas of the county of London were invaded. Camberwell had as many as 119 notified cases, and the four districts which had upwards of 50 notifications accounted for a total of 304, or 30 per cent. of the 41 invaded areas. The corresponding period of 1895 saw only 488 notifications, and the two preceding monthly periods of this current year 988 and 1054 respectively. The registered deaths in the period ended on March 21st were 191, or 48 weekly, and were at the rate of nearly 19 per cent. of the notified cases. Since the close of this period—i.e., since March 21st—the weekly deaths have been 51, 45, 45, and 42 respectively. The average has thus been 46, a slight decline on that of the preceding four weeks. Last week the admissions to hospital were 90, against 105, 82, and 78 in the preceding three weeks. The patients remaining in hospital on Saturday last numbered 671, as compared with 712 and 706 on the corresponding Saturdays of February and March. In the last three weeks the registered deaths from diphtheria in the West Ham district have been as many as 6, 8, and 10, this suburb of London remaining in an unenviable position.

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MESSRS. ALLEN AND HANBURYS have installed at 48, Wigmore-street, Cavendish-square, a complete apparatus for the demonstration of the new mode of photography.

PRESENTATION TO A MEDICAL MAN.—At the Plymouth terminus of the London and South Western Railway on the occasion of presenting, on Saturday last, certificates to the successful members of the Friary Ambulance Class, Dr. Wm. A. Buchan of Plymouth was the recipient of an engraved silver cigarette case for his instructive lectures on First Aid.

NORTH-WEST LONDON CLINICAL SOCIETY.—A clinical meeting of this society was held on April 15th. Dr. Harry Campbell showed two cases of Hemiplegia, both in middle-aged women. The first case was a typical example of cerebral hæmorrhage. Consciousness had been lost and left-sided hemiplegia rapidly developed. In this case almost complete recovery had taken place. The second patient had suffered from dilated heart, and paresis followed by paralysis of the right arm ensued. The arm had remained absolutely powerless. Dr. Campbell regarded the second case as one of arterial thrombosis.—Dr. Sibley showed a case of Psoriasis in a girl. The case had done well under oil of cade locally and arsenic internally. The lesions were abundant on the scalp and trunk, but there were none upon the elbows or knees.—Mr. Jackson Clarke showed a case of Raynaud's Disease in a woman aged thirty-five. There was a sloughy ulcer on the middle finger of the left hand. Mr. Clarke also showed an elderly woman who had suffered from Osteo-arthritis for thirty-three years. Nearly all the larger joints and the temporo-maxillary articulations were affected. The elbow joints were greatly enlarged and the tense fluctuating swellings showed that not only was the capsule distended, but that there were hernial protrusions of the synovial membrane beyond the capsule.—Dr. Sibley showed an unmarried woman aged twenty-eight with a large firm tumour occupying the lower half of the abdomen. The patient had suffered no inconvenience beyond discomfort caused by the weight of the growth. Menstruation had not been disturbed. Dr. Sibley believed it to be a large solid tumour of the left ovary.

THE DIFFUSION OF SMALL-POX.—Only one death from small-pox was registered last week among the thirty-three large towns dealt with by the Registrar-General; this was at Leeds. No death has occurred in London since the two registered in the week ending March 7th. The notified cases during the four weeks ending March 21st numbered only 23, and of these 9 belonged to Islington, 5 to Hackney, and 4 to Lambeth. In the preceding four weeks the total notified cases in London had been exactly double this number. At Gloucester matters have not improved. The Sanitary Committee reported up to Thursday of last week a total of 1302 cases in the city. In the week ended on that day the fresh cases had been 201, the deaths in hospital 25, and outside the institution 20, leaving in hospital 248 patients. The discharges in the week numbered only 18. These figures are not hopeful. The epidemic has now reached parts of the city hitherto free, the courts, slums, and alleys being invaded. The Town Clerk has written a strong letter to the Press on the present attitude of the authorities local and central towards the vaccination question, pointing out that prior to any move made at Gloucester either on the part of the central board, or of the local board of guardians, the corporation had got the machinery for securing the vaccination of the city into operation. He denies the efficacy of the staff provided by the guardians, even under pressure, to cope with the heavy arrears of unvaccinated persons. The fall in the numbers of new cases in the three days which ended on Monday of last week has not been maintained. The attacks reported on Tuesday increased to 51, although this number included some cases which occurred on the Monday. It would appear that much complaint has been made as to the haphazard manner in which isolated families have been visited with the view of ascertaining whether any members had sickened in consequence of the primary invasion of the household. Some families are stated to have been left unvisited for four weeks together with only one week's pay. As a consequence of this neglect members of their households had been out mixing with the general public. Instances of gross carelessness have been reported, such as the visiting of the homes of persons where those dead of small-pox were lying and the crowding around patients by their neighbours in the foolish though natural desire of saying good-bye prior to removal to hospital. A man with the disease out upon him has been discovered in a public thoroughfare, and another patient escaped from his residence and was only captured after being some hours at large. These are but instances of the difficulties with which the sanitary officials have to contend. In addition, failures to notify cases have been met with. In the case of one family, thirty attacks have been traced to concealed occurrences in the house. Meantime, vaccination and revaccination proceed, and in the week ended April 18th the persons vaccinated by the public vaccinators numbered 3285, while the work of private practitioners probably brings the total up to nearly 4000. Upon the direct representation of the corporation the guardians have acquiesced in the proposal that they should appoint additional vaccinators for the purpose of more quickly securing the protection of the unvaccinated who are still very numerous in the city. The corporation have done a good work by carrying on a house-to-house visitation for the same purpose. The Local Government Board, at the special request of the guardians, dispatched Dr. Sweeting to Gloucester on Wednesday and thus once again showed their practical desire to aid the local bodies in their efforts to defend the town against further inroads of small-pox. Dr. Coupland, on behalf of the Royal Commission on Vaccination, has again visited the city and has proceeded further with his detailed investigation of the circumstances of the outbreak in so far as they may have interest for the Commission. A Mr. Pickering has announced his ability to treat successfully all cases of small-pox by a hydropathic method and a local chapel was actually placed at his disposal as a temporary hospital for the treatment of those severer cases which could not be treated in their homes; but the hostile attitude of the citizens, provoked rather by the aggregation of small-pox cases in a populous neighbourhood than by any inherent distrust in Mr. Pickering's folly, has interfered with the smoothness of that gentleman's proceedings. Social events continue to be postponed, and the Bishop of Gloucester has requested candidates for holy orders coming up to the postponed ordination to be revaccinated before entering the city. Funds still flow in for the nursing of poorer patients, and charity in other forms is cheerfully sent in to the authorities. The grand jury of the Easter quarter sessions of the peace at Gloucester have made a presentment strongly in favour of the necessity of vaccination at the present juncture, and have expressed their belief that the duty of administering the Vaccination Acts should be withdrawn from guardians and placed in the hands of the Local Government Board or some other independent body.

Parliamentary Intelligence.

CURRENT NOTES.

The Budget.

THE Chancellor of the Exchequer (Sir Michael Hicks-Beach) made his Budget statement on Thursday, April 16th, and in the course of it gave some interesting information as to the changes in the popular taste in the matter of drink of one kind and another. For instance, he said that whereas in the year 1875 the consumption of cocoa was 5 oz. per head of the population, double that amount was consumed last year, while in the matter of coffee against 21 oz. per head consumed forty years ago there was last year only 11 oz. per head. Tea, he said, is driving coffee out of the market "because it is cheaper, because it requires less milk and because it is easier for people to make." With regard to spirituous drink, he was able to assure the House that British and Irish spirits are entirely displacing foreign spirits, that since the year 1870 the consumption of the latter has declined 23 per cent., while the consumption of the former has increased by 5 per cent. The taste for rum, except in the most extraordinarily cold weather, would appear to be declining in England, and the explanation given was that "people prefer, as they do in wine, what I may call a lighter and cleaner spirit." The figures with regard to tea show an increased consumption during the year of no less than 10,000,000 pounds weight, and point to the trade being rapidly transferred from China to India and Ceylon. In 1875 more than 122,000,000 lb. came from China, and in 1895 only 31,500,000 lb., while as to India and Ceylon there came from these countries in 1875 23,220,000 lb., and in 1895 190,500,000 lb. With regard to tobacco, Sir Michael Hicks-Beach said there has been a great increase in the consumption of cigarettes, largely due, as he suggested, to the taste

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of youths in this direction, and with regard to wines he said that the stronger kinds are decreasing, while the lighter sorts are increasing in popularity. As to the Budget proposals, it is perhaps enough to say here that they do not include any increase in taxation.

Mining Accidents.

The Government has introduced in the House of Commons a Bill to amend the Coal Mines Regulation Act of 1887 in the direction of increasing the precautions against accidents in fiery and dusty mines.

The Vaccination Commission.

Mr. Chaplin, President of the Local Government Board, has made it known that he has availed himself, and intends to continue to avail himself, of every opportunity presenting itself of informing boards of guardians that they have no legal right whatever to suspend action for the enforcement of the vaccination laws pending the issue of the report of the Royal Commission.

HOUSE OF COMMONS.

THURSDAY, APRIL 16TH.

Treatment of Inebriates.

Mr. Knowles asked the Secretary of State for the Home Department if he would introduce at an early date a Bill to carry out the report from the Departmental Committee on the treatment of inebriates.—Sir Matthew White Ridley replied: The Bill is in draft, but I am afraid I cannot say when I shall be able to introduce it. The establishment of inebriates' reformatories and the detention in them for long periods of persons habitually convicted of drunkenness are, as the hon. member is aware, an entirely new departure in our methods of dealing with crime, and the details of the measure, especially from a financial point of view, require the most careful consideration.

Poor-law Schools.

Mr. Chaplin, in reply to a question by Mr. Bemrose, said the Local Government Board were aware that considerable numbers of children had been retained of late in London workhouses for want of school accommodation and for other reasons, and that the arrangements where they were so retained were not in all cases satisfactory. Questions as regards school accommodation for Poor-law children had necessarily been much in abeyance pending the inquiry of the Poor-law Schools Committee.

Cycle Accidents in London.

Sir Matthew White Ridley, replying to several questions on this subject, said: I have obtained a return which has been prepared by the police after careful inquiry, showing the number of fatal and serious accidents which have occurred to cyclists in the police district during the first quarter of the year. The number of fatal accidents was three; of serious accidents, such as fracture of limb, concussion, internal injuries, 12; in two cases only were the persons injured women. There have been, besides, numerous cases of slight accidents in which persons have either gone to their homes or, if taken to the hospital, have not been detained there. Considering the great number of those who ride in the streets, I cannot say that these figures are high or call for any exceptional measures. At the same time, there can be no doubt there is a great deal of reckless riding; during the first quarter of the year 318 persons were summoned by the police for this and similar offences. I have no power, however, to limit cyclists to certain thoroughfares or to subject them to regulations not applicable to traffic generally; but the police do everything in their power to minimise risk. In only one case, so far as I have been able to ascertain, has a coroner recently made any remark on the subject of these accidents in the London streets.

FRIDAY, APRIL 17TH.

The Fees of Medical Witnesses.

Dr. Farquharson asked the Secretary of State for the Home Department whether his attention had been called to the serious loss of time and money incurred by medical witnesses, who were compelled to leave their practices in order to give evidence at sessions and assizes in England and Wales, for which no adequate remuneration was given them, and, if so, whether he was prepared to provide a remedy by assimilating the fees to those paid in Scotland.—Sir Matthew White Ridley replied: The question of the remuneration of medical witnesses has received the consideration both of my predecessor and myself. It forms a part only of the question of the remuneration of witnesses generally, and I should not feel justified in altering the amounts to be paid to one class of witnesses alone. I am disposed to think that the revision of the present general scale, which was fixed so long ago as 1858, will require to be undertaken sooner or later, but any such general alteration would be attended by a large increase of expenditure falling on county funds.

MONDAY, APRIL 20TH.

Pleuro-pneumonia.

Mr. White asked the President of the Board of Agriculture whether, as in the case of swine fever, he would appoint a departmental committee to review the experience gained since (say) 1890 respecting the etiology, pathology, and morbid anatomy of the diseases known as pleuro-pneumonia; to supplement that experience by a series of experiments as to the bacteriology and life history of these diseases, and as to their communication, either directly or indirectly, from animal to animal; and to bring together the results of the work of foreign investigators.—Mr. Walter Long replied: Our scientific knowledge respecting pleuro-pneumonia is much more extensive than in the case of swine fever, and I have no reason to believe that it would be materially increased by the appointment of a departmental committee, whose opportunities for investigation would be very small by reason of the fact that cases of the disease in this country are happily now so rare. In these circumstances I do not see my way to adopt the suggestion of the hon. member.

The Disinfecting of Clothing.

Mr. Young asked the Chief Secretary to the Lord-Lieutenant of Ireland whether he was aware that the rule which compelled all sick persons, whether pay patients or not, entering the infirmary of a workhouse to wear union clothes prevented large numbers from availing themselves of those hospitals, thereby causing much suffering and the spread of infectious diseases, especially in rural districts; and whether he would take steps to rescind this rule and leave it discretionary with the medical officers to permit patients to use their own clothes when considered by them sanitary.—Mr. Gerald Balfour replied that the rule referred to, which also applied in England and Scotland, required that the clothing of patients suffering from infectious and other diseases should be taken from them on admission to the workhouse infirmary and cleansed and disinfected. He was not aware that the operation of this rule had the effect ascribed to it in the question, and the Local Government Board were of opinion that it could not be rescinded without endangering the health of the inmates of the institution; nor was it deemed advisable to vest in the medical officer the discretionary power suggested.

TUESDAY, APRIL 21ST.

The Tuberculosis Commission.

Mr. Cawley asked the President of the Local Government Board whether, in view of the fact brought to light by the Royal Commission on Tuberculosis that so many cows suffering from tuberculosis were giving milk which was supplied to consumers, and that the milk from these cows was dangerous to the health of human beings, he was prepared to institute some system by which all cows whose milk was sold for public consumption should be placed under compulsory inspection.—Mr. Chaplin said in reply: While the report of the Commission of 1895 has dealt fully with the scientific aspects of the matter referred to in the question, no report has been made upon administrative procedures necessary to give effect to the conclusions of the Commission. The Government have therefore assented to the proposal that a Royal Commission should be appointed to consider and report upon these matters. Legislation would be necessary to enable me to order the compulsory inspection of all cows whose milk is sold for public consumption, and I think it should be postponed pending the inquiry which has been determined on. In the meantime I may remind the hon. member that it is to be gathered from the report that by a very simple process—viz., by boiling the milk—immunity can be insured to the consumer.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

BEATTY, J., M.B., B.S.Dubl., has been appointed House Surgeon to Dr. Steevens' Hospital, Dublin.

CALEY, JAS. W., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Riccall Sanitary District of the Selby Union.

CARSON, H. W., M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer to the Evangelical Protestant Deaconesses' Institution and Training Hospital, the Green, Tottenham.

DANIELL, G. H. S., M.B., B.C.Camb., has been appointed Medical Officer for the First Sanitary District of the Blandford Union.

DUNCAN, R. B., M.D. Durh., B.S., has been reappointed Medical Officer for the Bradninch Sanitary District of the Tiverton Union.

EVANS, J. J., M.B., M.S. Edin., has been appointed Senior House Surgeon to the Birmingham and Midland Eye Hospital, Birmingham.

FINDLAY, W., M.B., C.M. Aberd., has been appointed Medical Attendant to the employees of the cleansing and lighting department by the City of Aberdeen Council.

GARNER, J. E., M.D. Aberd., has been reappointed Medical Officer for the First Sanitary District of the Preston Union, Lancashire.

GALLOWAY, W., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the South Gateshead Sanitary District of the Gateshead Union.

GRAHAM, J., M.B., C.M. Edin., has been appointed Medical Officer for the Orton Sanitary District of the East Ward Union.

HISLOP, JAS. A., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the district of Glenely.

KILLEN, S., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Superintendent of Shiels Institute, Carrickfergus.

LAMPLOUGH, CHAS., L.R.C.P. Lond., M.R.C.S., has been appointed House Physician, City of London Hospital for Diseases of the Chest, Victoria Park.

LIMRICK, W. S., L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer of Health for Waterloo.

LONG, F., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Wells Sanitary District of the Walsingham Union, vice A. Whitlock.

MACON, ARTHUR V., M.B., M.Ch. Dubl., F.R.C.P. Irel., has been re-appointed King's Professor of Midwifery in the Royal College of Physicians of Ireland.

MINNES, R. S., M.D., M.R.C.S., has been appointed Resident Surgical Officer to the Birmingham and Midland Eye Hospital, Birmingham.

MOORE, E. D., M.B., M.S. Edin., has been appointed Junior House Surgeon to the Birmingham and Midland Eye Hospital, Birmingham.

MORTON, BRUCE B., M.B., C.M. Glasg., has been appointed Resident Dispensary Surgeon to the Bradford Infirmary.

MUNRO, HECTOR, M.B., C.M. Aberd., has been appointed Resident Dispensary Surgeon to the Bradford Infirmary.

PAGE, GEORGE SHAPLEY, L.R.C.P., L.R.C.S. Edin., has been appointed Public Vaccinator for Bristol, vice Henry Lawrence, deceased.

PAXTON, F. V., M.B. Oxon., M.R.C.P. Lond., has been appointed Consulting Physician to the Chichester Infirmary.

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PENNY, F. S., M.R.C.S. Eng., L.R.C.P. Lond., of King's College Hospital, London, has been appointed House Surgeon, vice E. Baines, resigned.

ROBERTS, J. LLOYD, M.D., B.S., B.A., B.Sc. Lond., F.R.C.S. Eng., has been appointed Honorary Assistant Physician to the Stanley Hospital, Liverpool.

SADLER, F., M.B., B.Ch. Oxon, has been appointed Honorary Surgeon to the Beckett Hospital and Dispensary, Barnsley.

SMITH, A. G. L., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Medical Officer to the Crick District of the Rugby Union, vice Wallace resigned.

SIMMONS, G. A., M.D. Lond., B.S., M.R.C.S., L.R.C.P., has been appointed Medical Officer for the Fairfield House Workhouse, parish of Chelsea, vice A. W. Read, resigned.

THOMSON, A., M.B., C.M. Edin., D.P.H. Camb., has been appointed Medical Officer of Health for the Marston Sicca Rural Sanitary District.

THORNE, B. B. THORNE, M.D. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Physician to St. Peter's Convalescent Home, Woking.

WALLIS, E. D., M.R.C.S., has been appointed Medical Officer by the Leiston Urban District Council.

WIGHTMAN, C. FRANK, F.R.C.S. Eng., has been appointed Senior House Surgeon to the Bolton Infirmary.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ADELAIDE HOSPITAL, GOVERNMENT OF SOUTH AUSTRALIA.—Senior Resident Surgeon—Senior Resident Physician—Salary for the Surgeon £300, with apartments and board, and salary for the Physician £300, with apartments and board.—Applications to Mr. T. Playford, Agent General, 1, Crosby-Square, Bishopsgate-street Within, London, E.C.

BOROUGH OF PORTSMOUTH.—Medical Officer of Health, Port Sanitary Medical Officer and Medical Officer to the Infectious Diseases Hospital for the Borough. One appointment Salary £450 per annum, rising to £550 per annum as a maximum by four annual instalments. Applications to the Town Clerk.

BURGH OF LEITH PUBLIC HEALTH HOSPITAL.—Resident Physician for one year. Salary £50 guineas. Applications to the Town Clerk, Town Clerk's Office, Leith.

CORPORATION OF CROYDON, BOROUGH HOSPITAL FOR INFECTIOUS DISEASES.—Resident Medical Officer for three months. Salary £10 10s. a month, with board and lodging. Applications to Dr. Wilde, Sanitary Department, Katherine-street, Croydon.

CREDITON UNION.—Medical Officer for the sub-district of Bow. Salary £36 15s. per annum, with the usual fees for midwifery and surgical cases. Application to the Clerk, 2, Market-street, Crediton.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, W.C.—House Physician, for six months, unmarried. Salary £20, with board and residence in the hospital.

HOSPITAL FOR SICK CHILDREN, Newcastle-on-Tyne.—Resident Medical Officer. Salary £80, with board, lodging, and laundry.

LIVERPOOL INFIRMARY FOR CHILDREN, Myrtle-street.—House Surgeon. Salary £85 per annum, with board and lodging.

MACCLESFIELD GENERAL INFIRMARY.—Junior House Surgeon. Salary £70 per annum, with board and residence in the institution.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—Surgeon and Assistant Surgeon.

NORTHUMBERLAND, DURHAM, AND NEWCASTLE INFIRMARY FOR DISEASES OF THE EYE.—Honorary Surgeon. Applications to the Secretary, St. Mary's-place, Newcastle-on-Tyne.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Resident Medical Officer and Assistant Resident Medical Officer. Each appointment for six months. Salary for senior post at the rate of £50 per annum.

PLYMOUTH ROYAL EYE INFIRMARY.—Honorary Surgeon.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—Assistant House Surgeon for six months. Gratuity of £10 will be given if found satisfactory.

SHEFFIELD ROYAL HOSPITAL.—House Physician, unmarried, for one year. Board (exclusive of wine and beer) and lodging provided, and an honorarium of 25 guineas.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—Assistant House Surgeon for six months. Board and residence provided, and an honorarium of £10.

STOCKPORT INFIRMARY.—Junior Assistant House Surgeon for six months. Board and residence provided, and an honorarium of £10 given after six months' satisfactory service.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck-street, Cavendish-square.—Assistant resident Medical Officer for six months. Salary at the rate of £50 per annum, with furnished apartments, attendance, coal, and light.

ST. THOMAS'S HOSPITAL, London.—Assistant Obstetric Physician.—Applications to Mr. E. M. Hardy, Treasurer's Clerk, Counting-house, Westminster Bridge.

THE DENTAL HOSPITAL OF LONDON, Leicester-square.—Anæsthetist and Assistant Æsthetist.

THE HOSPITAL FOR WOMEN, Soho-Square, London, W.—House Surgeon for six months. Salary £30 for that period.

UNIVERSITY OF ST. ANDREWS.—Lecturers: (1) on Anatomy, salary £300 per annum; (2) on Materia Medica, salary £200 per annum; and (3) on History, salary £200 per annum. The appointments for a term of three years. Application to the Secretary of the University Court, St. Andrews.

Births, Marriages, and Deaths.

BIRTHS.

BEALE.—On April 19th, at Clapham-road, S.W., the wife of Arthur A. Beale, M.B. Glasg., of a daughter.

CLEASBY-TAYLOR.—On April 4th, at Alcaravaneras, Las Palmas, Grand Canary, the wife of — Cleasby-Taylor, M.D. Edin., of a son.

DONALDSON.—On April 15th, at Brent-road, Woolwich, the wife of Surgeon-Captain J. Donaldson, Army Medical Staff, of a son.

LOWNDS.—On April 15th, at Hall-gate, Doncaster, the wife of Henry Al Lownds, L.R.C.P. Edin., of a son.

PURCHAS.—On April 15th, at The Bank, Newtown, North Wales, the wife of F. Utten Purchas, M.D. Edin., of a daughter.

WHITAKER.—On April 21st, at Willoughby-road, Hornsey, N., the wife of George Herbert Whitaker, M.R.C.S., of a daughter.

WILLANS.—On April 14th, at Much Hadham, Herts, the wife of W. Blundell Willans, L.R.C.P. Edin., M.R.C.S., of a son.

MARRIAGES.

BRISTOWE—KARSLAKE.—On April 15th, at St. Peter's, Cranley-gardens, Hubert Carpenter Bristowe, M.D., of Wrington, Somerset, to Mary, daughter of Lewis Karslake, of Harcourt-terrace, Kensington.

BRYANT—LEWIS.—At St. Joseph's, Seacombe, April 14th, by the Rev. Canon Singleton, William Arthur Bryant, M.B., of Hull, to Catherine Smith (Tittiens) Lewis, of Seacombe, Cheshire.

GREENYER—LINDSAY.—On April 15th, at Holy Trinity Church, Upper Tooting, Vivian Tudor Greenyer, M.R.C.S. Eng., L.R.C.P. Lond., eldest son of George Greenyer, of Hove, Brighton, to Mary J. Douglas Lindsay, younger daughter of George Lindsay, of Balham, Surrey.

GROVES—ANDERSON.—On April 21st, at the church of St. Nicholas Cole Abbey, Ernest W. Hey Groves, M.R.C.S., L.R.C.P., to Frederica Margaret Louise Anderson, second daughter of the Rev. H. Anderson.

GUTHRIE—GODDARD.—On April 16th, at Illogan Parish Church, Cornwall, Roger Christian Lingard Guthrie, M.B., C.M. Edin., of Carnoustie, Forfarshire, to Ethel Annie Kennedy, second daughter of Henry Robertson Goddard, of Fairfield, Illogan, Cornwall.

KENDALL—CROSSE.—On April 15th, at Terrington, George William Kendall, B.A., M.B. Dubl., of Queensberry, Yorks, to Phillis, youngest daughter of the Rev. Marlborough Crosse, Vicar of Terrington St. Clement's, Norfolk.

STOKES—EASBY.—On April 8th at St. Mark's, Peterborough, by the Rev. B. de M. Egerton, M.A., assisted by the Revs. R. S. Pocock and H. Whittaker, W. Calcott Stokes, Esq., of Edge Hill House, Banbury, to Mary Elizabeth, eldest daughter of William Easby, M.D., of Westgate, Peterborough.

TATE—DALZELL.—On April 21st, at St. Benets and All Saints', by the Rev. A. C. Roberts, assisted by the Rev. H. Clark, brothers-in-law of the bride, Walter William Hunt Tate, M.D., son of the late George Tate, to Flora, widow of the late Dr. Anthony Dalzell.

TURNEY—FERGUSON.—On April 22nd, at St. James Episcopal Church, Inverleith Row, Edinburgh, by the Rev. William Jenkins, Horace George Turney, M.B., M.R.C.P., of 28, Wimpole-street, London, to Margaret, daughter of the late William Ferguson, Writer to the Signet, Edinburgh.

VENABLES-WILLIAMS—PARRY.—On April 15th, at St. John's Church, Chester, by the Rev. W. Venables-Williams, M.A., Oxon., Vicar of Llandrillo, Colwyn Bay, father of the bridegroom, assisted by the Rev. L. Garnett, M.A. Oxon., Rector of Christleton, and Rev. F. A. Screeton (Durham), Curate of St. John's, William Montagu Venables-Williams, J.P., county of Denbigh, L.R.C.P. and L.R.C.S. Edin., Colwyn Bay, to Sara A. A. Parry, second daughter of Albert Parry, Vicar's Cross, Chester.

WILLIAMS—LEIGH.—On April 14th, at St. Paul's Church, Portwood, Stockport, John R. Williams, M.B. Edin., of Penmaenmawr, to Annie Mary, elder daughter of the late James Leigh, of Manor House, Brinnington, Stockport.

DEATHS.

CRAIG.—On April 15th, at Waverley House, Worthing, John Craig, F.R.C.S., late of the East India Company's service.

GASON.—On April 12th, at Rome, John Gason, F.R.C.P., L.R.C.S. Irel., aged 79 years.

HENDERSON.—On April 19th (suddenly), at his residence, Stanhope-terrace, Regent's Park, Wm. Henderson, M.D. Glasg., aged 51.

HOLTTUM.—On April 21st, at Latchmere House, Watling-street, Canterbury, Charles Holttum, F.R.C.S., in his 79th year.

METCALFE.—On April 18th, at Massongex, Valais, Switzerland, John-William Metcalfe, M.D. Erlang, M.R.C.S. Eng., in his 78th year.

PARROTT.—On December 27th, 1895, at Lao-ho-k'ou, viâ Hankow, China, Annie W. Parrott, wife of Albert George Parrott, M.R.C.S., L.R.C.P. Lond., aged 40.

TOWNSEND.—On Sunday morning, April 19th, 1896, at 68, Queen's-gate, London, Mary Alice, wife of Thomas Sutton Townsend, of Clifton Manor, Warwickshire, and only daughter of the late Thomas Ainsworth, of The Flash, Cumberland, aged 45.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 23rd, 1896.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Apr'l 17	30·11	W.	49	46	102	61	42	0·06	Fine
" 18	30·33	S.W.	51	48	92	60	46	...	Fine
" 19	30·42	S.W.	51	49	96	67	45	...	Fine
" 20	30·41	N.E.	54	50	83	57	50	...	Fine
" 21	30·50	S.E.	47	45	95	59	42	...	Cloudy
" 22	30·33	S.W.	49	44	91	67	41	...	Hazy
" 23	30·17	N.E.	51	48	69	53	46	...	Overcast

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index for the second half-yearly volume for 1895 was given in the issue of Dec. 28th. The practice of supplying loose copies has been discontinued, the Index having been placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1895 are now ready. Bound in cloth, gilt lettered, price 18*s*.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s*.; by post, 2*s*. 3*d*.

To be obtained on application to the Manager, accompanied by remittance.

THE ENDORSEMENT OF A QUACK.

To the Editors of THE LANCET.

SIRS,—A. called me in to see his wife, who was suffering from secondary nodules in the skin around a scar left by the removal of the left breast and marked dyspnœa due to collapse of the left lung, probably due to a growth near its root. As I could not promise to cure the patient and gave a bad prognosis A. suggested I should watch her whilst a quack remedy was tried. I refused to be a party to this, as I considered I should be practically covering the quack and not doing the best for my patient, and threw up the case. Will you give me your opinion what is the proper course to pursue under like circumstances?

I am, Sirs, yours faithfully,

April 18th, 1896. F.R.C.S.

*** Our correspondent took the only possible course open to him. He could not, in however distant a manner, be a party to the employment of a quack remedy for the cure of malignant disease.—ED. L.

A CASE OF SOMNAMBULISM.

ON awaking one morning recently a Dutch farmer of Heerenneen (Drenthe) perceived with astonishment that his wife was no longer in bed beside him. In one corner of the room lay her shoes and in another her clothing, but of the good dame herself not a trace could he find anywhere about the premises. Greatly alarmed he called in the aid of the police, and all day long there was a most energetic search for the missing housewife, but without avail. At length, towards evening, a peasant came forward and said that shortly after daybreak he had seen a woman in her night clothes wandering about near the village of Bonenknype. At the time he was inclined to think it was an apparition, for in the uncertain light the figure had a most unearthly look, but perhaps, after all, he was mistaken. Upon hearing this tale the farmer at once started off in the direction indicated, and finally succeeded in finding his wife at the house of her sister, which is distant three leagues from Heerenneen. The wanderer had arrived there at about seven o'clock in a dazed condition and half dead with cold. She had no recollection of leaving her home and could give no account whatever of the journey she had undertaken in such extremely light marching order. Before reaching her sister's place she had to cross a score or more of narrow bridges, some of them mere planks, and was likewise obliged to jump several formidable ditches. The fact that under these circumstances she escaped an accident is looked upon by the simple peasantry as well-nigh miraculous, but seems to bear out the general supposition that people in a state of somnambulism are able to perform gymnastic feats which they could not attempt in their waking moments.

A NOVEL METHOD OF INTRODUCING A NEWLY-QUALIFIED MAN.

To the Editors of THE LANCET.

SIRS,—As one who holds the honour of the medical profession dear, who considers it should be looked on as a "learned profession" and not as an advertising business, and that there are other considerations which are of greater importance to him who has the privilege of being a member of the same than that of making money,—as one holding these views may I beg your opinion on the following, which was publicly "cried" on the evening of April 18th, 1896, in the village of ——, ——shire: "Dr. J—— has passed his degrees of the highest order in the shortest time." There was later an intimation given that he was coming to reside there on Thursday next. Surely Dr. J—— cannot be aware of this liberty taken with his name, and should take the earliest opportunity of repudiating any responsibility for such an advertisement of one barely on the threshold of the profession.

I am, Sirs, yours truly,

April 20th, 1896. VINDICATOR.

*** Our correspondent adds that Dr. J——'s advent had been previously advertised for three months on boards. There can be no doubt that the methods adopted by Dr. J——'s friends to introduce him to the notice of his future *clientèle* are utterly opposed to all the traditions of our profession.—ED. L.

SEATS FOR THE USE OF EMPLOYÉS.

THE *Boston Medical and Surgical Journal* states that the New Hampshire Legislature has passed a law compelling all employers of females in any manufacturing, mechanical, or mercantile establishment in the State to provide suitable seats for the use of females so employed. A fine of not less than $10 (£2) or more than $30 (£6) for each offence is the penalty prescribed for a violation of the law.

"A CARDIAC CURIOSITY."

To the Editors of THE LANCET.

SIRS,—A case somewhat similar to the one described by Dr. Fuller and Mr. Gibbs under the above heading in THE LANCET of April 4th recently came under my notice. The patient was a police constable, aged thirty years, enjoying good general health and on active duty. He had a loud mitral murmur distinctly audible through his clothes at a distance of several feet. He informed me that he had had two attacks of rheumatic fever, the last three years ago, and ever since then the murmur had been present. He showed no other symptoms except slight palpitation and occasionally slight œdema of the feet and ankles. In the course of his duty he had to walk from eight to twelve miles per day in a very hilly district.

I am, Sirs, yours faithfully,

JOHN CRAIG, L.R.C.P. & S. Edin., L.F.P. & S.G.

Wolsingham, Darlington, April 9th, 1896.

A TRANSLATION AT FAULT.

AN amusing blunder appeared in a French journal published, curiously enough, on April 1st. An account being given, translated from the *Vrach*, of the cure of two cases of diphtheria by the injection of *petit lait anti-diphtérique*. Anti-diphtheritic whey! It happens, however, that the Russian word "suivorotka" means serum as well as whey.

Doubtful.—The questions are very proper ones in the light of a possible marriage and should be referred to the medical attendant of the family. They do not all admit of a definite answer.

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FILARIA SANGUINIS HOMINIS IN PHILADELPHIA.

ACCORDING to the *Philadelphia Polyclinic* living filariæ in the blood were for the first time demonstrated in Philadelphia last February, when Dr. F. P. Henry exhibited a number of microscope slides showing the embryos alive and active. The blood was drawn from the finger of a white woman, who was a patient in the Women's Hospital, and had developed hæmato-chyluria after labour. She was a native of South Carolina and had been in Philadelphia not quite one year. It was probable that the parasite had been acquired in the South and that rupture of a lymph vessel during the strain of labour had led to the chyluria; it was an example of the nocturnal variety, and was consequently not to be found in the blood drawn from the surface vessels during the day.

GOOD *v.* BAD VACCINATION.

To the Editors of THE LANCET.

SIRS,—I in large measure fully sympathise with "A London Doctor" who in a recent letter to the *Pall Mall Gazette* has deplored the sort of vaccination which, equally with the best, is declared to be "successful." He advocates the certification of the vaccination of an individual only after the operator has made four insertions, together with rigid examination of the person vaccinated by an expert giving up his time to this duty. Without going so far as this I would gladly see the instructions of the Local Government Board which bind public vaccinators made equally binding on all practitioners, and enforced if need be by Government examination, as is now done in the case of public vaccinators. The Government, while inspecting the results of vaccinations performed by officials over whom it has some control, is allowing other men a free hand. As a consequence certain members of the medical profession may, if they choose to look askance at vaccination as a prophylactic, comply with the letter of the law and infringe its spirit at will. I would, indeed, go a step further. We consider that it is desirable that a medical officer of health should be debarred from coming into competition in the way of ordinary practice with his professional brethren—at least that view is growing in the profession. Similarly I would see all vaccination relegated to properly appointed public vaccinators. The matter is of national importance. Then let it be done under central supervision and only by those who come under that supervision.—I am, Sirs, yours faithfully,

April 22nd, 1896. ONE WHO KNOWS.

Reproduction has not put his questions in very definite shape. The structure and physiology of the parts will be found fully given and freely illustrated in all standard works on anatomy. For the best authorities on the different pathological points we refer our correspondent to "Neale's Digest" (1840–1890), p. 498, *et seq.*

"A SKIN AFFECTION PRODUCED BY WORKING IN TEAK."

To the Editors of THE LANCET.

SIRS,—A gentleman was in my consulting room this forenoon who has had thirty years' experience of working in teak. I read the question on teak appearing in THE LANCET of April 21st to him and asked him if he could answer it. He said that he had never heard of any skin affection on the face or hands troubling carpenters when working with teak, but if the smallest splint pierces the skin, or if the skin gets abraded in the slightest degree when a carpenter is working with teak, the place is sure to inflame and suppurate. I am, Sirs, yours truly,

April 20th, 1896. M.B.

Inquirer is advised not to accept the lower scale, or at any rate only to do so after statement of his intentions to the present medical officer. We appreciate the fact that the difference in distance might account for a difference in remuneration, but to take a lower sum would have the appearance of underselling a fellow practitioner, and it is very important that just now even the appearance of such a proceeding should, in the best interests of the profession, be avoided.

AN UNFORTUNATE ERROR.

WE have received the following from the Rebman Publishing Company, Limited:—

"The Rebman Publishing Company beg to state with extreme regret that they have by mistake published a testimonial purporting to be from Dr. H. Davy of Exeter with reference to their calf lymph. The testimonial was given by Dr. H. Davy of Kimmage Lodge, Terenure, county Dublin. They have never received any testimonial from Dr. Davy of Exeter nor has he in any way communicated with them on the subject.

"Dated, April, 1896."

The company have done very right to make the *amende honorable* thus definitely to Dr. Davy of Exeter, whose annoyance at finding attributed to himself a testimonial that he did not give can be imagined. The incorrect address was given in pure error as we have had an opportunity of ascertaining.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (27th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.).

TUESDAY (28th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (29th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY (30th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Great Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (1st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.) Gt. Northern Central (2.30 P.M.).

SATURDAY (2nd).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (27th).—SOCIETY OF ARTS.—8 P.M. Mr. J. Swinburne: Applied Electro-Chemistry. (Cantor Lecture.)

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Marmaduke Sheild: On Suppurative Affections of the Mammary Gland.—Mr. J. D. Malcolm: Twenty Cases in which Abdominal Section has been Performed a Second Time.

TUESDAY (28th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—Mr. R. Barwell: On Spontaneous Dislocation of the Hip, with some Remarks on a Class of Case often mistaken for Rheumatism.—Mr. Mayo Robson: A Method of obtaining a Complete Skin Covering after Ablation of the Breast.—Mr. H. T. Butlin and Mr. Beadon Adams: On the Transplantation of Skin Flaps for the filling up of considerable Defects after Amputation of the Breast.

WEDNESDAY (29th).—SOCIETY OF ARTS.—8 P.M. Mr. E. W. Badger: Fruit Drying or Evaporation.

FRIDAY (1st).—WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary, Greenwich-road, S.E.).—7.45 P.M. Messrs. Maw, Son and Thompson will exhibit Surgical Instruments.—Messrs. Johnson and Johnson will show Surgical Dressings, &c. 8.15 P.M. The President (Mr. E. Clarke): Recent Progress in the Treatment of Diseases of the Eye.—Mr. T. Moore: Demonstration of the Roentgen Rays.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

TUESDAY (28th).—ROYAL INSTITUTION.—3 P.M. Professor James Sully: Child-Study and Education.

THURSDAY (30th).—ROYAL INSTITUTION.—3 P.M. Professor Dewar: Recent Chemical Progress.

FRIDAY (1st).—CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL.—4 P.M. Dr. Dundas Grant: The Diagnosis and Treatment of various forms of Nerve-deafness.

ROYAL INSTITUTION.—5 P.M. Annual Meeting. 9 P.M. Col. H. Watkin: Chronographs and their Application to Gun Ballistics.

SATURDAY (2nd).—ROYAL INSTITUTION.—3 P.M. Professor W. B. Richmond: The Vault of the Sixtine Chapel.

During the week marked copies of the following newspapers have been received:—*Sheffield Telegraph, Manchester Guardian, East Anglian Daily Times, Folkestone Express, Leicester Post, Dundee Courier, Bedford Standard, Carlisle Journal, Northern Whig, Blackpool Gazette, Scottish Border Record, Worcestershire Chronicle, Bucks Herald, Bingley Chronicle, Times of India, Hastings Times, Pioneer Mail, Oldham Standard, Liverpool Courier, Architect, Liverpool Daily Post, Sussex Daily News, Keene's Bath Journal, City Press, Bristol Mercury, Western Daily Mercury, Sandbach Advertiser, South Wales Daily News, Western Mail, Hampshire Independent, Wakefield Herald, Bristol Times, Leighton Independent, Yorkshire Post, Builder, Westmeath Examiner, Ramsay Courier, Bradford Mercury, Newcastle Journal, Kentish Express, Leeds Mercury, Birmingham Gazette, Rochdale Observer, Scotsman, Citizen, Sanitary Record, West Middlesex Standard, Mining Journal, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, Reading Mercury, Hertfordshire Mercury, Nottingham Daily Guardian, Bournemouth Visitor's Directory, Indian Mirror, Health, Practitioner, Surrey Advertiser, Local Government Journal, Gloucestershire Chronicle, Beverley Echo, Spalding Free Press, Galloway Gazette, Jersey Times, Le Temps (Paris), Edinburgh Evening News, &c., &c.*

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A Presidential Address
ON
MEDICAL DIAGNOSIS.

Delivered before the North London Medical and Chirurgical Society on April 9th, 1896,

BY CHARLES KING, M.R.C.S. ENG,
LATE HONORARY SURGEON TO THE HOLLOWAY AND NORTH ISLINGTON DISPENSARY.

GENTLEMEN,—I had some little difficulty at first in deciding what should be the subject of this, my presidential address, but finally came to the conclusion that the question of diagnosis was one of general interest to us all, for in the practice of the profession of medicine and surgery the question which daily arises is, "What is the matter?" and the diagnosis of disease may fairly claim at our hands the paramount attention. For how can we treat our patients correctly or with any scientific pretension—how can we honestly give a prognosis unless we know what organ is at fault, the nature of the morbid process at work, and the extent of its ravages?

"Neque enim credunt posse eum scire
Quomodo morbos curare conveniat, qui unde hi sint ignoret."

Yet how often do we find difficulties arising, how often have we to confess ourselves beaten by the obscurity and complexity of the symptoms and physical signs? The making of a diagnosis does not begin and end with the labeling of a pathological condition or prominent symptom with a long name; the term must be understood and employed in a very much wider sense—it must include a conception as to how the organ has been affected from the first, the exact nature of the disease, and the resulting injury to the body generally as well as locally. To examine a patient who consults us for heart disease and then to say he has morbus cordis is not sufficient. It is not making a diagnosis—we must proceed further and make up our minds as to the nature of the change. Is the cardiac muscle primarily at fault? If so, what is the nature of the disease—is it fatty or fibroid degeneration or myocarditis? Is it a case of valvular disease? If so, what valve is affected and how is it affected? Is it incompetent or stenosed? Or are both conditions present? Another patient consults us for vomiting blood; to say he is suffering from hæmatemesis, again, is not enough, and we must endeavour to find out what the condition is due to. Is it gastric ulcer, carcinoma of the stomach, or cirrhosis of the liver?

During the last fifty years, since I was a student at Guy's Hospital, the advances in the science and art of diagnosis have, indeed, been great and wonderful; and to prove this we only have to look at the large number and the size of the text-books now entirely devoted to this subject. I might mention such works as Vierordt's "Medical Diagnosis," Finlayson's "Clinical Manual," Von Jacksh's "Clinical Diagnosis," and others. Methods of investigation have become more systematic and thorough. Our knowledge of anatomy, physiology, pathology, and chemistry is much more extensive. Many wonderful and ingenious instruments have been invented for investigating hitherto hidden parts, such as the eye, the larynx, and the bladder, for examining the blood, urine, and other fluids. I do not pretend to be practically acquainted with them all, but since I decided on the subject of my address to you this evening I have done my best to investigate some of the results which may be gained by their use, and for this purpose I have spent much time at my old school, where every facility has been afforded me for gaining this information.

A contrast.—How different are the surroundings of the student of to-day to what they were in 1846, when I was a clinical clerk under Dr. Addison. In those days a tablespoon and a candle were the only apparatus available in a medical ward for the detection of albumin in the urine. Now I see in all cases of albuminuria that an accurate record is kept of the amount of urine passed each twenty-four hours, of its specific gravity, reaction, amount of albumin and urea in addition to a description of the microscopical appearance of the deposit, and for this purpose every possible form of instrument and kind of reagent is at hand.

Successful diagnosis is an all-important adjunct to successful practice. In order to make an accurate diagnosis we must recognise abnormal physical signs, and not only recognise them, but interpret their special significance. This knowledge can only be obtained by constant practice, and we cannot obtain it by reading the experiences of others only, although by this means we get to know what to look for and to expect. We require a good general knowledge of anatomy and physiology, for if we do not know the normal structures and functions of the various organs, how can we expect to recognise their numerous diseased conditions?

Importance of morbid anatomy.—A knowledge of morbid anatomy is also of the greatest importance, and that is a science in which we who are general practitioners have little facility for becoming proficient. A good morbid anatomist as a rule is a good clinical physician. We should all become much more proficient in diagnosis, and our patient would in the end reap the benefit, if there were not that popular sentiment against the performance of necropsies in private. How much wider would our experience be if in doubtful cases we had opportunities afforded us of verifying or correcting our diagnosis by a post-mortem examination. How often do we sign a death certificate without any degree of certainty as to the exact nature of the immediate cause of death. I was shown two cases in the wards of the hospital which were supposed to be respectively types of the atrophic and hypertrophic forms of cirrhosis of the liver. One was a woman of alcoholic appearance aged about forty, with marked ascites and no jaundice and with physical signs of decrease in the size of the liver. She was pointed out as a typical case of atrophic cirrhosis. She died, and at the necropsy the case was found to be one of tuberculous peritonitis. The other case was that of a woman, also of alcoholic appearance, aged about forty-five, suffering from jaundice, sickness pain, and evidence of a very large liver. She was pointed out as a typical case of hypertrophic cirrhosis. She died, and at the necropsy the case was found to be one of carcinoma of the liver. In private practice both would have been certified as cases of cirrhosis of the liver and would have been classed under that heading in the at present useless statistics brought out by the Registrar-General. Morbid anatomy in these cases not only exposed our ignorance but added to our knowledge and rendered the probability of a correct diagnosis being made in similar cases in the future more likely.

The fallacy of lightning diagnosis.—In order to recognise the signs of disease we have especially to employ our senses of vision, touch, and hearing. In many instances we may be tempted to employ our eyes only, making a diagnosis it may be to impress our patients with a sense of our smartness, but it will not pay in the end. We should not get into the habit of making lightning diagnoses. We may succeed brilliantly for a time, but sooner or later a miserable failure will be the inevitable result. However, there are some cases in which we can detect the nature of the disease simply from the general appearance of the patient. The large white man has probably large white kidneys; the prominent eyes—staring, terrified expression—and the enlarged thyroid gland are characteristic of exophthalmic goitre; the broad, expressionless face, with bright-red patches on either cheek, the spade-like hands, the scanty hair, the thick, blurred articulation and monotonous voice, of the patient suffering from myxœdema; the livid cheeks, nose, ears, and the clubbed and livid fingers and toes speak of congenital heart disease; the tremor and general condition of flexion of paralysis agitans; the withered, shrunken, old-mannish appearance of the child of congenital syphilis; and there are other examples too numerous to mention.

Importance of noting slight symptoms.—The severity of the symptoms of any particular disease may vary considerably in different individuals. A strong man may become very ill without his knowing there is very much amiss, whereas a delicate, susceptible woman may feel the slightest ache or pain and attach the greatest importance to any departure from normal health. We should therefore observe the idiosyncracies of our patients, and certainly never let any of them imagine that we treat the description of their symptoms with scorn. Some patients are unskilful in describing symptoms, others are too graphic and elaborate. We must learn to discriminate, and take an accurate estimate of the

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evidence before us. We must also remember that if a patient comes to consult us—no matter how slight the cause may seem—there must be some good reason for his doing so, and we should be just as careful with trivial as with grave cases.

Local causes of diseases should be carefully sought for, and we should not be too ready to treat a prominent symptom without finding some adequate cause for it. Every third-rate druggist has a bottle of medicine for every symptom for which he may be consulted. I know of a case which speaks strongly on this point. A woman aged about fifty-five consulted a druggist for diarrhœa and for four months was made the receptacle of the various astringent drugs of the pharmacopœa. She gradually became worse, and her medical attendant then found her trouble was due to carcinoma of the lower part of the rectum! I could give other illustrations on this point, but shall be content by mentioning the curious fact that asthma may be caused by disorders of the uterus and its appendages, and the importance of examining the pelvic organs in this disease when no other adequate cause can be found. In one of the New Sydenham Society's books[1] there is an interesting lecture on this subject by Dr. Alexander Peyer. Many diseases begin acutely with rigor and rise of temperature, and it is thus of importance to determine the manner of the onset. Some of the acute specific fevers—variola, scarlet fever, pneumonia, pleurisy, acute tonsillitis, and influenza—commence, as a rule, in this way. But variola for the first three days until the appearance of the characteristic eruption may be mistaken for scarlet fever. Influenza may be mistaken for scarlet fever. In such instances our clinical experience is found of the greatest value in making a differential diagnosis.

The significance of abdominal pain and of headache.—In many diseases one symptom may stand out prominently and attract all our attention as well as that of the patient. I allude to pain. Abdominal pain is a very common symptom of disease and the causes are legion. It may be due to gastric disturbance or it may be associated with sclerosis of the posterior columns of the spinal cord. Is its nature paroxysmal and colicky? Is it associated with jaundice and tenderness in the right hypochondrium? Then it is probably due to gall-stones. Is it associated with hæmaturia and does the pain run down in the direction of the ureters and cause retraction of the testicle? Then there may be renal calculus. Is it associated with constipation? Then it is important to examine the gums: it may be due to lead-poisoning. Peritonitis is another cause; and if the pain has come on suddenly with collapse it may arise from perforation of one of the abdominal viscera. Deep-seated pain may be due to malignant growths or to aneurysm. Pain is often associated with pulsation of the abdominal aorta. But on this account abdominal aneurysm should not be diagnosed every time we feel the abdominal aorta pulsating. Severe abdominal pain and vomiting may occur in locomotor ataxy, and very often is one early sign of this disease before ataxy is marked. The actual cause is very often overlooked, and such cases have been treated for gastritis, gastric ulcer, or gastric carcinoma. Therefore, in all cases of long continued and severe abdominal pain and vomiting we must examine the pupils and the knee-jerks. If the Argyll-Robertson pupil is found and the knee-jerks are absent locomotor ataxy will be the cause of the abdominal symptoms. Again, abdominal pain may be the most marked symptom of pneumonia or pleurisy, or, on the other hand, may be a prominent symptom of spinal caries. The moral to be drawn is that in cases in which abdominal pain is a prominent symptom a very careful and systematic examination must be undertaken to discover the cause.

Headache is another every-day complaint, and its causes are innumerable and require a very careful and systematic examination before treatment can be adopted. It may be due to disordered functions of the alimentary canal or generative organs; to errors of refraction; to toxic substances circulating in the blood; to alcoholism; to uræmia; to pathological changes in the brain and meninges; to cerebral tumours and meningitis; to diseases of the scalp and the cranium; and to many other causes.

The nervous system.—I have stated that a knowledge of anatomy and physiology is an important basis for diagnosis, and this in particular applies to the nervous system, for a familiarity with its normal structures and functions is indispensable for a recognition of its derangements. We must bear in mind how complex is that structure, with its nerve cells, ganglia centres, and nerve fibres, which conduct afferent and efferent impulses governing the movement and especially the nutrition of all parts of the body. The whole of the nervous system may be mapped out into areas, each of which has a certain connexion with special functions or particular parts of the body. The researches of Ferrier, Schäfer, Horsley, and others have so greatly increased our knowledge of localisation and special function within the last few years that we now know important facts not dreamed of in my student days, as that the convolution on either side of the fissure of Rolando controls the movements on the opposite side of the body; that in the posterior part of the third left frontal convolution the centre for articulate speech lies, and that a lesion here causes motor aphasia; that the visual centres are located in the occipital lobes, and the auditory centres in the first temporo-sphenoidal convolution. This knowledge of cerebral localisation has led to most important results, for now we can diagnose the exact seat of many lesions of the nervous system which are capable of cure by appropriate means. Again, our knowledge of the course of the pyramidal fibres from the cerebral cortex to the muscles and the effects of lesions in the various parts is an important aid to diagnosis. This point can be well illustrated by facial paralysis. If the lower part of the face only is affected and if twitching movements are noticed to occur at frequent intervals on the affected side it will be most probably due to a lesion affecting the facial cortical motor area on the opposite side of the brain. If it is associated with paralysis of the arm and leg on the same side of the body the lesion will be in the opposite internal capsule; if the arm and leg on the opposite side of the body are paralysed the lesion will be in the pons; and if the whole of one side of the face is paralysed and wasting of the muscles has occurred it points to a lesion of the nerve or its nucleus.

The kidneys.—Our knowledge of the diagnosis of disease of the kidneys has been much improved during the last twenty or thirty years on account of the increased care with which the urine is examined, for not only do we submit this important excretion to elaborate chemical analysis, but also take into consideration the variations which take place in its general characters. Deposits are submitted to careful microscopical examination, and by this means most important data for an accurate diagnosis can be obtained. In obscure abdominal tumours a change in the urinary excretion will indicate in many cases that the kidney is the seat of the disease. For example, if there is a large deposit of pus and the urine is acid we think the abdominal tumour may perhaps be a tuberculous kidney or a pyonephrosis; if a further examination of the pus is made and tubercle bacilli are found then we know it is a tuberculous kidney. Again, the variation in the amount passed is of importance. In one case a patient was suffering from a large abdominal tumour which was supposed to be a malignant tumour connected with the liver. A careful record of the daily amount of urine passed was kept and found to be an average of fifty ounces. One day, however, he passed 120 ounces, and when the abdomen was examined the tumour could not be felt. Some weeks afterwards he complained of difficult micturition and pain at the end of the penis. On sounding his bladder a vesical calculus was found. The abdominal tumour had evidently been a hydronephrosis which had been caused by the calculous obstruction.

Diseases of female pelvic organs.—Great advances have also been made in the diagnosis of diseases of the female pelvic organs. Dr. Cullingworth, in a clinical lecture[2] on this subject, says: "To-day I should be ashamed for any of my clinical clerks to be found at the close of their three months' tenure of office unable to diagnose, under reasonably favourable conditions, the size, position, consistence, and mobility of the Fallopian tubes, even if not of the ovaries as well, with a fair amount of accuracy"—a statement which would have been scoffed at a few years ago. These improvements have been brought about by as often as possible confirming the original diagnosis by subsequent examination on the operating table and in the post-mortem room as opportunities offered themselves. The introduction of the dorsal position, in addition to the left lateral position, by means of which a

[1] Clinical Lectures on Medicine and Surgery by German Authors, 1894.

[2] Clinical Journal, 1893, p. 284.

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bimanual examination can be more thoroughly conducted, has also been an important factor in bringing about these improvements.

Skin diseases.—In the diagnosis of skin diseases difficulties often arise as symptoms are so liable to differ and they are so rarely pathognomonic. It is of special importance to note the nature and distribution of the lesion or lesions present. Some diseases are very rare but their form so characteristic that the diagnosis is not difficult, as in the case of favus. We must also not forget that an eruption may be factitious—eczema, impetigo, pigmentation may all be artificially produced by malingerers and hysterical young women. It is not, as a rule, difficult to detect the fraud when once our suspicions are aroused. Again, in all cases of dermatitis the irritant should be sought for: pediculi in the hair are often the cause of impetigo, eczema may be caused by objects handled in the patient's trade, and pruritus vulvæ in women by diabetic urine. Cutaneous eruptions may be caused by the acute specific fevers, when the use of the thermometer will be of assistance, yet variola or varicella may be mistaken for acne or impetigo. The diagnosis of possible syphilis as the cause of the skin lesions is by no means a simple matter in many cases and requires all the care and judgment of which the practitioner is capable. Many skin diseases have characteristic distributions: psoriasis on the extensor surfaces of the knees and elbows; lichen ruber planus on the flexor surface of the elbows; acne vulgaris on the face, forehead, and back; and lupus erythematosus on the nose and cheeks. In all cases of skin disease it is of the greatest importance to examine every part of the body affected with the lesion. Many incorrect diagnoses are made through not following out this rule. Psoriasis may affect the scalp and may simulate seborrhœa and be diagnosed as such, whereas a systematic examination would have revealed the characteristic lesion of the disease on the extensor surfaces of the knees and elbows. Some diseases affect the deeper layers of the skin and are characterised by scarring, and the diagnosis between tuberculous dermatitis and syphilis is often extremely difficult on this account. The parasitic diseases may be detected by microscopical examination, which in the case of the vegetable parasites will reveal the characteristic spores and mycelium.

The clinical thermometer.—The clinical thermometer did not come into general use until after the years 1850 and 1851, when very great attention was called to its importance by the papers published on the subject by Traube and Bärensprung respectively. Wunderlich of Leipzig then devoted himself to the study of the temperature in every variety of disease, and his well known work, which has been translated and published by the New Sydenham Society, is still the standard work on this most important subject. In England the clinical thermometer was first adopted by Parkes, Ringer, and Aitkin. It is now, of course, in the hands of every medical man, and in determining the presence or absence of pyrexia and the course, duration, and degree of pyrexia its value as an aid to diagnosis cannot be over-estimated. We know that the temperature runs a definite course in certain diseases, so that if a careful record has been kept and recorded on a chart the nature of a doubtful case may often be thus cleared up. The sudden rise, the continuous character for five or six days, followed by a crisis, are all familiar to us as characteristic of lobar pneumonia; the gradual rise followed by the continuous type which ends about the end of the third week by lysis of typhoid fever. In this last-mentioned disease we should remember also the importance of taking the temperature for some time after the lysis, for the only indication of a relapse may be the rise of temperature. It is also of great importance to note the state of the pulse- and respiration-rate to the rise of temperature; in ordinary cases, the pulse, respiration, and temperature rise synchronously. In some diseases, however, there is a considerable variation from this; for instance, in typhoid fever with a temperature of 104° F. the pulse may be only 80, and an observation of this point is an important aid to the diagnosis of the case. Again in pneumonia and broncho-pneumonia with a temperature of 104° the respiration-rate may reach 60 or 70 to the minute, and such an observation at once points to the lungs as being the primary seat of the disease. In cases of wasting and weakness without definite evidence of organic disease pyrexia indicates, with a considerable degree of probability, tuberculosis. A single rigor accompanied by a rise of temperature to 104° or 105° may lead to the diagnosis of suppuration, especially if it occurs in a patient who is suffering from gall-stones or renal calculi.

The ophthalmoscope was invented by Helmholtz in the year 1851, and by its means he was able to study the details of the hitherto unseen lining of the fundus oculi, retina, and choroid, and thus was the pioneer of one of our most certain and helpful diagnostic instruments. We may have a patient suffering from œdema of the legs, ascites, enlarged liver, and hypertrophied and dilated heart and albuminuria, and the question which often arises is, Is this a case of primary heart or kidney disease with secondary cardiac trouble? The ophthalmoscopic examination may reveal the presence of albuminuric retinitis, and we forthwith make our diagnosis of primary renal disease. We have another case suffering from pyrexia and diarrhœa which does not present to us the typical picture of typhoid fever. An ophthalmoscopic examination may reveal the presence of tubercles in the choroid, and then a diagnosis of acute tuberculosis is made. In cases of severe and persistent headache also an examination of the fundus oculi is of the greatest importance, for the causes of headache are innumerable. If, however, optic neuritis is found we know we have a gross cerebral lesion to deal with and treat our patient accordingly.

The laryngoscope.—The laryngoscope was first introduced into medical practice by Türck and Czermak of Vienna in the year 1857. Now it is in the hands of every general practitioner, and its use in the differential diagnosis of diseases of the larynx is invaluable. By its means such hitherto invisible structures as the epiglottis, aryteno-epiglottidean folds, vocal cords, and trachea can be examined by the eyes; and syphilitic, tuberculous, and malignant ulceration can be differentiated. In the girl suffering from hysterical aphonia the vocal cords can be seen widely separated through paralysis of the adductors. The deep-seated intra-thoracic aneurysm which is pressing on the recurrent laryngeal nerve and which has given rise to few other characteristic signs may be diagnosed by the discovery of the abductor paralysis of the corresponding vocal cord by the systematic use of the laryngoscope in such cases. New growths may be diagnosed and removed by the aid of this instrument and important facts gained by its routine use.

Examination of the blood.—In the differential diagnosis of anæmia it is of great importance to investigate the conditions of the red and white blood corpuscles and hæmoglobin, and for this purpose several ingenious instruments have been introduced. Vierordt in 1854 was the first observer to determine the corpuscular richness of the blood, and he did so by allowing blood diluted to a known degree to dry on a glass slide and then counting the corpuscles by means of a microscope and micrometer. He ascertained that a healthy adult man should have about 5,000,000 red blood corpuscles to the cubic millimetre. Since then Gowers, Thoma, Zeiss, and Malassez have introduced more elaborate instruments by means of which the percentage number of corpuscles and the percentage amount of hæmoglobin can be determined. The importance of such examinations can be illustrated by the characteristic changes which are generally present in the following diseases. In chlorosis the red blood corpuscles are rarely reduced below 60 per cent. of the normal, whereas the hæmoglobin may be reduced to 20 per cent. of the normal, and the white are not increased. In pernicious anæmia the red blood corpuscles may be reduced to as low as 10 per cent. of the normal, but the hæmoglobin not to a corresponding degree, so that in this disease the individual value of each red blood corpuscle for hæmoglobin is greater than normal—a condition diagnostic of this disease. In addition the red blood corpuscles are changed in shape, and nucleated red blood corpuscles may be found. In leucocythæmia there may be a large excess of white blood corpuscles, and in extreme cases they may exceed the red in number. There is another most important condition in which the microscopical examination of the blood is of importance and that is in malaria, in which disease plasmodial bodies may be detected in the red blood corpuscles. The discovery of these bodies may help us considerably in diagnosing this disease from other fevers and also from the form of the plasmodia in determining the particular kind of malaria.

Examination of the bladder and urethra.—By means of an instrument called the electric cystoscope the interior of the bladder can now be illuminated. Dr. Nitze of Berlin conceived and carried out this idea in 1879. The illumination was derived from a platinum loop. This was, however, supplanted in 1887 by an incandescent lamp, which change-

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has rendered the instrument much more simple and less costly. Its value in surgical diagnosis has been proved by many surgeons in England, and Meyer of New York in 1889 wrote: "There is no doubt in my opinion (and no surgeon doubts it any more to-day) that cystoscopy has a great future. Of course, we have yet to learn in many respects to recognise the disease in the picture, and may often be mistaken in explaining what we see—just as may occur to laryngologists, and very experienced ones, with diseases of the larynx." This instrument is of especial use in the diagnosis of symptomless hæmaturia. The orifices of the ureters can be examined, and if blood is of renal origin it may be seen issuing from the ureter or ureters. Papillomatous growths, encysted calculus, hæmorrhagic cystitis, and enlarged prostate can be detected—in fact, it is a most important aid to the diagnosis of obscure disease of the bladder. Dr. Nitze has also introduced another ingenious instrument, the photocystoscope, by means of which photographs can now be taken of the interior of the living bladder.

Bacteriology is a very important aid to diagnosis, since so many diseases are due to definite specific micro-organisms which are recognised by their special form and reaction to stains and manner of growth in culture media. Of course, this method of research cannot be carried out by the general practitioner, but at a small cost it can be done for us by the Clinical Research Association. The importance of this method applies in particular to the diagnosis of diphtheria and tuberculosis. So far as the diagnosis of diphtheria is concerned the modern physician does not feel comfortable or satisfied unless in at any rate all doubtful cases of sore-throat the opinion he gives is confirmed by bacteriological diagnosis. The diagnosis of phthisis has become much easier and can be made much earlier and with greater certainty since the discovery of the tubercle bacillus and its significant reaction to certain stains. In all suspicious cases of chronic lung disease an examination of the sputum should be made for these micro-organisms. Cholera is another disease in the diagnosis of sporadic cases of which a bacteriological examination for the comma bacillus is necessary.

Very great interest has been centred during the last few months in the so-called "new photography," the latest and one of the most startling and sensational scientific discoveries with which the name of Professor Roentgen is popularly associated. The chief medical interest in this discovery lies in the fact that bone is opaque and flesh transparent, so that by means of these rays the skeleton of a living body can be photographed, as shown in the beautiful photographs reproduced in our medical journals; and in this way the nature of deformities, obscure fractures, and dislocations can be accurately determined. It is almost impossible at present to realise the full importance of this discovery as an aid to medical and surgical diagnosis; but, judging from the great advances already made, it seems possible that not only injuries of bone and foreign bodies in the tissues may be seen, but the diagnosis of such obscure conditions as renal and biliary calculi will be much facilitated. Another tribute to the immense importance of this discovery is the fact that one of these photographs has been accepted in a court of law as evidence of injury and substantial damages awarded in consequence. I quote from the report which is taken from the *Sun* of March 8th, 1896. "The Roentgen Rays in Court.—The Roentgen rays penetrated yesterday into the Assize Court at Nottingham, where Mr. Justice Hawkins was sitting at *Nisi Prius*. Miss Gladys Ffolliott, an actress, claimed damages from the Nottingham Theatre Company for injuries sustained through a faulty staircase in the defendants' theatre. During the hearing of the case a London medical practitioner produced in evidence negatives of the plaintiff's left foot taken by Professor Ramsay by means of the new 'x' rays. The negatives showed that the bones of the foot had been displaced. Mr. Justice Hawkins remarked that nowadays a man might be sent to an asylum by having his head photographed. Verdict for the plaintiff, damages £76 10*s*."

Gentlemen, I now beg leave to conclude. In doing so may I be allowed to thank you for the honour you conferred on me by placing me in this chair, and may I also express my sincere and cordial thanks to the honorary secretaries of this society, Dr. James Galloway and Dr. E. S. Tait, for the kindness and the able support I have received from them during the whole of my term of office?

THE CAUSATION AND TREATMENT OF MAMMARY ABSCESS.[1]

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IN these days of striking novelties in surgical matters there is always an inclination to commence with an apology when one writes a paper upon a medical or surgical malady of common occurrence, which is ordinarily met with in practice, and the diagnosis and treatment of which are supposed to be generally well known. Such a subject is suppuration within the mammary gland, and I have been induced to bring it forward because of its importance in all classes of practice, and because I feel sure that the operative treatment of mammary abscess as ordinarily conducted is by no means satisfactory in its results. The very commonness of the affection would serve as a sufficient plea for my bringing it before a society where men of all varieties of practice meet on common ground. There are many points regarding mammary suppuration of great interest. Not the least are some of the modern methods of treatment and the frequent diagnostic difficulties that from time to time arise. As regards the causation of these affections, though everyone connects them with suckling and lactation, yet instances occur in practice which are quite inexplicable on these grounds, and it is here that the special diagnostic difficulties arise which renders the subject of mammary abscess so immensely important to surgeons. Taking first the common form of acute mammary abscess I need only state a few figures to show its close relation to lactation. The total number of cases of abscess of the breast admitted into St. George's Hospital between 1870 and 1895 was 200. The right breast was more commonly affected. Both breasts were affected in 13 instances. There were 2 cases affecting males: 1 due to pyæmia and the other to a blow. Out of the 200 cases 169 were directly due to lactation and referred to sore nipples in women of the child-bearing age. 31 were due to other causes; of these, 8 seemed directly attributable to a blow, 1 was due to necrosis of a rib and 22 were due to no certain cause; but of these in 5 instances the abscesses originated on the site of former abscesses, and there was in three a suspicion of the affection being tuberculous. In the 22 cases the patients were either young girls or women between forty and sixty years of age. The youngest were eleven and fifteen and the oldest fifty-eight and sixty-seven years of age. In only 2 cases was the abscess submammary. In the majority of instances the pus was within the gland substance itself. In several of the older patients the abscess was thought to be a solid tumour, and the true nature was only discovered after exploration.

In like manner I have studied sixty cases of abscess of the mamma admitted into University College Hospital for six years, from 1884 to 1890, selecting that period because then alone were full particulars given of the nature of the abscesses and the time they occurred after lactation. Of the 60 cases, 51 were associated with pregnancy or lactation in women of varying ages. The left breast slightly preponderates in order of frequency of attack. Of cases of chronic abscess there were eight occurring between the ages of thirty-five and fifty-one years. In one of these blows were mentioned as a likely cause. Several of the chronic abscesses were only differentiated from scirrhus by exploratory incision, being associated with ulceration of the nipple, and in one the nature of the contents seemed likely to show that the supposed abscess was really an ancient galactocele with inspissated contents. One case of acute superficial abscess occurred in the male breast just beneath the areola, and no cause could be assigned for it. Of 102 cases of abscess related by Bryant[2] 79 occurred during lactation, two during pregnancy, and 21 in non-lactating, non-pregnant women. Birkett[3] in examining 149 cases of mammary suppuration noted that 132 of them occurred

[1] A paper read before the Medical Society of London on April 27th, 1896.

[2] Diseases of the Breast.

[3] Holmes's System of Surgery, vol. iii., p. 434.

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n suckling women. Among 72 cases published by Nunn 38 occurred in lactating women, 7 in pregnant women, and 7 in non-puerperal women. Of 230 cases collected by Jamain and Terrier[4] 183 were connected with the puerperal state, 47 occurred during pregnancy, and 34 were not connected with either condition. McClintock[5] preserved notes of 82 cases of mammary abscess and found the preponderance on the left side. Of all the abscesses he had seen the vast majority made their appearance during the first six weeks of lactation. As regards the time after parturition that mammary abscess occurs I find the greatest variability. Some of the cases occur as early as the first, others not until the fourteenth month. Birkett[6] found that in 116 cases half of them occurred as early as the first month after parturition, and a large proportion of these as early as the first week. In 50 of the St. George's Hospital cases collected by myself, where the time after parturition is noted, the majority occurred later than this, 38 cases occurring in the period between the second and the fourth month. Bryant[7] found that out of 102 cases 68 occurred in the first two months after pregnancy. It would seem very difficult if not impossible to strike an average regarding the exact month at which lactation abscess is the more common; but Nunn, Birkett, and Bryant are all agreed that this affection is most frequent in the early and late months of pregnancy. Birkett[8] estimates that half of the cases are associated with defective or sore nipples. Personally, I believe the average is far higher than this, and I have never seen a case of acute mammary abscess in a young woman without being able to observe, by the aid of a lens, breaches of surface in the vicinity of the nipple by which organisms might readily enter the lymphatic channels. Through the courtesy of Dr. Griffiths and Dr. Grigg I have been able to inspect the records of Queen Charlotte's Lying-in Hospital, and I was greatly struck at the remarkable infrequency of mammary abscess at that institution. Out of 2000 cases examined by myself, taken by selecting 200 at a time, out of different years in the practice of various physicians, to my surprise not a single case of mammary abscess was found. The medical officer was obviously on the alert to note such conditions, for cases of "milk-engorgement" with threatening inflammation were here and there noted. It is true that the majority of parturient women were early discharged from the hospital, say, in a fortnight or three weeks; but, on the other hand, it must be pointed out that most of the patients were primiparæ in whom the nipples are often badly developed, badly cared for, and frequently sore. The cause was not far to seek in the precautions taken by the physicians to ensure the cleanliness of the nipples and of the infant's mouth, and this brings me to enunciate the first important proposition of this paper, that in the vast majority of cases acute mammary abscess, whether during lactation or not, and in either sex is due to absorption by the lymphatics of organisms, which enter abrasions on the nipple or areola. The common organisms found on the skin can nowhere be more abundant than in the axilla or about the areola of the mamma—parts moist and protected and affording every opportunity for active increase and growth. Moreover, round the nipple is a fossa kept moist by the secretion of especial sebaceous glands, and in such a locality organisms most abound. The least breach of surface is inoculated as surely as though the surgeon had rubbed in the virus intentionally.

During lactation the vascularity of the breast and the rapidity and vigour of its lymphatic circulation render absorption very marked. The organ is engorged with blood and full of an animal fluid, affording an excellent medium for the proliferation of organisms. All these considerations are sufficient to explain why the least breach of surface about the nipple of a lactating breast so readily leads to abscess. Modern investigations into the true causes of suppuration exclude engorgements of the mamma as having anything to do with mammary abscess except as a predisposing cause. In former days the milk was thought to be the cause of mammary and puerperal affections. Thus, puerperal insanity was termed 'mania lactea" and iliac phlebitis was commonly termed 'milk-leg." These erroneous terms were first publicly denounced by Meigs, who applied the contemptuous epithet of "milkmen" to his professional opponents. The organisms found on the skin capable of originating suppuration are probably numerous and need not here be enumerated. Modern writers on dermatology, especially in Germany, have recognised the fact that many of the suppurative affections of the skin associated with local infective qualities, as boils, pustules, and impetiginous eczema, are due to the entrance of organisms, especially staphylococci, by minute abrasions or by the mouths of the ducts of the sebaceous glands.[9] Dr. Slater, bacteriologist to St. George's Hospital, has kindly examined for me the pus taken from acute mammary abscess. In all of the cases abundant staphylococci were found, principally the staphylococcus aureus. Jamain and Terrier are of the same opinion.[10] "Abscess of the breast," write these authors, "is the result of infection." The most common agent is the staphylococcus, sometimes the streptococcus, and, according to Bumm, in exceptional instances the gonococcus. In accordance with the view that all cases of acute mammary abscess are due to the entrance of organisms from the neighbourhood of the nipple, I must view with doubt those cases of so-called acute idiopathic abscess that occur in the unimpregnated condition. Among the St. George's Hospital cases are found instances of acute abscess occurring in girls as early as the age of fifteen and eleven years, and no apparent cause was to be found. In neither of those cases was an examination made of the nipple and areola with a lens, and without such precaution an abrasion may be readily overlooked. I had an opportunity of observing an important case which bears out this view under the care of Mr. Pick in the wards of St. George's Hospital during the past year. A middle-aged, healthy-looking single woman had noticed for about a year that the left nipple was occasionally "a little sore." A week before admission she had complained of acute pain in the left breast with some swelling. There was an apparent tumour the size of an orange in the left breast, hard but markedly tender, with a sense of elasticity towards its centre and a faint red blush on the skin. At the base of the nipple was a small abrasion covered by a scab. The appearances were very similar to scirrhous cancer. An exploratory incision evacuated creamy pus, which was examined by Dr. Slater and found to contain the staphylococcus aureus in abundance. The abrasion on the nipple might readily have been overlooked without close examination.

Although in the numerous instances where chaps and excoriation about the nipple become infected with organisms, the staphylococcus — especially the staphylococcus aureus—appears to be common, yet there is nothing to prevent organisms of a more virulent nature from entering the tissues. This will perhaps explain cases which the older writers used to term diffuse phlegmon of the breast, where the tissues became gangrenous and the patient rapidly sank. Such cases are certainly rare. I have never seen one, and they are scarcely mentioned by modern surgeons. Velpeau[11] notices the case of a healthy and powerful young woman, who was neither pregnant nor recently confined, who was attacked with what was considered to be "erysipelas" near the left nipple. The swelling increased with a rapidity similar to that observed in the scrotum, eyelids, or cellular tissue elsewhere. A large gangrenous patch formed over the external half of the gland and the patient rapidly sank. In such a case modern investigation would probably have discovered such organisms as streptococci and the bacillus septicus.

The cases, says Spiegelberg, in which abscess of the mamma is part of general septic infection must be very few. Rokitansky mentions the occurrence, and other cases are related by McClintock and one by Spiegelberg[12] himself. McClintock's case of abscess due to general septic infection is referred to in his clinical memoir on diseases of women (page 325). "Only one example has fallen under my notice in which I felt satisfied the abscess of the breast was purely symptomatic. In this instance it succeeded to uterine phlebitis. An enormous swelling, attended with great pain and some discolouration of the skin, formed in the superior part of the right mamma extending upwards to near the clavicle. On dissection, an immense quantity of unhealthy purulent fluid was infiltrated throughout all

[4] Manuel de Pathologie et de Clinique Chirurgicales, tome iv.; Maladies du Sein, p. 686.
[5] Clinical Memoirs, pp. 309–310.
[6] Holmes's System of Surgery, vol. iii., p. 435.
[7] Diseases of the Breast, p. 25.
[8] Op. cit.
[9] Malcolm Morris: Diseases of the Skin, p. 327.
[10] Manuel de Pathologie et de Clinique Chirurgicales, tome iv., deuxième fascicule, p 687.
[11] Diseases of the Breast, p. 31.
[12] Text-book of Midwifery, vol. ii., p. 408.

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the structures of the part." The records of the Middlesex and University College Hospitals show us no examples of pyæmic abscess of the breast, and it is not mentioned by writers of repute. I have only been able to find one case of abscess of this nature in the records of St. George's Hospital in twenty-five years, though it is right to point out that in fatal cases of pyæmia a small abscess in the breast may readily have been overlooked. A feeble man was admitted into St. George's Hospital on July 30th, 1884. He was too ill to give an account of himself, but it was gathered from his wife that he had been ailing for about ten weeks with "aches and pains all over him." Five weeks before admission a painful swelling began to form in the left breast and right nipple. On admission a large abscess was opened in the left breast, and an incision over the right inner malleolus was made through brawny indurated tissue. This patient remained in the hospital for nearly seven months with all the symptoms of chronic pyæmia, abscesses being opened in the buttock, the calf of the leg, and the sterno-clavicular articulation. He finally recovered after a severe and protracted illness. The primary focus of infection was doubtful, but abscess undoubtedly first formed in the left mamma.

I have asserted that the vast majority of cases of acute mammary abscess are caused by the direct action of organisms which enter the lymphatic channels. There yet remains another possible method of infection which is of the highest interest and which possibly has not received the attention it deserves—i.e., the entrance of organisms along the milk ducts themselves. I have already referred to the fact now well known among dermatologists that organisms may enter the sebaceous glands of the skin and thus produce the phenomena of boils and pustules. Seing that the breast is only a highly differentiated sebaceous gland one suspects that the same might here occur. Nocard of Lyons produced tuberculous mammary abscess by injecting tuberculous virus into the milk ducts of a lactating goat. Boissard in a clinical lecture delivered in Paris in 1893[13] speaks very positively of the invasion of the milk ducts by streptococci and staphylococci. He terms the resulting suppurative affection galactophoritis. Chassaignac called the disease canalicular intra-mammary abscess Nyeth[14] relates the case of a woman aged forty-two years who was non-lactating and affected with bilateral mammary abscess which burrowed through and destroyed both breasts. He terms the case infection of the mammary gland through the nipple and galactophorous ducts. The destruction was so extensive that both breasts were ultimately amputated, which seems a very severe remedy. The branching nature of the abscesses along the milk ducts seems especially to impress the writers upon galactophoritis. It is always open to doubt in these cases that some breach of surface does not really exist, and although the experiments of Nocard place it beyond doubt that infection by the ducts is possible it is certainly not common. For three years I have closely examined a number of cases of mammary inflammation and abscess without finding a single case where I could certainly attribute the abscess to infection through the milk ducts themselves. Moreover, in 1894 Professor Sherrington and myself performed two experiments at the Brown Institute which had a negative result. In a lactating cat and a lactating rabbit milk was squeezed from the mammary gland, and where the ducts were empty and ready for absorption pus was well rubbed into their orifices and allowed to dry there. In one case fresh pyæmic pus was used, in the other secretion from a tuberculous abscess. In neither of the cases did any reaction or alteration occur. I think these two experiments, which were carefully done, go some way to show that suppurative processes do not readily pass along the milk ducts of animals. What the effect of gonorrhœal pus upon the milk ducts of the human subject may be it is, of course, impossible to prove by experiment; but judging by the way it affects the urethra one would imagine that purulent inflammation would readily result. The principal importance of purulent inflammation of the milk ducts are the serious results which may possibly occur to the infant. We hardly yet quite understand the extraordinary influences which the mother's milk may exercise on the infant for good or bad. We, indeed, are aware that certain drugs are excreted with the milk and that emotional disturbances and febrile attacks on the part of the mother have deranged the digestive system of the infant. The presence of pus in the milk would be likely to cause very serious consequences, and I recommend this investigation especially to those who are interested in the dietary and management of young infants. Dr. R. A. Gibbons[15] relates a most interesting example of fatal and acute purpura hæmorrhagica in a child. The case is a very striking one, and one can hardly doubt on considering it that the condition was due to the pernicious effect of pus in the milk. The child had suffered from severe diarrhœa and was progressing well upon asses' milk until suddenly he became extremely ill with severe epistaxis and all the familiar symptoms of hæmorrhagic purpura. He died after an attack of severe hæmatemesis. About six days previously to his death his mother noticed a thick sediment in the milk, and on inquiry being made the donkey which supplied the milk was found to be suffering from abscess of the udder. Dr. Gibbons states further to me: "I know of two cases in which mammary abscess was developed, and before the suppuration was pronounced the infants were ill. One of these cases, a wet-nurse, I admitted under my own care at the hospital, and she had several abscesses of the mamma."

The influence of blows in causing abscess of the breast is well known. When suppuration occurs in the male breast it is usually due to this cause. Bryant[16] found that of 12 cases 8 were attributed to local pressure or injury, causing extravasation of blood. I have notes of 3 cases where abscess of the male breast followed a kick, a blow from the horn of a cow, and the pressure of a shoemaker's last. In these instances it seems quite plain that a communication is established between an area of tissue containing extravasated blood, the resistance of which is impaired, and the external parts through the torn or injured ducts, and hence organisms may enter and produce injurious effects. Abscess in the breast of infants has been frequently recorded and appears to be largely a preventable malady. The milky exudation which flows from the nipples of some infants is almost entirely due to disintegration of the central cells of the columnar epithelial masses of which the primary gland is formed. When ignorant nurses in these cases pull or rub the nipples a breach of surface is effected by the rupture of a milk duct or abrasion of the integument of the nipple, and, organisms entering, an abscess is the result. In the well-conducted large "lying-in" hospitals of this city abscess of the breast in infants is practically unknown, yet the swelling and hyperæmia associated with secretion of spurious milk are not uncommon and often lead to feelings of alarm in the mind of the medical attendant. A case of mammary abscess in an infant three weeks old is related by Dr. Stephen of Lettercairn.[17] It is said to have been caused by "retention of milk." The child, a female, was sixteen days old when the right breast inflamed, pointed, and was opened, when about an ounce of thick greenish pus escaped. On examination a milky secretion was found issuing from the left breast, which was examined with the microscope and found to resemble the maternal milk except that the latter contained more corpuscles. A case of double mammary abscess in a male infant is related by Dr. Wilks of Ryde.[18]

Attention being drawn to the subject, a number of cases of abscess in infants are recorded by various practitioners.[19] Most observers refer the occurrence of the abscess to the practice prevalent among ignorant nurses of pulling and rubbing the nipples. Dr. Robert Barnes[20] backs up this assertion and states that when he was house surgeon to a lying-in hospital he encountered several cases of abscess in the breasts of infants due to the manipulations of nurses. Numerous other instances may be found in surgical literature where experienced practitioners attribute cases of abscess in infants to this practice.

In cases of swelling and engorgements in the breasts of infants were the attendant content to keep the parts about the nipple scrupulously clean with a very dilute mercurial wash and to apply graduated pressure with cotton-wool and bandage the phenomena of abscess would probably never occur. Suppuration in connexion with new growths in any part of the body is extremely rare, and the same is true of new growths of the breast. Abscesses may, however, be found in the neighbourhood of ulcerating cancer, and the same phenomenon is sometimes observed in other parts; thus

[13] Semaine Medicale, 1893, p. 499.
[14] New York Medical Journal for 1890.
[15] Medical Times, Jan. 3rd, 1885.
[16] Diseases of the Breast, p. 53.
[17] Brit. Med. Jour., July 25th, 1874.
[18] Ibid., Aug. 1st, 1874.
[19] Ibid., Aug. 8th, 1874.
[20] Ibid., Aug. 15th, 1874.

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we find abscess of the neck with ulcerating epithelioma and abdominal abscess with ulcerating carcinoma of the intestine. In very exceptional cases the cysts of sarcoma or adenoma may contain pus. Should they be artificially inflamed or inoculated with septic material, as by the introduction of a dirty trocar, suppuration is, of course, not uncommon. In the days when caustics were employed to remove cancers of the mamma, surrounding abscess and cellular inflammation were often enough exemplified. In the year 1867 a patient was treated in St. George's Hospital for scirrhus of the left breast with the chloride of zinc paste inserted in the form of arrows into the diseased mass. The whole breast sloughed out, but severe rigors and fever ensued, and a large abscess formed in the other breast. The patient died apparently from pyæmia. A good instance of abscess of the breast in association with scirrhus is the following. A woman aged seventy-six years was in St. George's Hospital in 1883 with a hard scirrhous cancer growing in the left breast and which had existed for two years. Lately the tumour had ulcerated, the nipple was retracted, and the skin adherent. There was a large abscess stretching from the nipple to the axilla. The abscess was opened and much foul pus evacuated. The tumour and pectoral muscle to which it was adherent were removed. The patient recovered favourably. A single woman aged thirty-three years was in St. George's Hospital in 1889 suffering from a tumour of the left breast. She stated that this had existed for six weeks, but the history was very doubtful. Her mother had died from uterine cancer. The patient had always suffered from a painful and retracted nipple. On examination there was a large, round, tender, movable swelling in the upper part of the left breast and the skin was non-adherent. There were some enlarged axillary glands. At consultation exploratory incision was decided on. This being performed, pus was discovered and the sac of the supposed abscess with the surrounding breast tissue dissected out. It was later discovered that papillary growths were present on the walls of the sac. Thus the case was really one of suppurating cyst. Such instances are exceedingly rare. In the past year I saw my colleague, Mr. Bennett, operate upon a large cystic sarcoma. One of the cysts discharged pus abundantly and there was practically a sinus communicating with a large abscess cavity. This had resulted from a puncture with a lancet made outside the hospital into one of the main cysts in connexion with the growth, allowing the cystic cavities to become septic.

Having thus discussed the probable true pathology of the acute forms of mammary abscess a word may be said as to the position and effects of purulent collections within the gland. In nearly all our text-books the division is made into the supra-mammary, the intra-mammary, and the sub-mammary abscess. As regards the first variety, the pus forms immediately beneath the skin of the areola, and in a considerable number of cases is doubtless due to suppuration in some of the sebaceous structures (glands of Montgomery) which exist in that position. As regards the sub-mammary abscess I may at once state my belief that abscess really beneath the gland is far more rare than is generally believed. I may here state that I have never seen a case of true sub-mammary abscess except as a consequence of caries of the ribs or empyema. I have, indeed, been shown examples where the breast has been pushed forwards as though by pus behind it, but in all of them I have found in operation that the purulent collection has been in the deeper part of the mammary gland itself and not entirely beneath it. In short, it may be said that the majority of mammary abscesses of gravity or significance are found in the substance of the breast itself. Great havoc is wrought by untreated suppuration in the breast. The abscess burrows extensively and in a branching and irregular manner so that numerous pockets or recesses are formed and multiple "pointings" and sinuses may only too readily ensue. A fatal result from septicæmia very rarely occurs, but in severe cases the patient may be invalided for many months and suffer very severely. Sinuses may be so persistent, discharges so profuse, and destruction of the mammary gland so great that amputation has even been thought needful, as in the following case.

A married woman aged forty-four years was in University College Hospital in 1881. She had had five healthy children and then six miscarriages. Beyond this there was no suspicion of syphilis and no symptoms or history of tuberculosis. She had never suckled with the left breast which had been inflamed and tender for about eight weeks. The upper and inner part of the left mamma from the third cartilage to the xiphoid was firm, tender, and lobulated, the skin being red and adherent over low rounded prominences. Three sinuses near the nipple were discharging thin yellow pus from a superficial abscess. The liver and spleen were enlarged, smooth, and not tender. Menstruation was normal. The evening temperature was raised. The gland was described as riddled with sinuses and was amputated under antiseptic conditions, and the wound speedily healed. The gland was indurated, traversed by sinuses with granulating walls, leading to a cavity beneath the breast. The ducts were full of soft caseating material.[21]

In the breast it especially happens that abscesses are prone to become constricted in one part, where the pus has burrowed through a fascia or intra-mammary septum. The abscess then assumes a shape which may well be likened to an hour-glass. This most important variety of mammary abscess is too little noticed in modern times, but was long ago well described by Velpeau under the term "abscès en bouton de chemise."[22] I have seen several examples of this condition. The abscess shows itself as a subcutaneous swelling, and if the usual practice is adopted of making an incision radiating from the nipple the discharge will continue indefinitely: the true explanation being due to the fact that the main bulk of the pus is found deep in the substance of the gland communicating with the collection found under the skin of the areola by a narrow and sometimes sinuous channel of considerable length. I shall refer to this variety of abscess again when speaking of the subject of treatment, and meanwhile I may only point out that the likeness of the shape of the abscess to a shirt button as stated by the French writer is peculiarly appropriate.

I propose next, as briefly as possible, to pass in review the pathological causation of the more chronic varieties of mammary abscess which, though comparatively infrequent, are not less important than the acute on account of the numerous diagnostic difficulties and errors to which they give rise. And first it will be convenient to consider the influence of tubercle in producing abscess of the breast. Sir Astley Cooper noticed long ago the existence of "scrofulous tumours" in the breasts of single women; the skin becomes softened over them and finally gives way with a discharge of thin watery or curdy pus. The axillary glands are prone to share in the mischief, becoming enlarged and slowly suppurating. Dr. Charles A. Power[23] reports a case operated upon by Bull in 1886. This writer finds authentic records of 35 cases. Of these, 34 were in females and 1 in a male. Of the 34 women, 22 were married and 5 were single. In 8 these conditions were not mentioned; 21 of the 22 women had borne children and 6 had suppurative inflammation of the breast, while 3 had had inflammation not going on to suppuration. In 18 the right breast was affected; in 14 the left breast, and in 1 both glands. The youngest patient was seventeen years and the oldest fifty-two years. Excellent examples of this affection are related by Hebb and Shattock in the Transactions of the Pathological Society for 1888, and an extensive bibliographical list is given by Shattock in THE LANCET of June 8th, 1889, which comprises most, if not all, of what has been written regarding the subject up to that date. Payne[24] has related a remarkable example of tuberculous abscess near the nipple of a child who subsequently died from general tuberculosis. The important question of the transmission of tubercle by a mother to her child from the milk was discussed in this case. Most opinions were in favour of the possibility of this, though one observer pointed out that he believed Colles' law held good in tuberculosis as well as in syphilis. Personally, I have met with six cases of tuberculous abscess of the mamma, but I will only quote one of them, which will serve as an example of the others. In June, 1893, I saw at the Hospital for Women and Children in the Waterloo-bridge-road a pale, emaciated, worn woman aged forty-three years who had the scars of old gland disease in her neck and who had lost two children from phthisis. She herself had twice experienced attacks of hæmoptysis and had suffered with the left breast for about twelve months, "a lump" having broken and discharged. On the axillary aspect of the left mamma was a ragged cavity with livid undermined edges. The axillary glands were enlarged and one of them distinctly fluctuated. Close to the abscess cavity the breast was much indurated and

[21] University College Hospital Reports, 1881.
[22] Velpeau: Treatise on Diseases of the Breast, p. 75.
[23] Annals of Surgery, vol. xx., 1894.
[24] Meeting of the Pathological Society, May 25th, 1889.

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thickened. The discharge was thin and watery, but no tubercle bacilli were found therein. The axillary abscesses were opened and the ulcer scraped and dressed with iodoform. It never soundly healed and the woman would not consent to any more radical measures being adopted. As an instance of this affection occurring in a man I may quote the following. The patient, aged thirty-one years, was in the Westminster Hospital under Mr. Macnamara on Sept. 20th, 1893. Six months before admission he had noticed a lump in the left breast, which was painless. No history of syphilis was obtainable, but the man stated he was struck with a bar on the part a year previously. The tumour is described as forming an indolent lump, movable and not affecting the skin; the nipple was normal. There was slight glandular enlargement in the axilla. A considerable portion of the breast was removed with the caseous mass, but the affected glands were apparently left.

It would serve little useful purpose to quote numbers of those cases, for their pathology and clinical significance are very similar to tuberculous maladies occurring elsewhere. The abscess may be singular or multiple, and the surrounding breast substance healthy or more commonly riddled with small cavities containing caseating material. Thus the French writers will divide these cases into disseminated isolated tubercle, confluent tubercle, and "cold" abscess.[25] Practically speaking, tubercle of the breast will seldom or never come before the surgeon until its grosser symptoms are manifest. It is especially important to note that the bacillus is not always found in the discharge and the presence of caseating material on the walls of the abscess and around it is the principal distinguishing sign to the naked eye.

The symptoms of these important abscesses may thus be summarised. They are indolent in progress, forming chronic—and often—hard lumps in the breast of those who commonly exhibit signs of the tuberculous diathesis or have marked hereditary proclivities towards tuberculous disease; the skin is commonly slightly reddened over the centre of the swelling; and finally, when fluctuation occurs and thin, watery pus is evacuated, an unhealthy ulcer with livid, overhanging edges and feeble granulations is generally left. The axillary glands are very often affected, and this, together with the hardness of the swelling in its earlier stages, has probably led to the diagnosis and treatment for cancer being adopted more frequently than surgeons are apt to allow. While exceptionally occurring in very young or in old individuals it may with truth be said that the majority of chronic abscesses of the mammary gland are not tuberculous and their pathology and causation are matters of the highest interest and clinical importance. Typical cases of this nature are found in women forty years of age and upwards in whom lactation has long been in abeyance and in whose cases apparently no known cause can be adduced. I have already stated my belief and quoted a case in point that the true explanation of many of these obscure cases is the entrance of organisms through some slight breach of surface on the nipple or at its base. Another pathological point of great interest and importance as regards the pathology of these abscesses is the frequency with which one finds a history of antecedent abscess or inflammation in the breast, it may be many years before. So frequently do I find this, that one cannot doubt but that many chronic abscesses of the mammary gland are what were well termed by Paget "residual abscesses."[26] We have at present no certain means of knowing how long a time organisms may lie latent within the tissues, to be started into activity by some form of stimulation, and the whole question of the latency of organisms of disease is an untrodden ground rich with interest and importance. Some of the several instances I have seen of chronic abscess arising in a mammary gland, the seat of old-standing suppurative mischief, may now be quoted.

A married woman aged forty-two years was admitted into St. George's Hospital on Aug. 20th, 1888. She had been married twenty-three years and had borne ten children. Her last pregnancy was four years ago. Sixteen years before admission she had an abscess of the right breast, which had burst. Since then she had never been able to suckle with that breast. Six weeks ago, with no apparent cause, the right breast became painful and gradually swelled, and finally another abscess burst in the exact site of the former one. There was a sinus in the breast leading into indurated tissue. These conditions were cured by ordinary treatment. A married woman aged forty years saw me at the Waterloo-bridge-road Hospital for Women on Nov. 25th, 1874. Her right breast had become painful and swollen without any known cause for eight weeks. She had had twelve children and four years ago had two abscesses in the right breast. The scars of the sinuses resulting were still to be seen. Her last child was born four years ago. On examination the right breast was irregularly swollen and just internal to a deeply retracted nipple were two rounded, red, fluctuating swellings, obviously abscesses. These were opened, scraped, and the tube brought out below as will be hereafter explained. The pus contained the staphylococcus aureus in abundance. It is only right to point out that although in a number of instances of chronic abscesses of the breast there is a history of past suppurative affections, yet cases are met with where no such explanation, or, indeed, any rational explanation, is possible. These abscesses may occur in any part of the mammary gland but are commonly deeply seated. They are surrounded by much dense indurated tissue and the contents are thick and inspissated. From time to time surgeons have drawn attention to the extreme similarity between these affections and scirrhous cancer, and even with our modern knowledge diagnostic mistakes between chronic abscess and cancer more frequently occur than surgeons are willing to allow.

The symptoms of acute mammary abscess are so well known that it would be idle for me to attempt to enlarge upon them. Yet cases are related where acute inflamed cancer exactly simulates them. Mr. Howard Marsh, in vol. xxiii. of the St. Bartholomew's Hospital Reports, has recorded an admirable example of this condition. A most remarkable case of inflamed carcinoma simulating abscess was under the care of my colleague (Mr. Dent) at St. George's Hospital in March of this year. The patient was a pale, emaciated, wan-looking, single woman aged thirty-seven years, and her right mamma had been getting swollen and painful for three months. The symptoms of abscess were all exemplified in redness, swelling, heat, and pain, with elasticity and fluctuation, but the pain was "shooting," not "throbbing," in nature and the skin over the swelling showed the appearance of *peau d'orange*. An incision revealed a breaking-down growth with a cavity in its centre full of blood and serum. Microscopically the growth after removal proved to be scirrhus. The diagnostic importance of the symptom of *peau d'orange* was thus shown to be very great. It is otherwise with the chronic variety of mammary abscess. The depth at which these abscesses are situated, the induration of the tissues round them, the frequent co-existence of a retracted nipple, and chronically enlarged axillary glands make the diagnosis from scirrhus impossible without exploratory incision. Nay, even this may mislead. On Aug. 28th, 1894, I saw a spare, healthy-looking woman aged twenty-seven years, a patient of Mr. Hugh Webb of Parson's-green, who was suffering from a tumour of the left breast. She had never been pregnant. She had noticed the occurrence and gradual enlargement of the tumour for about four months. The nipple was deeply retracted and beneath it, incorporated with the breast tissue, was a hard mass, feeling in all respects like a mass of cancer. The axillary glands were not affected. The family history was good. There had never been discharge from the nipple. An exploratory incision was made into the mass and some pus welled up, but the tissue was so dense and bore so exact a resemblance to cancer that it was thought wise to remove the whole breast. The abscess was the size of a small walnut, situated deeply beneath the nipple, and surrounded by hard indurated tissue to the extent of half an inch. Dr. Rolleston kindly examined this tissue with the microscope, and I append his report: "Groups of atrophied and compressed mammary tubes enclosed in well-formed old fibrous tissue ..... sections of the wall of the abscess shewed well-formed fibrous tissue with an irregular lining of small cells, among which there are some traces of hæmorrhage." It is questionable in cases like this whether removal of the breast is or is not the right course to pursue, and upon this most important point opinions may well be divided. The records of every hospital, if carefully perused, will afford instances of confusion between chronic abscess and carcinoma of the mamma, and will exemplify the truth that the precaution of adopting

[25] Jamain et Terrier: Pathologie Chirurgicale, tome iv., deuxième fascicule, p. 702.

[26] Clinical Lectures and Essays, p. 309.

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an exploratory incision will alone discriminate between these affections. A series of chronic mammary abscesses simulating cancer are quoted by Reclus,[27] and the same subject is dealt with at length by Castex.[28]

I have intentionally somewhat hurried over the subject of the symptoms of mammary abscess, for they are tolerably well known, and I am anxious to dwell upon some points in connexion with the treatment of the disease which I believe to be of the highest importance. In the first place acute mammary abscess should be a preventable disorder if the medical attendant is careful as to the cleansing of the nipple and of the mouth of the child, and is aware of the importance of attention to the proper care of the nipples previously to marriage. In certain cases of mal-development of the nipples fissures or ulcer will arise and in such abscess may occur even with the best care. I propose to speak of the purely operative treatment of acute abscess of the breast, without ignoring the important accessories of weaning the child, supporting the breast, the administration of various drugs, or expression of the milk by massage and the exhausting pump. The prevention of mammary abscess by expression of milk, and the use of an exhausting bottle to the nipple, is favourably spoken of by Spencer and Beale.[29] The latter also advocates the treatment of mammary abscess by opening with a trocar and cannula, and applying the exhausting bottle to the aperture. While I am ready to admit that this treatment might be applicable to small superficial abscesses, I should hesitate to apply it to deeply-seated collections of pus with loculi in the substance of the gland.

I feel quite sure that the treatment of acute mammary abscess by the method of establishing a free opening anteriorly radiating from the nipple is essentially wrong. It leaves a scar on the front of the breast and, what is of greater importance, it opens the purulent collection in a position the least suitable for drainage. As a consequence many of these cases need several operations until drainage-tubes are seen projecting through various openings and very unsightly scarring results with subsequent deformity and grave interference with the functions of the gland. In a considerable majority of the cases I have been able to collect from the records of St. George's and other hospitals several operations under anæsthetics were often needful. This clearly means inefficient drainage. I will now describe the method of treatment I have found efficacious in several cases, trusting that those who have extensive practice among parturient women will give it their careful consideration. So soon as elasticity and deep fluctuation are evident an incision is made radiating from the nipple just large enough to admit the index-finger of the operator and this is deepened until pus flows. The finger is now passed into the cavity, and in the vast majority of cases it will be found that the end of the digit may be brought fairly near the surface in a dependent position, and this is generally at the thoracic mammary junction. In this situation it may especially be noted that scars are hidden from view. Sometimes the finger passes towards the axillary margin, and occasionally the cavity is so large that a stout dent probe must be used to indicate the deepest part of the abscess. In this situation, the gland being well raised by an assistant, a free opening is to be made, large enough to well evacuate the pus, and the finger being now introduced through this the inferior opening, the operator will be surprised to find that the pus has burrowed about, and is contained in loculi bounded by fibrous septa. It is especially noteworthy that in many cases quite a narrow channel towards the nipple connects the deep abscess with the more superficial collection of pus opened anteriorly, and it will then be clearly understood how inefficient is drainage in the practice of those who are content with a small incision anteriorly in these cases. The remainder of the treatment is obvious; the cavity is well flushed out with whatever agent the operator fancies, and a full-sized tube is introduced from below. The opening made near the nipple is closed with fine horse-hair and painted with collodion. It readily unites with only a faint scar, and the free drainage prevents the possibility of the re-collection of pus and a necessity for further operation. The tube, a large one, can be left in the cavity as long as needful and is slowly shortened and withdrawn. It may seem superfluous to mention that the drainage-tube should be secured with a piece of silk, but the fact of the tube having entered an abscess cavity and having been there retained or only removed by a troublesome operation must not be lost sight of. This accident may readily happen unless special care be taken. The unsightly scar is completely hidden by the position and volume of the gland above.

The treatment of chronic abscess of the breast is a matter of greater difficulty and must ever raise differences of opinion. The importance of exploratory incision has already been raised, and I would here make a statement which may seem exaggerated, but which experience and a perusal of the literature of the subject permit me to positively advance. There is no symptom of scirrhous cancer of the breast which may not be simulated by a chronic abscess enclosed in a dense mass of inflammatory material, and unless exploratory measures are made as a matter of course grave errors of treatment will occasionally arise. The diagnosis of chronic abscess being established one of the first thoughts which should arise is as to the presence or absence of tubercle. The thin and watery nature of the pus with the presence of caseating material in the walls of the abscess is one of the best naked-eyed tests that can be applied. Many writers seem to be in favour of removing the entire breast in cases which appear to be of a tuberculous nature. With reference to this very important point in operative surgery much will depend upon the extent of the disease. In disseminated tubercle, where several abscesses or masses of caseating material are disseminated in the breast, removal of the entire organ, with possibly the axillary glands also, is undoubtedly the right treatment to adopt. With regard to non-tuberculous chronic abscesses there is again no absolute rule. When the abscess is surrounded by tolerably healthy mammary tissue and has moderately thick parietes the free use of the spoon, with scraping and flushing and drainage in a dependent position in the thoracic mammary furrow, will give good results. But if the abscess, as in one of the cases I have related, is enclosed in a dense mass of inflammatory tissue infiltrating the greater part of the breast, and especially if the patient be at the age when scirrhus is frequent, removal of the entire organ is, in my belief, the wiser course to pursue. Regarding this question there is much difference of opinion. It is always most difficult in practice to determine at the moment what is best for the patient, and the operative treatment of chronic abscess of the breast is eminently one for consideration and discussion. I can only assert my belief that breasts are removed too frequently for these affections, and that free drainage in a dependent position with erasion and flushing will negative the necessity for the more serious operation in the vast majority of cases we meet with in practice.

Cavendish-place, W.

[27] Cliniques Chirurgicales, 1888, page 417
[28] Revue de Chirurgie, 1887.
[29] THE LANCET, March 7th, 1893.

ON THE FORMATION AND STRUCTURE OF DENTAL ENAMEL.[1]

BY J. LEON WILLIAMS, D.D.S. BALTIMORE, L.D.S. R.C.S.I.

ALMOST every anatomist or histologist of note since the time of John Hunter has made some contribution to the subject of this paper. In going over the literature of the theme one is struck by the wide divergence of opinion expressed—a divergence which is as marked and emphatic to-day as it was forty or fifty years ago. Broadly speaking, all who have written on the subject may be separated into two groups or schools: those who have taught that the formation of enamel is effected by direct cell-calcification and those who have claimed that the tissue is produced by a secretion—by the calcification of a cell-product. Between 1850 and 1860 Professor Carpenter was maintaining the former position, and during the same time the late Professor Huxley wrote several papers antagonising this view, and claiming that enamel could not be produced by any conversion of a cellular structure. Curiously enough, his main contention was correct, although founded upon mistaken premisses. In 1848 the late Sir John Tomes delivered a course of lectures in which he taught that enamel-formation is the result of the calcification of the enamel-forming cells. His son, Mr. Charles Tomes, in the last

[1] An abstract of a paper read before the Royal Society, Dec. 12th, 1895.

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edition of his work on Dental Anatomy, published in 1894, still holds to this opinion, and these views are also shared by Waldeyer, Wedl, and many others. On the other side, Professor Schäfer in England, Professor Spee in Germany, and Dr. Andrews and Dr. Sudduth in America have maintained that the enamel-cells or ameloblasts are not directly calcified, but that they are the active agents in producing the material from which enamel is formed.

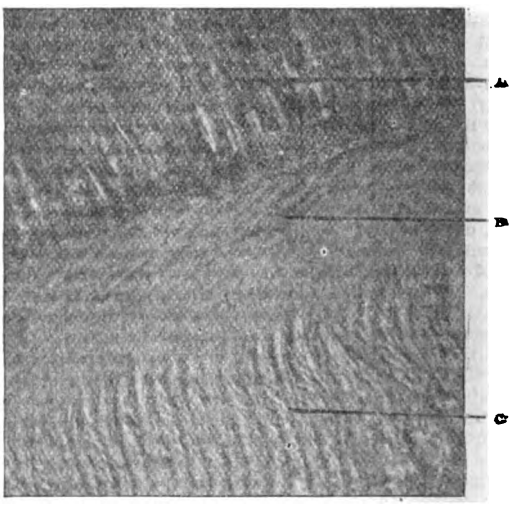
It is not my intention to present a summary of the history of the literature of this subject, and I have mentioned the foregoing names merely to show that the most eminent teachers have held, and still hold, widely different views. This difference, I believe, has largely grown out of relying too closely on one or on a few particular methods of working. I have seen many illustrations of the possibility of drawing contradictory conclusions from appearances presented by different methods of treating tissues, each of these conclusions very probably representing a half truth. Another reason may also be found in the very great difficulties attending the preparation of thin sections of developing teeth with all of the tissues in their normal relations. In deciding, therefore, to reinvestigate the whole field of the development of the teeth I determined at the outset to adopt a large number of methods of working, in the hope that by comparing the results of widely differing treatment I might unravel some of the tangles in which the subject has always been involved. I selected for the commencement of my work embryos of the cat, dog, sheep, cow, hog, and monkey, as well as human embryos of all stages of development. The rodents were also represented by mice, rats, and guinea-pigs. Some of the material was cut while fresh and some immediately after fixing by freezing processes. Other material was fixed and hardened by a great variety of processes and embedded in balsam by the Weil process or decalcified by different acids and embedded in paraffin and celloidin. More than thirty different stains and combinations of stains have been tried, and sections have been mounted in balsam, Farrant's medium, glycerol, sulpho-carbolate of zinc in glycerol (my favourite medium for purposes of study), and other preservatives. As there is but little difference of opinion concerning those earlier stages of tooth development which precede the commencement of the formation of dentine and enamel we need give no further attention to this period than is necessary for an introduction to the subject proper. All students of dental histology are now aware that the teeth are developed from two distinct tissues. The so-called enamel organ is a product of the oral epithelium, while the dentinal germ or papilla is formed in the submucous or dermal tissues, the former being the first to appear.

The first sections cut for these special studies were from the jaw of an embryo lamb at a period just after the commencement of enamel formation. The material was fixed in a saturated aqueous solution of corrosive sublimate, partially decalcified in a weak solution of chromic and nitric acids, and embedded in paraffin. Sections were stained with a modification of the Ehrlich-Biondi fluid. The appearances were different from anything I had before seen. There was no trace of a prismatic character in the partially decalcified enamel, but instead a faint appearance of fibres running parallel with the inner ends of the ameloblasts, with small globular masses irregularly distributed among them.

FIBROUS CHARACTER OF ENAMEL.

With the suggestions which this specimen gave me I prepared some extremely thin sections from the persistently growing incisor of the rat. The enamel rods in the enamel of the rat, as is well known to those who have studied the subject, terminate a little below the surface, leaving on the outside a thin layer of clear and apparently structureless enamel. A partial decalcification of this layer showed a stroma composed of two sets of fibres running in nearly opposite directions, neither direction corresponding with the long axis of the ameloblasts. One set of fibres passes in a somewhat more oblique course than the other and becomes confluent with the ends of the enamel prisms. The other set of fibres sweeps downward on a circular course, crossing the more oblique-running fibres and the enamel prisms nearly at right angles. Sometimes both sets of fibres join and twisting about each other in a rope-like design pass along the course of the enamel prisms (Fig. 1). It is probable that the arrangement of fibres is fairly constant in teeth of the same animals, although differing widely in teeth of different animals; but it is only by cutting sections in a great variety of directions that one at last gets a true picture of the complex arrangement of fibres and rods. Enamel from the teeth of rats and mice shows a more marked fibrous character than any other that I have examined, and the most striking feature of arrangement of the fibre is the interlacing or weaving together of those running in

FIG. 1.



Forming enamel from incisor of rat. × 800. A, Enamel cells. B, Outer fibrous layer of enamel. C, Enamel rods showing twisted fibres.

different directions, like warp and woof in a web. This is very plainly shown in Fig. 2, where the torn edge of the enamel bears a striking resemblance to the effect produced by tearing a woven fabric of any sort.

STRUCTURELESS BASEMENT MEMBRANE OR MEMBRANA PRÆMAFORMATIVA.

By means of selective stains I have been able to demonstrate the existence of a membrane-like structure lying between the ameloblasts and the forming enamel and also between the ameloblasts and the stratum intermedium. It is uncertain whether this structure is identical with the membrana præmaformativa of Raschow, Huxley, and others. Its existence has been disputed by several of the more recent writers upon this subject, but it is plainly shown in Figs. 3, 4, 5, 6, and 7. I suggest that the structure lying between the ameloblasts and the stratum intermedium be called the *outer ameloblastic membrane*, while that which separates the enamel cells from the forming enamel may be known as the *inner ameloblastic membrane*.

THE CELLS OF THE STRATUM INTERMEDIUM.

It has for many years seemed clear to me that the enamel organ, and more especially the cells of the stratum intermedium, should be classed among the true secreting tissues. I am not able to understand how so many good observers have failed to see the intricate plexus of bloodvessels, which is very early developed in this layer of cells. Wedl, Magitot and Legros, Suddoth, and others say that they have uniformly failed to detect a blood-supply within any part of the enamel organ proper. If we examine the evolution of this tissue in the enamel organ of the mouse or the rat its place among glandular structures at once becomes evident. All appearance of round, polygonal, or oblong cells, as usually seen in the stratum intermedium, has entirely disappeared, and in their place we have a highly differentiated secreting tissue. The ameloblasts are surmounted by epithelial papillæ, around and between which is a free distribution of capillary loops. The ameloblasts are seen to be in intimate relation with the papillæ, each ameloblast seeming to have a root-like process which extends into and is lost in the substance of the papilla to which it belongs. The diameter of each papilla is equal to about that of five or six ameloblasts, and each papilla may therefore be said to supply from twenty to twenty-five ameloblasts. Bloodvessels are seen, in both transverse and longitudinal section, everywhere

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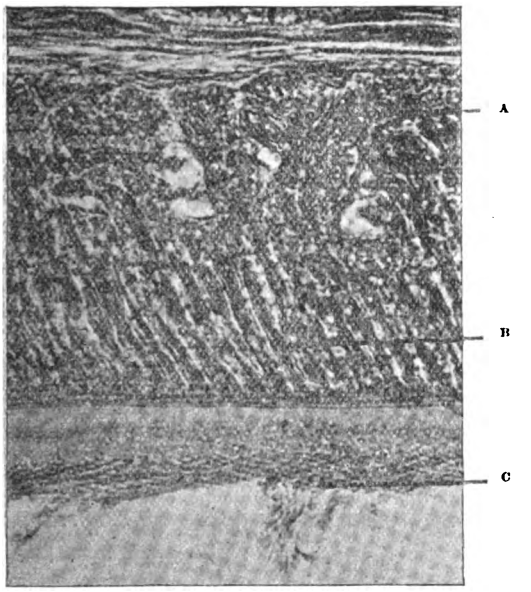
about the papillæ, and we may often observe branches descending to supply the loops which pass round the ends of the papillæ lying next the ameloblasts (Fig. 2).

At the commencement of enamel-formation in the teeth of

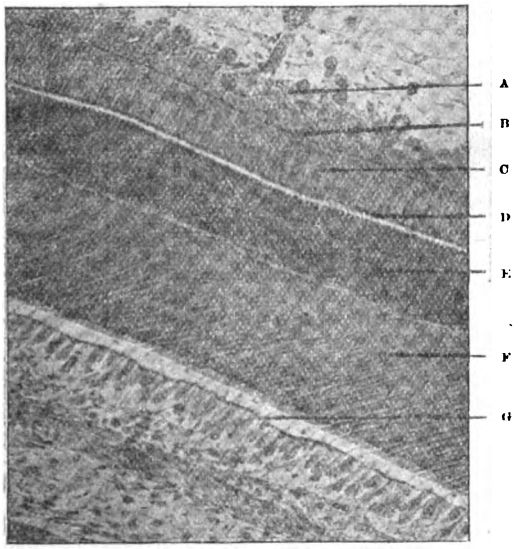
FIG. 2.



Forming enamel of rat. × 400. A, Secreting papillæ of enamel organ. B, Enamel cells. C, Torn fibrous edge of enamel.

the mouse there is but little indication of a special secretory organ, as may be seen by referring to Fig. 4. We see here that the outer ameloblastic membrane is not structureless, but is apparently composed of very fine fibres.

FIG. 3.

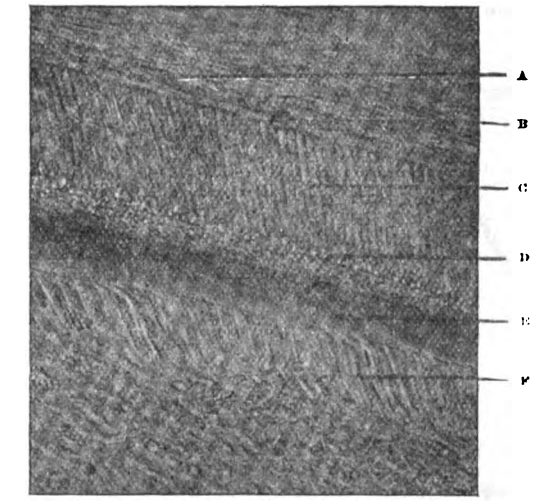


From longitudinal section of developing tooth of lamb. × 150. A, Secreting cells of stratum intermedium. B, Outer ameloblastic membrane. C, Ameloblasts or enamel cells. D, Inner ameloblastic membrane. E, Enamel. F, Dentine. G, Odontoblasts.

METHOD OF FORMATION OF ENAMEL.

Several observers of distinction, notably Dr. R. R. Andrews and Professor Spee, have described the development of enamel as a process in which the tissue is formed by the deposit of droplets or spherules of calcoglobulin. This view is undoubtedly correct, but, as stated by the writers mentioned, it does not include all the phenomena that may be observed. The ultimate structure of completely formed enamel shows that it is built up by the deposit of bodies

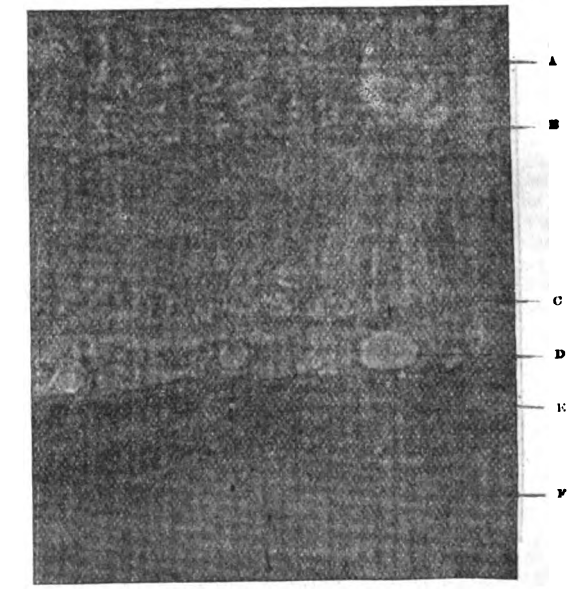
FIG. 4.



Section of developing incisor of mouse. × 400. A, Cells of stratum intermedium from which secreting papillæ are developed. B, Outer ameloblastic membrane. C, Ameloblasts. D, Formation of enamel by deposit of globular bodies from enamel cells. E, Dentine. F, Odontoblasts.

which are of very nearly uniform size. There is, as we shall see, no uniformity in the size of these masses of calcoglobulin, neither is there anything in their structure which corresponds with that of formed enamel; in fact, under the finest lenses that are made they show as highly refractive

FIG. 5.



Formation of masses of calcoglobulin in enamel organ of lamb's tooth. × 800. A, Stratum intermedium. B, Outer ameloblastic membrane. C, Inner ameloblastic membrane; D, Calcoglobulin masses. E, Enamel globules from which enamel rods are formed. F, Dentine.

masses without definite structure. Although they are usually more numerous at the inner ends of the ameloblasts, next to the forming enamel, they may be seen throughout the entire

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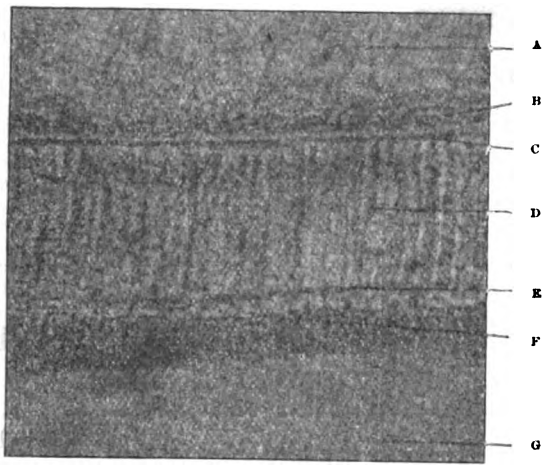
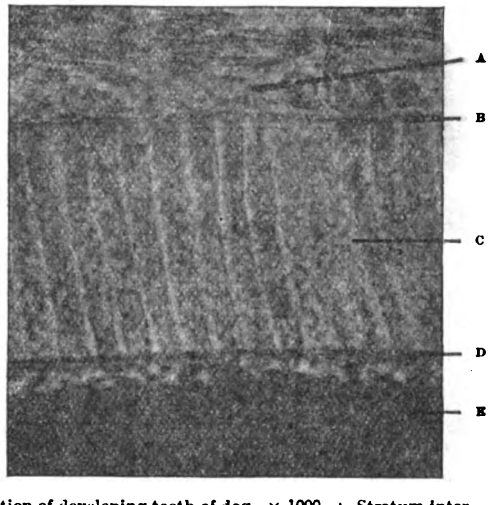
length of these cells, and I have often seen them lying close up to the membrane which separates the ameloblasts from the stratum intermedium. Occasionally I have espied them when they seemed to be actually in, or emerging from this membrane. Such appearances are shown in Fig. 5. It is possible, and I think highly probable, that this substance, although appearing in the ameloblasts, is really formed in the more specifically secreting cells of this stratum intermedium. These masses probably consist of calcoglobulin, an albumin-like substance holding calcific material in solution. Its function, I believe, is not the building up of the enamel rods as has heretofore been supposed, but the formation of the interprismatic or cement substance which binds the enamel rods together. It is clearly shown in Fig. 6 that the enamel rods are formed by the superposition or continuous deposition of bodies which are spherical when they leave the enamel cells, but by compression or chemical action are more or less charged into a disc-like shape as they take their place in the building of the enamel rods. Thus for the first time we have a clear explanation of the varicose appearance of the rods or prisms in completely formed enamel. Each varicosity of the rods represents one of these globules or disc-like bodies. In the inner portion of enamel next to the dentine the enamel globules usually melt together so completely that their individual form is lost, but as we approach the outer surface of the enamel the rods are clearly seen to be composed of globular or flattened bodies, not completely united, but still connected by calcified plasmic strings. These plasmic strings, of which there are many to each enamel rod, are often seen under a power of from 800 to 1000 diameters to be made up of granules, and these granules, so far as our present powers of observation are concerned, constitute the ultimate structure of enamel.

FIG. 6.



Section of developing tooth of human embryo. × 600. A, Reticulum of enamel organ. B. Stratum intermedium. C. Outer ameloblastic membrane. D, Ameloblasts. E, Inner ameloblastic membrane. F, Formation of enamel rods by successive deposit of enamel globules. G, Dentine.

FIG. 7.



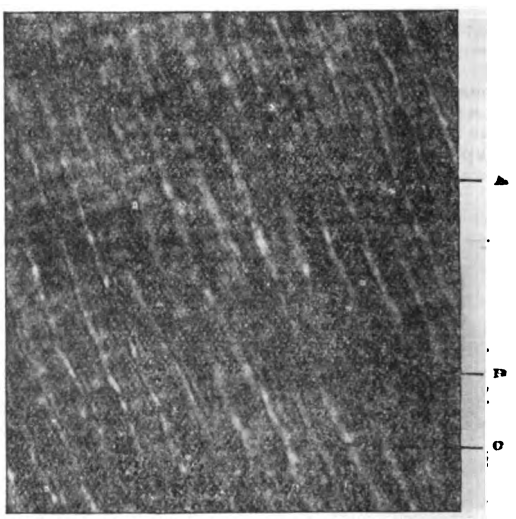
Section of developing tooth of dog. × 1000. A, Stratum intermedium. B. Outer ameloblastic membrane. C, Ameloblasts showing small masses of calcoglobulin. D, Inner ameloblastic membrane. E, Enamel.

THE CROSS STRIÆ AND RETZIUS BANDS.

My observations on these points have led me to totally different conclusions from those reached by Professor von Ebner of Vienna. Professor von Ebner regards the striæ of the enamel rods as an artificial appearance produced by the action of acids, and the Retzius bands as due to ground-off or artificial prism ends, and also to imprisoned air or gas contained in minute tubes or canals.

I have clearly demonstrated that the cross striæ are due to the varicose enlargements of the enamel rods and that these varicosities are produced by the successive deposit of globular masses from the enamel cells. The deposit of these bodies is simultaneous over the entire surface of the forming enamel, hence the regularity of the lines of striation and increment. I have further shown that the Retzius bands cannot be due to air or gas in minute canals because there are no such canals in normal human enamel. Neither are these bands due to the ground-off ends of enamel rods, as may be clearly seen from Fig. 8, where the rods are seen to pass through several bands without break in their continuity. The Retzius bands are caused by pigmentary matter in the granules which constitute the ultimate structure of enamel. Completely formed normal human enamel contains no living matter in the sense in which this term is generally understood. There are consequently no nutritive changes in enamel after it is once formed.

FIG. 8.



Human enamel. × 1000. A, B, Bands of Retzius. C, Enamel rod passing through bands without break of continuity.

George-street, W.

THE FRENCH HOSPITAL.—The twenty-eighth annual dinner in aid of the funds of the French Hospital and Dispensary in London was held at the Hôtel Métropole on April 25th. The chair was taken by the French Chargé d'Affaires (M. Léon Geoffray), who was supported by, among others, the Lord Mayor, the Swiss Minister, the Italian Ambassador, Sir William MacCormac, Dr. L. Vintras, Dr. J. Keser, and Mr. E. Rüffer (honorary secretary). Subscriptions and donations amounting to nearly £2500 were announced.

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REMARKS ON A CASE OF SPLENECTOMY, WITH OBSERVATIONS ON THE CONDITION OF THE BLOOD BEFORE AND AFTER OPERATION.

BY C. J. BOND, F.R.C.S. ENG.,
HONORARY SURGEON TO THE LEICESTER INFIRMARY.

WHILE our knowledge of the function of the spleen as far as regards its relation to the corpuscular elements of the blood is somewhat fragmentary, still evidence has accumulated latterly[1] which points strongly to the very important share the spleen takes in the breaking up of the red corpuscles. It is in order to emphasise this point that I am induced to publish the following remarks.

It seems pretty clear from the experience of several observers, Gibson and others, that the effect of removal of the spleen in dogs is to produce at first a diminution in the number of red corpuscles and an increase, both relative and absolute, in the number of white corpuscles; this condition reaches its maximum in a few weeks, and then, owing probably to the fact that other organs concerned in blood metabolism, such as the marrow and lymph glands, take on compensatory action, the normal proportion of red to white corpuscles is re-established in a few months. In the case of man, although numerous cases of splenectomy have been recorded, there are very few in which the blood condition both before and after operation has been accurately noted. In Crédé's case the immediate effect of removal was an increase in leucocytes, but the blood reached its normal state later. In this case, however, the spleen was cystic, and it is very important to bear in mind that in experiments on animals it is a physiologically healthy organ which is removed. So, too, in those cases in man in which the spleen has been removed for cystic disease, the organ is not probably in that active pathological condition as regards blood metabolism, that it is in other cases of splenic hypertrophy and splenic lymphadenoma, consequently the effect on the blood of removal of the organ is likely to be very different in the two classes of cases. With these few preliminary observations I will shortly narrate the notes of the case and then offer one or two remarks on the effect of removal of the spleen on the blood.

A married woman aged thirty-five years, having two children, the youngest aged six years, was strong and healthy until two years ago, when, without any apparent cause, her health began gradually to deteriorate and she first noticed a swelling in the left hypochondrium. During these two years she has gradually lost strength and flesh and become more anæmic, and has suffered, too, from occasional attacks of vomiting, until during the last fortnight the vomiting has been excessive and the asthenia very great. There was a large movable mass in the left side, having all the characters of an enlarged spleen; it was very movable, so that the sharp notched anterior margin could be turned right over and made to lie in the left flank, and it was, I think, probable that this extreme mobility, by causing stretching of the gastro-splenic omentum, may have been the chief cause of the vomiting. The temperature was normal, the urine healthy but somewhat deeply pigmented, with occasional deposit of urates. After a few twenty-grain doses of calcium chloride on the three previous days the spleen was removed on March 27th, 1895, four days later. A median incision was made and the enlarged organ delivered lower end first; owing to its extreme mobility and the absence of adhesions this was not difficult. The pedicle was wide and contained some inches of the tail of the pancreas, which easily came outside the abdomen. The splenic artery, enormously enlarged, was first ligatured separately and the rest of the splenic mesentery was ligatured in several portions and the organ removed. The abdominal wound showed a tendency to bleed unduly and the blood appeared brighter and more arterial than usual; after swabbing with hot hazeline it was sutured and no further hæmorrhage occurred. Recovery from the surgical point of view—that is, as far as the wound was concerned—was uneventful. At the end of the first week, after a week's subnormal temperature, the patient complained of considerable pain in the region of the liver and the temperature ran up to 101°F.; it came down, however, in a few days, but ran up again to 103° a fortnight later, and for three days continued of remittent type, with morning remissions, again becoming normal on the third day. I have noticed these irregular rises of temperature, having no surgical cause, in two other cases of splenectomy, and, indeed, in patients who are suffering from splenic enlargement with or without leucocythæmia, the temperature line, even when normal or subnormal, shows the evening rise and morning remission; it may, I think, probably depend on the blood condition and requires further investigation.

The effect of the removal of the organ on the blood may next be considered. The blood was examined three days before operation; at that time the red corpuscles numbered only 3,000,000 per c.m. and the white about 1 to 250 red, and the hæmoglobin was only 50 per cent. of the normal quantity. At that time the patient was on a generous diet and small doses of arsenic and iron. Seven days after removal, the patient having been on the very low diet usual for the first few days after abdominal section, the red corpuscles numbered 6,000,000 per c.m. and the white 1 to 250 red, and the hæmoglobin had risen to 80 per cent. The blood was now examined at intervals of about a week; the excessive increase of red corpuscles was not maintained, but fell on April 11th to 5,800,000, on April 21st to 5,200,300, but rose again on April 28th (which date coincided with the febrile attack) to 6,000,000, but fell again, till on May 28th it was 4,120,000. The white corpuscles showed a very slight progressive increase and the hæmoglobin fell after the first week from 80 to 70 per cent. and remained at about 65 per cent. of the normal. The marked change in the patient's appearance after the first week, from pallor to a florid complexion was very striking, and when last seen on June 8th the appearance was maintained; she expressed herself as feeling well, though still weak; the urine was now and had been pale since the operation. The spleen after removal and when drained of blood weighed 1 lb., was uniformly enlarged, of a dark-blue colour, and on microscopical examination showed the appearance of simple hypertrophy—that is, enormous increase of the pulp tissue or reticular structure crowded with lymphocytes. Besides the changes in the corpuscular elements in the blood mentioned above, there were other changes. A specimen of blood both before and after operation when examined immediately after withdrawal showed a considerable number of masses of granular protoplasm like islands in the plasma. On staining thin films of blood coagulated by heat immediately on withdrawal, with Grubler's esosin hæmatoxyline glycerine stain, these irregular protoplasmic masses stained deeply with hæmatoxyline contrasting strongly with the esosin coloured red corpuscles. As to the nature of these bodies, knowing that other observers have described the appearance of granular bodies in the blood, which have been really a post-mortem change and due to aggregation of blood platelets and other causes, it seemed likely that such might be their origin in this case. The fact that they were present in a film of blood heated on a cover glass immediately on withdrawal shows that the change must occur very rapidly. In order, however, to decide this I first examined the blood by pricking the finger through a drop of Hayem's fluid, and allowing the blood to run directly from the vessels into that fluid as practised by Hayem, but I found that these granular masses were still present as such in the liquid. I found, however, when using osmic acid (2 per cent.) instead of Hayem's fluid, that they were not present, as such, in the blood as it left the vessels, but rather an increase of small disc-like granular bodies exactly resembling the figures of Hayem's blood platelets, fixed, no doubt, by the osmic acid in the form in which they circulate in the vessels. An examination of the blood of other patients suffering from other diseases was now undertaken, and while granular masses were occasionally found in many of the diseases accompanied with high temperature especially of the infective type, in which there was increased activity of the blood and lymph organs, I found them especially abundant in a bad case of phthisis in the last stage with a very marked hectic temperature with an evening rise of 103·5°. Here, too, they were absent in the blood received into the osmic acid solution, and instead was found a marked increase in the blood platelets as compared with normal blood. The same masses were found with the same antecedent increase in blood-plates in a case of splenic leucocythæmia,

[1] See papers by Dr. Hunter and Dr. Auld on Hæmatogenous Jaundice. Brit. Med. Jour., Dec. 3rd, 1892, and Jan. 18th, 1896.

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but in a very much less marked degree, and in this case the very numerous leucocytes were of the large, faintly granular kind with dividing nuclei, and the small, deeply granular lymphocytes, whereas in the case of splenectomy the few leucocytes were like those found in the normal blood. It is also interesting to note that the same granular masses were found to a very excessive extent in a patient in whom the spleen had been removed by Mr. Marriott four months previously. The organ is now in the museum of the Royal College of Surgeons of England, and on microscopic examination showed the same character of hypertrophy together with numerous collections of large multinucleated cells like giant cells.[2] In this case there was no leucocythæmia and not much anæmia, but there was a very marked tendency to hæmorrhage; and, further, I found that these granular masses were practically absent from the blood of a patient when examined fifteen months after removal of the spleen for cystic disease also by Mr. Marriott.

Such then are the facts as far as ascertained. Before drawing any inferences from these as to any function the spleen may have in blood metabolism it may be well to call to mind for a moment the various views held as to the physiology of the normal spleen. It is supposed that the spleen in man takes some share in the retrogressive changes in the red corpuscles, in some way tending to dissociate the hæmoglobin from the effete corpuscle, and thus prepare the way for the further change—the conversion of hæmoglobin into bilirubin which occurs in the liver (Foster). It is held that the spleen, as a part of the lymph gland system, produces leucocytes which are thus added to the blood. It is further held that the spleen produces red corpuscles either by the deposition of hæmoglobin in the large cells of the spleen pulp, or, as held by Virchow, that it converts the leucocytes into the hæmoglobin-holding or red corpuscles during their slow passage through the pulp tissue, and that the essential factor in the disease splenic leucocythæmia is a failure to bring about the conversion of white into red corpuscles. Among these various suppositions it seems clear that in the evidence derived from pathological investigation, as in that derived from experiments on animals, it is very difficult to isolate, as it were, the spleen from the rest of the organs, lymph glands, bone marrow, &c., concerned in blood metabolism, and to apportion the exact amount and kind of function to the spleen which it really possesses. The fact that in the case of splenectomy after removal of a hypertrophied organ, the red corpuscles doubled in number in one week after operation, other things remaining the same, is pretty clear evidence, I think, that the spleen in this case was previously to removal actually engaged in the destruction of the red corpuscles.

The next point is the presence in the blood of the granular masses which are probably not present in the circulating blood, which have for their antecedents an increased number of blood platelets. The masses are so large that it is somewhat difficult to understand how they can be formed by the aggregation of numbers of blood-plates only, and it looks as if each aggregation of platelets was a focus from which at the moment of withdrawal of the blood some effect was produced on the plasma around, causing it to become granular and to take the hæmotoxylin stain. The fact that these masses, with their antecedent increase in number of platelets, gradually increase after splenectomy, and were also present in a marked degree in one patient four months after removal of the spleen, is clear proof that the blood-plates are not formed entirely or even chiefly in the spleen. The further fact that this increase of blood-plates is present together with a marked tendency to hæmorrhage is a matter of peculiarity and of interest, because it has been strongly held by Hayem and Osler, and others that the blood-plates are one of the determining factors in causing coagulation of the blood.

Finally, it is, I think, becoming more evident that these different cases of splenic diseases, varying as they do in their clinical character, in the degree of anæmia, and in the presence or absence of leucocythæmia, each have a different pathology; and that in many cases the disease is a general one affecting the whole system of blood-forming organs, while in others the spleen itself is the organ alone involved, and it is, of course, in this latter class that the operation of splenectomy holds out the best prospect of success.

Leicester.

[2] There is evidence pointing to this being a tuberculous spleen.

A RECORD OF

THE INFECTIOUS DISEASES OCCURRING AMONGST 400 ADOLESCENTS DURING A PERIOD OF TWENTY-FIVE YEARS.

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THE following record of the infectious diseases occurring amongst a large number of adolescents during a period of twenty-five years will be of interest to those who have the welfare of the young at heart during the period of education. There can be no question of the fact that the amount of illness amongst the young is a sure index of the appropriateness or otherwise of their surroundings. And, further, a trivial infectious illness assumes importance in schools in proportion to the number of persons it obtains opportunity of infecting. As a class zymotic diseases are fostered where organic matters, inclusive of animal exhalations, are undergoing decomposition—in fact, these conditions form a fertile soil in which disease bacteria as well as putrefactive bacteria can flourish. They vary in amount and in frequency to an enormous extent in different schools. In some they appear to be regarded as necessary evils and no attempt is made to diminish their number; in others they are encouraged owing to a damp situation causing an absence of vigorous health; in others by reason of facilities for infection, owing to the schools being situated in towns; in others, again, in consequence of children being crowded together in barracks by hundreds instead of in houses by tens; and in others, on account of their faulty sanitary arrangements or by reason of an impure water-supply. When set going in a school illness of this class is multiplied by imperfect medical arrangements, often of the most primitive description, so that infected children are not immediately and completely isolated from the healthy—in fact, in a large proportion of instances pupils suffering from many of the zymotic diseases are allowed to remain and be treated in the boarding houses with those who are not infected. Schools will never be exempt from infectious illnesses until we are able to prevent them by protective inoculations, but they should be under some effective control. This can be achieved by preventing overcrowding, remedying faulty drains, removing refuse heaps, providing a good water-supply, and sufficient and wholesome food. I venture to place this record before the profession, for it indicates what can be done where a school is healthily situated, where sanitary necessities are not ignored, where the provision for sickness somewhat approaches an ideal standard, and where unceasing care is bestowed upon the minutest details in the medical arrangements. At the present time no case of accident or sickness of any kind is treated in boarding-houses, but in every case of unfitness for schoolwork which requires detention for more than a few hours the patient is removed for treatment to the sanatorium, where the proportion of sick beds should be 10 per cent. This must be the minimum number, and to render them sufficient the greatest pains must be taken to isolate the first cases of zymotic diseases and to quarantine those that are suspicious or have even been in close contact with the first case, for without this caution they are totally inadequate and 15 per cent. is imperative. Unless this care is exercised large schools must have their cases of infectious illness by the hundred. It must be borne in mind that, owing to the increased solicitude expended upon children in the nursery in the prevention of illness, a far larger proportion enter upon school life without having passed through the ordinary infectious illnesses which were formerly considered incidental to early childhood, to the infinite gain of the children. For, consider for one moment the mortality of whooping-cough and measles in children under two years of age, while at the school age it is practically *nil*; and in the case of scarlet fever it is 4 per cent. at the school age and 26 per cent. in children under two years of age. The following tables are sufficiently explicit to speak for themselves. I append a few notes of comment upon some points connected with them.

Influenza.—Before the influenza reached Rugby in 1890 it was very prevalent and fatal in various parts of the country, and the headmaster called upon me to discuss the question

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of reassembling the school in January. Some schools had already given out that they would not assemble. I was unable to advise a resort to this plan and we met as usual. I had never seen a case of influenza, but from watching the published accounts it was quite evident that it mainly spread from patient to patient, as was conspicuous in the House of Commons. I therefore resolved to treat it as one of the ordinary zymotic diseases and isolated every case as it arose, however slight—quarantining on mere suspicion also—for a minimum period of ten days and then disinfected thoroughly before permitting a return to school. The result was that only 16·25 per cent. fell with it in that year, while another school with which I am acquainted and which did not follow this plan had 96 per cent. fall. In 1893, when we had the largest number, by still pursuing this method only 29·5 per cent. were affected. In the six years of the epidemic, with a total number of cases of 431, there was only one death, which arose from cerebro-spinal meningitis.

Epidemic roseola.—This disease is usually, most unfortunately, called "German measles" and is so frequently confused with English measles that it entails endless trouble and anxiety. It spreads largely owing to ill-defined cases. For instance, some cases present merely *pink eyes* and no rash, and are consequently frequently not isolated, so that while they infect schoolfellows they are themselves protected from a subsequent attack. Others have only the subcutaneous lymphatic glands enlarged in the groin, in the armpit, and in the side of the neck. They have no eruption and yet they spread it in the same way.

Mumps.—It is still insufficiently recognised that the orchitis of mumps, as I pointed out in THE LANCET of Oct. 29th, 1881, when it *follows* parotitis (instead of taking its place, as it occasionally does) invariably arises on the eighth day of mumps and never occurs if the patient is kept in bed over the eight days.

Ophthalmia.—Previously to 1875 these cases were not isolated, but were treated in the boarding-houses, so that I have no record of them; since then every case has been isolated as carefully and as strictly as if it were scarlet fever. It is evidently a germ disease which occurs in epidemic form from time to time, obeying the same laws as all classes of zymotic diseases, and having, where hygienic conditions are as they should be, its period of quiescence. In 1893 it was rife all over the country and I was consulted concerning it by several schools. Like all the zymotic diseases of which I am speaking it is mainly a disease of the young and, as a rule, leaves the adult severely alone. For the growth of all kinds of bacteria two things are essential—the germs themselves and a suitable soil for their germination. Without the latter, while the diseases they occasion may occur, they fail to develop luxuriantly and so are comparatively innocuous and do not spread, but only affect some peculiarly susceptible individuals. Woe betide, however, the assemblage of the young where unsanitary conditions are in force. For instance, the advent of cholera in a clean neighbourhood causes little anxiety, while where filthy conditions are rampant it decimates the population. Typhus fever, so prevalent in former years in our gaols as to receive the name of "gaol fever," saved the judges much trouble (where it did not kill them) by otherwise disposing of the prisoners. The germs found the most suitable soil in the appalling state of our prisons, whereas now, owing to their improved hygienic conditions, the germs have not a chance to grow and the disease is practically unknown in them. The germs of ophthalmia have found a similarly suitable soil in the State schools, as has been recently revealed by the commission of inquiry into the condition of the metropolitan pauper schools, where the children are apparently as grossly neglected in all sanitary precautions as were our prisoners in the sixteenth century. Its prevalence is the surest test of unsanitary conditions where the young are concerned, especially the want of soap and water and fresh air. Wherever these are absent in relation to the young there ophthalmia and impetigo are sure to be found.

The need of fresh air for children is mostly felt in the dormitories, where nine or ten hours are continuously spent

TABLE I., *showing the Seasons of the Year in which Infectious Illness has occurred amongst 400 Adolescents during a Period of Twenty-five Years from Jan. 1st, 1871, to Dec. 31st, 1895.*

Name of zymotic disease.	Number of cases occurring during the month of												Total.
	*January.	February.	March.	*April.	May.	June.	July.	*August.	*September.	October.	November.	December.	
Influenza ...	35	84	97	2	15	60	104	—	—	10	15	9	431
Measles ...	4	119	10	1	65	73	96	—	—	—	—	—	368
Epidemic roseola	—		98	26	30	76	33	—	1	1	—	2	275
Mumps ...	4	29	67	10	7	13	37	—	—	3	15	11	196
Ophthalmia	—	17	26	—	29	42	21	—	2	20	12	10	179
Chicken-pox	1	7	19	1	4	3	—	—	—	8	27	22	92
Scarlet fever	—	10	9	5	6	8	11	—	1	—	9	12	71
Whooping-cough	—	5	3	—	8	8	8	—	—	—	—	—	32
Ringworm ...	—	5	3	—	2	4	—	—	3	1	2	2	22
Typhoid fever	—	1	—	—	—	—	—	—	—	1	1	1	4
Diphtheria ...	—	—	—	—	1	1	—	—	1	—	—	—	3
Erysipelas of head and face	—	—	—	1	—	—	—	—	—	—	—	—	1
Small-pox ...	—	1	—	—	—	—	—	—	—	—	—	—	1
Totals ...	44	236	332	46	167	288	310	—	8	44	81	69	1675

* Vacations.

TABLE II., *showing Year by Year the Attacks of Infectious Illnesses occurring amongst 400 Adolescents during the Twenty-five Years from Jan. 1st, 1871, to Dec. 31st, 1895.*

Name of zymotic disease.	Number of Cases occurring during the year.																								Total.
	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	
Influenza	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	65	89	73	118	68	18	431
Measles	—	30	—	26	5	—	6	—	—	—	—	71	—	45	—	—	—	69	—	12	47	6	—	1	50	368
Epidemic roseola	1	—	—	7	—	2	59	26	—	14	—	7	30	1	—	—	65	—	—	—	—	54	9	—	—	275
Mumps	—	26	21	—	30	—	2	11	—	8	—	1	—	11	3	2	—	24	—	—	2	4	51	—	—	196
Ophthalmia	—	—	—	—	4	2	1	2	2	3	1	—	21	9	3	2	10	4	2	1	25	21	31	17	18	179
Chicken-pox	2	—	—	6	1	—	—	5	—	10	1	1	5	2	—	4	—	3	11	18	—	3	3	4	13	92
Scarlet fever	—	1	—	10	2	—	6	—	—	6	17	—	—	5	3	1	1	—	7	—	—	—	—	2	10	71
Whooping-cough	—	—	3	—	—	—	—	1	—	—	—	1	—	—	10	—	—	—	—	—	—	3	—	14	—	32
Ringworm	—	1	—	—	—	1	—	1	4	2	1	1	—	—	—	2	1	—	1	1	1	1	—	3	1	22
Typhoid fever	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	4
Diphtheria	—	—	—	—	—	—	—	—	—	—	—	—	2	1	—	—	—	—	—	—	—	—	—	—	—	3
Erysipelas of head and face	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Small-pox	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Totals	5	58	24	49	42	6	74	46	6	43	20	83	58	74	19	11	78	100	22	97	164	165	212	109	110	1675

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in a more or less close atmosphere, varying according to the cubic space and ventilation provided. Some time since I had occasion to visit a school bedroom where five children were sleeping in the cubic space appropriate for three. The stench was so horrible that I retired as expeditiou ly and as gracefully as I could. I knew that by-and-by I should see the effects of this, and sure as fate one of the occupants developed ophthalmia, with subsequently granular lids, which took me thirty-three days to cure, and this with a keen insight into the cause, with an unlimited supply of air indoors, with six hours a day out of doors, with an unlimited and unquestioned food-supply, and with an able and willing nurse at my command with ample time at her disposal. Yet all the circumstances of life were as healthy as could be wished, with the exception of the deficient ration of air. If this difficulty arises where such facilities are possible it is no wonder that it is incurable and that children so frequently become blind where they are overcrowded or where there are insufficient attendants to carry out the nursing. It is hopeless to attempt to prevent the spread of ophthalmia in any school until it is fully recognised that it is as loathsome to retake our gaseous emanations into the lungs as it would be to insert our liquid and solid excretions into the stomach. Yet these pauper children in State schools rebreathe over and over again their prebreathed air, with the natural result. When they receive their due sanitarily ophthalmia, except seasonal sporadic cases, will become as extinct in these schools as gaol fever is in prisons, for it arises from similar faults and is a disease of the overcrowding of children as typhus fever is of adults.

TABLE III, *showing the Average Number of Cases of Infectious Illness occurring amongst 400 Adolescents during a Period of Twenty-five Years from Jan 1st, 1871, to Dec 31st, 1895.*

Name of zymotic disease.	Total number of cases in 25 years.	Average number of cases per annum.	Per cent. per annum.
Influenza	431	17 24	4·25
Measles	368	14·72	3·68
Epidemic roseola	275	11 00	2 75
Mumps	198	7·81	1·96
Ophthalmia	179	7 16	1·79
Chicken-pox	92	3 68	0 92
Scarlet fever	71	2·84	0 72
Whooping-cough	32	1·28	0·32
Ringworm	22	0·88	0·22
Typhoid fever	4	0 16	0·04
Diphtheria	3	0·12	0·03
Erysipelas of head and face	1	0·04	0·01
Smal.-pox	1	0·04	0·01
Total number of all cases of infectious illness among 400 adolescents during 25 years	1675	67 00	16 70

Moreover, there is not a month in the year in which the germs of ophthalmia are not on the war-path. The only months where none are recorded in Table I. are those of the vacations. It will be observed that the largest number of cases has occurred in June, and also, as shown in Table II, the largest number occurred in one of the sunniest years, 1893, though in another sunny year, 1887, there were comparatively few. I can only account for this by those cases which arise from exposure to strong sunlight at cricket in caps which afford no shade for the eyes. The plan seems to me exceedingly injudicious not only from the eye but from the cricket point of view, for strong sunlight in the unshaded eyes causes the lids to be half closed to shield them from the glare, vision is not so acute, and from time to time it prevents cricket altogether through causing granular lids. It may be said that these, possibly sun cases, are not similar to those I have been discussing. This may be true. I do not profess to have arrived at a solution of the difficulty; but I do know this, that, whatever the cause, the effect is much the same—granular lids in spite of urgent and hygienic treatment such as I have described above. There is another point about ophthalmia which I am at present unable to explain—many of the cases are accompanied by albuminuria. The gist of the whole matter is this, that notwithstanding the greatest care, the provision of hygienic surroundings, and even of 800 cubic feet for dormitories, sporadic cases of ophthalmia will arise where the young are congregated together. What happens when these essentials for health are not in force has been revealed by the commission above referred to.

Diphtheria.—It will be of interest to note that the dates of the two cases which occurred in 1883 were June 19th and September 26th.

Small-pox.—This one case occurred in the severe epidemic of 1871–72. As boys are now re-vaccinated, and have been since 1873, on entering the school it is scarcely probable that another case will have to be recorded.

Rugby.

THE VACCINATION LAWS AND THEIR AMENDMENT.

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THE principal Acts of Parliament in force relating to vaccination are (1) the Vaccination Act of 1867 and (2) the Vaccination Act of 1871. Previously to 1867 at least three Acts had been passed—one in 1840 entitled "An Act to Extend the Practice of Vaccination"—a purely optional Act; a second in 1853 making vaccination compulsory; and a third in 1858 entitled "An Act for Vesting in the Privy Council certain Powers for the Protection of the Public Health." The 1853 Act was not, however, efficiently enforced. In the 1840 Act inoculation or otherwise producing small-pox was forbidden under a penalty of one month's imprisonment. The Act of 1867 consolidated and amended all the laws relating to vaccination. This Act came into force on Jan. 1st, 1868, and although amended in certain clauses by the Act of 1871 is still called the principal Act dealing with vaccination. A recapitulation of the more important clauses in the Act is necessary to show that, although it is in itself an admirable Act, the method adopted for securing efficient vaccination has, through non-enforcement of some of the clauses, not proved so successful as was at one time anticipated. By this Act, in addition to the payments from the guardians, an allowance was to be given at a rate not exceeding 1*s.* for each child vaccinated. The fee payable for vaccination within one mile from the vaccinator's residence was not to be less than 1*s.* 6*d.*, over one and under two miles not less than 2*s.*, and over two miles not less than 3*s.* Revaccination was to be paid at the rate of two thirds of the fee payable in cases of primary vaccination. The parent was to see that his child was vaccinated within three months. Provision was also made for the inspection of the child after vaccination, for certificates of unfitness, and for insusceptibility. In this Act the certificate of successful vaccination was to be sent to the registrar and a duplicate to be given to the parent. If the vaccination were performed by a medical practitioner other than the public vaccinator the parent had to transmit the certificate to the registrar of the district. Vaccination or surgical or medical assistance incidental to vaccination by the public vaccinator was not to be considered as parochial relief, alms, or charitable allowance, and no such parent or person was to be deprived of any right or privilege or subject to any disqualification. The guardians half yearly were to revise the list of unvaccinated, and it is distinctly stated that they shall cause proceedings to be taken against persons in default. This clause has, as we well know, not been carried out by a large number of boards of guardians in England. In the report of the medical officer to the Local Government Board for 1890 the number of children not finally accounted for, including postponed cases, stated as percentage of total births, was for England and Wales 11·3, while in the county of Bedford it was 30, in Leicester 52·9, and in Northampton 43·6. In the metropolis the largest percentages were in Bethnal-green 30·6, Greenwich 32·3, and Hackney 26·6. In the various unions in England the highest percentages were in Luton (Bedford) 72·5, Falmouth 46·5, Weymouth 28·3, Gloucester 83 2, St. Albans 32·8, Tonbridge 25·3, Oldham 74·4, Barrow-on-Soar (Leicester) 67·2, Leicester 78·7, Loughborough (Leicester) 61·4, King's Lynn 40·2, Kettering 53·3,

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69·6, and Keighley 80·1. To sanitarians these figures are of exceptional interest, as in these localities small-pox if once introduced tends to spread with rapidity and is a source of danger to the whole of the country. We have only to single out one which has been brought into prominence within the last few weeks—viz., Gloucester. In 1890 the percentage of unvaccinated children to births in that year was 83·2, and there is good reason for the belief that the percentage had not diminished but rather increased in the following years. Over 80 per cent., then, of the children under five years must have been unvaccinated, and we know that among these small-pox spreads with great rapidity and is exceptionally fatal. What has happened there is likely to happen in any unvaccinated or badly vaccinated community, although in the latter the age incidence may be altered.

Another clause in the 1867 Act is worthy of noting—viz., clause 28, which is to the effect that guardians may pay all expenses in working this Act, and in or about inquiries and reports as to the state of small-pox and vaccination in their union or parish, and in taking measures to prevent the spread of small-pox and to promote vaccination upon any actual or expected outbreak. Very few, if any, boards of guardians in England have taken advantage of the clause. It is generally left to the health officer to carry out these inquiries, and more especially has this been the case since the notification of small-pox has been enforced. The 1871 Act principally dealt with the appointment and duties of the vaccination officer, and also that the lists of births and of deaths of infants under twelve months were to be transmitted once at least in each month to such officer. In this Act also a clause was inserted imposing a penalty on the parent or guardian for preventing the public vaccinator from taking lymph from children vaccinated by him. These, in short, are the main provisions of the Acts in force, and after nearly thirty years most sanitarians are of opinion that a change in administration is necessary. When the 1867 Act was passed the laws relating to public health were in their infancy, and the 1875 Public Health Act, not to speak of the more extended 1891 London Act, was not dreamt of. The prevention of all other infectious diseases, small-pox included, is one of the duties of the health officer, and no one doubts that vaccination and revaccination constitute *the*—I would almost say *the only*—means of preventing small-pox. The transference of all powers in regard to vaccination from the boards of guardians to the sanitary authorities is therefore necessary. The advantages of this are obvious. It may reasonably be asked, Have the public any guarantee that these duties would be carried out any better under the sanitary authority? One thing to be said in answer to this is that every sanitary authority has an official who is, or ought to be, capable of directly advising them in all matters relating to vaccination, while under the present system the guardians have not. In nearly all recent epidemics, whether extensive or not, it is the sanitary authority that has always taken the initiative in stamping out the disease, and if such authority had the direct control of vaccination its officials would have immediate cognisance of those persons and localities most likely to be affected.

The abolition of the office of public vaccinator would certainly meet with very strong opposition, but I have for a long time held the opinion that public vaccination is the cause of a very great deal of the objection to vaccination. If vaccination is performed privately it is almost certain that, with due precautions, it would be more general and that the percentage of unvaccinated children would very largely diminish. Each medical practitioner would be supplied by the sanitary authority with a numbered form, the details of which will shortly be considered, and when a child had been successfully vaccinated this form would be transmitted to the medical officer of health. At present the public vaccinators vaccinate, roughly speaking, about two-thirds of all the children vaccinated. That they do their work well no one will deny, but the system adopted is out of date and cumbrous, whereas this system would simplify matters very much. When the Infectious Disease Notification Act was passed some medical men prophesied that it would never work and stated many objections to the Act. Experience has shown that these objections were groundless, and speaking from my own experience the Act is carried out economically, quickly, and with little or no friction between the medical attendant and the officials. It might be said that it throws an additional burden on the general practitioner, but I do not think this Northampton 74·6, Banbury 43·1, Eastbourne 65·1, Halifax burden will prove a heavy one, and, besides, his additional work will be remunerated at a fair rate. Each general practitioner becomes practically a public vaccinator, and as long as the form is filled up conscientiously and the instructions thereon carried out it will be immaterial as to whether the vaccinator performs the operation privately or at his surgery. It is the experience of every general practitioner that he does not vaccinate on the average more than one-third of the children whose mothers were attended by him in their confinement. By this system he would probably vaccinate all, or at least all who were still his patients. Again, revaccinations ought to be paid on the same scale as primary vaccinations, and should public opinion become more educated as to the necessity of this the general practitioner will secure a sure though small addition to his income. This will be secured without any great addition to the rates, as if the profession at large would be satisfied with a moderate fee the money now spent in carrying out the Vaccination Acts would be almost sufficient.

Another factor to be considered is the personal influence of the general practitioner. The respectable working class, to which class the larger proportion of unvaccinated children belong, would be more readily influenced by the advice of their private medical attendant in this matter, and they likewise believe, whether rightly or wrongly, that their own medical man takes more pains in the selection of the lymph used. They could also be more readily brought to realise the enormous benefit, both physically and financially, to be derived from efficient vaccination. Parents much prefer taking their children to their own private medical attendant to be vaccinated, and it is the experience of most medical men that it is not among the parents of those children vaccinated by them that the objection to the operation of vaccination is strongest.

In the next proposed amendment no one, not even the vaccination officer himself, can take offence, as under the present Act his position is a precarious one, and one not at all well remunerated. It may be said that the system of payment by results is a very logical one, but in a matter of this kind it is time, I think, that the system were altered In parishes and districts where the vaccination officer devotes all his time to these duties, and these districts are few, only a simple transfer would be necessary, but in other districts, though not in all these latter, the work might be done by the present sanitary staff. That this is possible is open to discussion, but judging from the thorough knowledge which the sanitary inspectors of the parish of Wandsworth possess of all the various duties which fall to them, I personally would have no hesitation in saying that the duties of vaccination officers could without difficulty be added to their existing duties, and that without lessening the thoroughness of their work under the Public Health Act. In most parishes an increase in the clerical staff would be necessary, but this would not be a serious item, and the services of this official could easily be utilised by the health officer for other clerical work.

The next proposed amendment is one which I would not strongly insist on, but we have the experience of the northern portion of this island to guide us in this matter. In Scotland the limit has always been six months, and there the objection to vaccination is not nearly so pronounced as in England. After twelve years' experience in the north I can speak with certainty on the point and can assert that in all these years I only met with one pronounced anti-vaccinationist. General statements are not, however, so convincing as actual figures, and if we look at the returns of the Registrar-General for Scotland for 1889 and 1890, which are the latest reports in my possession, we find that in 1889 122,847 births were registered, and 3226 of these were unaccounted for—a percentage of 2 63. In the county of Lanark, the most populous county in Scotland, this percentage was 2·5 nearly. In 1890 the percentage for all Scotland was 2·48. Compare this with the returns for England, where the proportion of cases unaccounted for was 9 4 per cent. and for the metropolis 12·2 per cent., excluding postponed cases. The later returns for England, and especially for the metropolis, show a decided increase. In 1891, the latest complete return, the percentages were 14·7 in the metropolis and 11·4 in the rest of England. This is largely explained by the apathy of boards of guardians consequent on the long-delayed report of the Royal Commission on

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Vaccination. The following table shows the percentages for the years 1880–1890:—

Percentage of Births "Unaccounted for."

Year.	Metropolis.	Rest of England.	Scotland.
1880	7·0	4·5	1 89
1881	5·7	4·3	2·05
1882	6·6	4·5	2·09
1883	6·5	4·9	1·97
1884	6 8	5·3	2·19
1885	7·0	5·5	2·29
1886	7·8	6·1	2·39
1887	9·0	6·7	2 45
1888	10·3	8·2	2·51
1889	11·6	9·6	2·63
1890	13·9	10·9	2·48

One reason for proposing this amendment is that some parents have a strong objection to the vaccination of their children at such a tender age, and not because of their non-belief in its efficacy as a preventive of small-pox. This objection is, from a parent's point of view, a reasonable one; and if, as can be shown in the case of Scotland, the spread of small-pox has not been influenced by this cause alone, and that some objectors to the operation would be silenced, the extended limit might be included among these amendments. From the medical aspect also it might be contended that this extended limit is desirable. I am sure it is the experience of many of us that infantile eczema frequently begins between three and six months, and some of us may have had the unpleasant experience of having been told by parents that such eczema was due to vaccination. This would in some, though not in all, instances be avoided by the extended limit. Any change which is to be made in the vaccination laws must allow for popular opinion, and this extended limit is one which has been frequently put forward by parents who do not on principle object to vaccination. The certificate of successful vaccination is, when filled up, to be sent to the medical officer of health of the district or parish where the child was registered. At present the vaccination forms have a postage stamp affixed to them and there is no reason why the present practice should not be continued. This change would be a very great advance, as all children could be accounted for except those who died before vaccination. Under the present law many children, owing to their parents' peripatetic habits, escape vaccination, and the vaccination officer of the parish in which the child was born loses all trace of its whereabouts. In the parish of Wandsworth for the year 1893 1606 births were registered, and of these 153 had removed to districts unknown and only 3 to districts known to the vaccination officer. The majority of these unvaccinated children would sooner or later be detected by the sanitary officials in their ordinary house-to-house visitation and ordered to be vaccinated. In this case the certificate would necessarily be forthcoming. It would not be a difficult matter to train the present sanitary staff to recognise vaccine cicatrices, and the presence of these cicatrices would be sufficient proof that the child had been vaccinated, when such children had been registered in other parishes.

The form of certificate is one of the most important amendments proposed. The present certificate is faulty in that it does not state the number of insertions made or the number successful, and another important omission is that it does not state the source of the lymph used. In the certificate, then, we ought to have the name and age of the child vaccinated, the name of the parent or guardian, if the parents are deceased, the place of birth, and the place and date of vaccination. The number of insertions made and the number successful are very important, as the small number of insertions, and consequent inefficient vaccination, is a charge frequently brought against private vaccination. It is not necessary to enter into a discussion as to the greater amount of protection afforded by multiple marks, but I simply direct attention to Marson's well-known figures, which have never been contradicted; in fact, all the later statistics only serve to confirm Marson's conclusions that for efficient protection four vaccine marks are necessary. In addition, however, to the power of efficient vaccination in preventing death we have also to consider its power of preventing attacks of small-pox. In addition to the statistics obtained by the Privy Council as far back as 1863, in which the protective power between the best vaccination and the worst vaccination is represented by the ratio eleven to one, we have the overwhelming evidence adduced by Dr. Barry of the Local Government Board in the report of his inquiry into the Sheffield epidemic of 1887–88.

In every certificate of successful vaccination the source of the lymph ought to be stated, whether vaccinated with calf lymph (in which case the name of the institution should be given) or with human lymph. As every certificate would be numbered this number could be inserted instead of a name, and every medical man would thus have a correct record of all the sources of lymph used by him. It would be the duty of the sanitary authority to keep a record of these, and thus in any case of suspected inoculation of any disease by means of vaccination the source of the lymph could be at once ascertained. This is, of course, done at the present time by public vaccinators, but very few medical men other than these keep a satisfactory record of the sources of their lymph.

The fee for the performance of vaccination ought to be paid by the sanitary authority at a fixed rate—at least, in towns and urban districts. In some rural districts the fee would require to be more elastic, although if the child be brought to the house of the vaccinator the same fixed fee would suffice, the amount of this fee ought, in my opinion, to be 3*s.* 6*d.* This is higher than the fee under the Notification Act, but in the latter the physician has no actual expenditure, whereas in vaccination the cost of lymph has to be considered. The parent or guardian ought distinctly to understand that the fee does not include any further attendance other than the act of vaccination and the inspection of it seven days thereafter. Further medical or surgical attendance ought to be paid for by the parent or guardian. The registrar at present sends the list of births as well as of deaths of infants to the vaccination officer and is paid a fee for so doing, so that the amendment that these be sent to the medical officer of health will cause no additional expense. No one knows what the Royal Commission on Vaccination will recommend, whether a continuation of the present system or an alteration of it in some slight way; but I am certain that a Bill on the lines I have mentioned would be more satisfactory as regards the efficacy of vaccination and that many objections to the operation would be thereby removed. The preliminary report issued by the Commission has been productive of no little harm; but it is to be hoped that better counsels will prevail, and that the report will emphasise the necessity of primary vaccination and the advisability if not the necessity of revaccination.

Church-row, S.W.

LITHOTRITY IN CASES OF STONE: SIMPLE AND COMPLICATED.

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(Concluded from page 1132.)

WITH regard to stones retained in a post-prostatic pouch my experience has been, in the few cases I have had, that urethral lithotrity was very easily performed and afforded successful results. In the more advanced cases referred to by Buckstone Browne I see no alternative but suprapubic cystotomy. The third category of complications are those arising from the incomplete development of infancy and childhood; in other words, from the smallness of the parts concerned. My personal experience of stone in children has been but small. In Egypt the very great majority of stones occur in subjects over ten years of age. The tables given with this paper do not demonstrate this point, but on reference to my records I find that out of the 200 cases given in Table I. 9 only were in children under ten, whereas Cheselden in 213 cases met with 105. In India, on the other hand, the proportion of children operated on is exceptionally large. The difference is due to the fact that stone in Egypt is principally caused by the alterations produced in the urinary system by the presence of Bilharzia

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embryos, and that the Bilharzia parasite, while very common in adult males, is rare in women and children. The relative values of the various operations for children have been frequently discussed of late years in the medical journals. The Indian surgeons especially, following the example of Keegan and Freyer, have published many records and have very strongly advocated lithotrity for children of all ages. The results they have obtained have been remarkably good and equal—at least, the best results given by lithotomy. While, however, it must be accepted that the method is an excellent one as practised by experts, it is by no means certain that the general surgeon will find its adoption satisfactory. The conclusion I have come to is that when a surgeon is likely to have to treat many cases of stone in children it will be advisable for him to acquire the necessary ability that practice only can give, but that the surgeon called upon to treat such cases occasionally only will do better by keeping to the time-honoured operation of Cheselden. I have quite lately come across very useful information on this head in a paper by Gilbert Barling.[1] In it are given the results of 152 operations performed in various English hospitals between 1888 and 1892 on children under ten years of age. Of these, 43 were litholapaxy with 1 death, 46 were suprapubic lithotomies with 10 deaths, 48 were lateral lithotomies with 2 deaths, and 15 were median lithotomies with 1 death. These figures, giving the experience of many surgeons, represent, I think, the relative values of the different operations more fairly than the results obtained at the hands of a few specialists. It fully bears out what has been my opinion for long past that the results obtained by suprapubic operation in children are far from justifying the preference given to it in some quarters. Any considerable statistical evidence in its favour is still wanting, and this while statistics, to be counted by many hundreds, have been published by various operators showing a mortality of greatly under 5 per cent. for litholapaxy and perineal lithotomy. The fourth category of complications are those arising from old age and its degenerations, and it is in avoiding the dangers due to these complications that the most real difficulties of the surgeon lie. To-day, thanks to the great improvements in instruments and methods, and especially to the cleanliness so universally practised, the mortality rate of stone operations in children and adults is, at the hands of experts, almost *nil* or, as it might perhaps be expressed, it is reduced to the personal equation of the operator. When once the true percentage mortality of an operation or class of operations has been brought down to zero by any operator, as it has been done by more than one surgeon in India, in the case of stone, it is hardly justifiable to talk of the dangers inherent to the operation. I advisedly use the term true percentage mortality, being of the opinion that no percentage mortality can pretend to truth, and, therefore, should not be estimated until the number of cases cited can be counted by centuries. It is unjustifiable to calculate a percentage mortality from 99 cases as from one case, and I would express proportions deduced from such numbers as relative mortalities, taking for expression of the ratios the lowest possible whole numbers, thus 1 in 15 or 2 in 31. While, however, the percentage mortality of stone operations has been reduced almost to *nil* in adults and children, the results are quite otherwise when dealing with the aged. Old subjects support most operations fairly well, amputations are constantly successfully performed in extreme old age, and ovariotomy in very old women is almost as successful as amongst the young. Shock, if great care is taken to prevent loss of heat, is probably less marked in the old than in the young after operative interference. Old tissues, so long as elimination of effete products is fairly carried out, are probably not such suitable media for the development of most micro-organisms as the juicier tissues of the young. While, however, the susceptibility to attack is perhaps diminished, the power of expulsion of morbid products is generally greatly lowered. In youth and middle age the individual can assimilate most things, from the living organisms of various diseases to the toxines of lobster salad, with certain trust in its powers of elimination. In old age, while the resistance to attack by living organisms is perhaps greater, the powers of elimination are probably much diminished. The epithelial surfaces from their increased dryness and rigidity are perhaps more efficiently protective than when in a younger stage, but their power of excretion is proportionately enfeebled. It is probable that a preponderant share of the work of elimination is in old subjects carried on by the kidneys, and any morbid condition of the urinary apparatus has therefore a special importance. It is, moreover, in connexion with the urinary system that occur the local complications usually attending stone in old men. Chronic gouty or other changes in the kidney, atony of the bladder and cystitis, obstructive enlargement of the prostate, are often the accompaniments if not the original cause of the calculus. An old man the subject of such morbid conditions is already in a perilous condition, and the scales of life and death begin to balance. A slight addition to either means its preponderance, but the result is likely to be in the one case only temporary and in the other permanent. The first question that arises, therefore, is whether under any conditions any attempt should be made to remove the stone or not. It is difficult to adduce any evidence on this point. There are many statistics showing the mortalities of stone-operations in the aged, but I know of none showing what percentage of the cases met with had been operated on. The mortality attending any form of stone operation under the conditions mentioned must be high, and, on the other hand, the inconvenience produced by the stone is under such circumstances, as has been pointed out by Sir Henry Thompson, not unfrequently comparatively slight. Further, even in what are reckoned in statistical returns as successful cases the amount of relief after operation may be but slight. I think, however, the general opinion of the profession, and more especially of operators, is that relief should be attempted in practically all cases except those in which the condition of the patient is such as to contra-indicate all interference from fear of immediate death.

Having decided on operating, the question still lies as to which method should be pursued. Here I think there is but little doubt. Opinion is universally in favour of the crushing operation. In the paper above referred to 155 of the cases were in subjects aged over sixty years. Of these 118 were operated on by litholapaxy, with a mortality of 11, equal to about 9·2 per cent.; 26 by suprapubic lithotomy, with a mortality of 8, equal to very nearly 1 in 3; and 11 by perineal lithotomy, with a mortality of 2. Of course, in these as in other statistics the relative mortality of the operations may depend on other factors than their intrinsic merits, but the table is particularly valuable as showing the great preference accorded by surgeons in general to the crushing process in the treatment of stone in the aged. Still, even by this the most favourable method the mortality is very considerable. I am inclined to attribute the dangers of lithotrity in old men to two principal factors—firstly, the bruising of the urethra, neck of the bladder, and prostate by the frequent introduction of the instruments; and secondly, to the effect on a weak bladder of over-distension during the evacuating process. I think that anything which tends to diminish these two dangers would largely increase the advantages of lithotrity. I have sought to obviate the first factor by uniting the crusher and evacuator in a single instrument—the evacuating lithotrite referred to previously. I have alluded to the use of this instrument in simple stone cases, but it is in the treatment of the class of complications now under notice that its chief use is likely to be found. My experience of it is not yet sufficiently large to express any opinion of its value, but I think that it is worthy of trial. In order to obtain success in this as in other forms of stone operations in similar cases attention is necessary to the minutest details. The patient should be kept in bed for at least two days before operation; he should be kept on a regular nourishing diet suitable to his general condition. Milk should if possible be taken in quantity. The bowels should be gently opened on each of the two days by saline purge and enema. Any catheterisation that is necessary may be carried out, but I think that the more the urethra and bladder are left alone the better. I consider it to be a good routine practice to give from fifteen to twenty grains of diuretin twice daily during the two days. I think that this drug is very useful for washing and cleaning out the urinary and general system and is an excellent general stimulant. A good night's rest should if possible be obtained before the operation, which I think is best performed as early in the morning as is consistent with the comfort of the patient. During the operation the greatest care must be taken to avoid any loss of heat. The room must be well warmed and the patient, especially his extremities, well covered. Eggs, milk, and stimulants should be taken from one to two hours previously. The

[1] Brit. Med. Jour., March 9th, 1895.

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question of anæsthesia is very important. Ether is, I think, in such cases often dangerous from its possible after-effects. Chloroform is preferable, although not free from danger; of other general anæsthetics I have no experience. I believe, however, that the use of an instrument capable of terminating the operation with a single introduction will obviate to a great extent the necessity for an anæsthetic. I have experimented with various drugs locally, but as yet without great success. Cocaine as an injection is, I think, too dangerous. Antipyrin in a 5 per cent. solution diminishes sensation considerably. Methylene blue in a 5 per cent. solution is even more effectual, but still does not sufficiently abolish sensibility. Up to the present I prefer to use chloroform narcosis, but I have found that a very small quantity of the drug is sufficient.

It is very important to use the largest instrument that can be introduced without putting any undue strain on the urethra. If small instruments be used the fragments extracted must of necessity be small and the operation in consequence prolonged. A fair idea of the capacity of the urethra may be gained from the size of its orifice. In most cases a No. 16 evacuating lithotrite may be used; in many, however, a No. 14 is the largest which can be easily introduced. The instrument must be well oiled and warmed and introduced with the minutest care. The point of the lithotrite having been introduced into the orifice should be allowed to find its own way down to the membranous portion of the urethra. The weight of the instrument is quite enough to effect this, and the left hand of the operator should only be used to keep it first horizontally and then perpendicularly in the middle line. During this passage the urethra must be put at its full stretch by pulling the penis vertically upwards with the right hand. There is a tendency for the lithotrite to be arrested on entering the membranous urethra, and it is here that the skill of the practised operator is required to ensure an uninterrupted, regular passage into the bladder. The moment before this arrest would take place the right hand of the surgeon leaves the extended penis and applies through the medium of the second and third fingers a pressure to the heel of the lithotrite. This, accompanied by the gradual depression of the handle between the legs of the patient, carries the jaws of the instrument smoothly through the membranous constriction, over the ridge of the prostate, and into the cavity of the bladder. It is during this moment, and at this time only, that any propelling force should be given by the left hand to the lithotrite.

It is my practice to wash out the bladder two or three times with boracic acid solution before proceeding to crush. I consider this process beneficial inasmuch as it cleans out the bladder before any considerable injury to the mucous membrane has taken place. For this washing out I always employ, as before stated, the hydrostatic douche at an elevation of about thirty inches. I generally leave from four to six ounces of solution in the bladder. The position of the stone is then carefully recognised and its seizure gently effected. The screw is applied slowly and deliberately. The stone is then crushed and the process repeated as often as possible until the débris is sufficient in quantity to become a hindrance. The evacuating syringe is then applied to the handle, the stop is withdrawn, and the male blade protruded. The bladder is then very carefully washed out, only a very small quantity of fluid being injected. This process of crushing and evacuation is continued until the stone is completely removed. This fact may be ascertained first by the absence of the passage of any débris and of the click of any large fragment against the jaws, and secondly by thoroughly exploring the bladder with the closed lithotrite. When using the instrument as a sound the blades should be screwed tightly home so as to prevent any rattling. The instrument is then withdrawn, leaving, as I have found best, from four to six ounces of boracic solution in the bladder. This operation, if carefully conducted, inflicts a minimum of damage on the urinary passages. It requires, however, great delicacy of manipulation and is apt to be more prolonged than lithotrity with the ordinary instruments. Two points should always be regarded in operating on old men: firstly, to practise the most extreme gentleness compatible with rapidity; secondly, to thoroughly explore the post-prostatic pouch and at the same time to fully utilise the advantages presented by it as a trap for fragments. The after-treatment of such cases is often as important as the operation itself. The bladder treatment should be entirely symptomatic. If it empties itself completely it should be allowed to do so; if not the urine should be drawn off with a sterile catheter every four or six hours. An alkaline condition of the urine should be treated by bladder douches, of which the best is, as I have found, a weak solution of permanganate of potash. A diminution of quantity of the urine should be obviated by demulcent drinks, such as barley water, and if necessary by diuretics, of which I think the best is diuretin. The patient's strength must be maintained by good feeding and by the exhibition of stimulants in such quantity as may be required. In case of febrile symptoms arising salicylate of soda, together with cognac, should be freely used. It is, of course, self-evident that the mortality of stone operations on the aged can never be reduced to the ratios obtained with youths and adults; still, a careful attention to details will considerably diminish the mortality dependent on senile changes. These changes, however, not only largely increase the dangers of the operation, but also in some cases from local alterations render its performance much more difficult. The alterations of the prostate, either in the form of general hypertrophy or the production of tumour, may be such as to cause in the first place great obstruction to the introduction of instruments into the bladder, or in the second more or less complete ensaculation of the calculus. The first difficulty, obstruction to the introduction of instruments, is usually to be overcome by careful manipulation. In some few cases the obstruction may be complete, and some form of cutting operation becomes necessary both for the relief of the retention of urine and for the removal of the stone. In the great majority, however, a fair-sized instrument may be introduced. It is in these cases that the evacuating lithotrite, if it can be introduced, is of chief benefit, as a single introduction of it allows of the completion of the operation. Here, as in most other cases of difficulty in introducing instruments into the bladder, a finger in the rectum is of the greatest assistance.

The retention of the calculus in a pouch behind the enlarged prostate is a matter of much greater importance. In the simpler examples of this condition, in which there exists only a dilatation of the normal trigonal pouch, operation is, as I have before remarked, rather facilitated than otherwise. Where, however, the pouch is more or less separated from the general bladder cavity by constriction of its upper margin, or where, as described by Buckston Browne, an overhanging tumour of the prostate entirely hides the calculus, lithotrity may become extremely difficult or even impossible. Under such circumstances relief can perhaps only be given by some cutting operation, but lithotrity should be, I think, attempted in most cases. It is sometimes possible to dislodge the stone by pressure exercised by a finger in the rectum. In such cases, however, a new point comes into consideration—the treatment of the complication itself. Many operations have lately been performed for prostatic tumour and with very encouraging results, such operations being nearly always performed through a suprapubic opening into the bladder. It becomes, therefore, a matter of consideration as to whether it would not be advisable, in all cases of stones co-existing with any considerable enlargement of the prostate, to remove both stone and tumour through the same opening. There are, however, several indications against the procedure. In the first place the results of lithotrity are, from the point of view of mortality, at any rate greatly superior to those of suprapubic lithotomy. Secondly, the diagnosis of a prostatic tumour likely to be benefited by operation is very difficult so long as a stone is present. Thirdly, after removal of the stone the prostate may give but little inconvenience. Fourthly, the wished-for diminution of the prostate may perhaps be more safely obtained by castration.

I would say, therefore, with regard to the treatment of stone when complicated by old age and its degenerations, that (1) lithotrity is attended in such cases with very much less mortality than any cutting operation and is, therefore, to be performed when possible; (2) that a further advantage may be gained in lithotrity by the use of an evacuating lithotrite; (3) that the minutest care is necessary in all such operations; (4) that where the stone is complicated by evident prostatic tumour the safer plan is to treat the stone first by lithotrity and then to determine on the nature of the interference necessary for the treatment of the prostate; (5) that some cases cannot be operated on by lithotrity and that some cutting operation, preferably suprapubic lithotomy, is necessary; and (6) that lithotrity in difficult cases may be greatly assisted by the manipulations of a finger in the rectum.

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The next varieties of complications that I have to refer to are those arising from the various pathological conditions of the urinary system. The conditions usually considered of importance are organic disease of the kidneys, cystitis in all its varieties, new growths of the bladder, urethral obstruction, prostatic hypertrophy and tumour, and tendency to hæmorrhage. Organic disease of the kidneys, as evidenced by the quantity of urine passed and by the presence of urinary casts, undoubtedly furnishes a very important item in prognosticating the result of any operation. Still, there is no condition of the kidney which could be taken as a contra-indication to operation. When, however, the question arises as to which operation, the crushing or the cutting, is likely to yield the better result it becomes very difficult to adduce trustworthy evidence. Lithotrity has, however, proved itself to be the best operation for cases of stone in general; and as pre-existing kidney disease is generally held responsible for the fatal results occurring amongst patients of middle age, this operation, yielding as it does the smallest general mortality, is probably the best suited to meet this special complication. The existence of severe cystitis is also an important element in cases of stone. Here, however, we stand on much surer ground in deciding between the merits of the two operations. The cystitis which is so frequent a companion of stone generally disappears after its removal. My experience has been very clear on this point, that the cure of the cystitis after lithotrity has been as certain as after lithotomy. As to the rapidity of the cure evidence is lacking, as until the urine passes per urethram instead of by the perineal or other wound it is difficult to determine the condition of the bladder. In lithotrity cases, however, the cystitis is usually cured long before the period at which a lithotomy wound is closed. I consider, therefore, that the presence of cystitis, however severe, is no contra-indication to lithotrity. There are, however, two points which must not be lost sight of. The one is that fever is by no means uncommon after lithotrity in severe cases. This fever is, I believe, as a rule due to septic absorption from the bladder and urethra and may call for active treatment. The rise of temperature may be accompanied by diminution in the quantity of urine secreted, a condition which cannot fail to give rise to anxiety.

The treatment of these complications after lithotrity has in Egyptian subjects been so successful as to become practically a routine. If there is fever salicylate of soda is given in doses of 1 gramme every two hours for four doses and then every four hours as long as necessary. If there is diminution of urine diuretin is given in similar doses every four hours. When there is persistent cystitis the patient receives 0 30 grammes of methylene blue daily. This latter drug I have found most useful for cystitis, and it is particularly beneficial from its anodyne action. In very severe cystitis, especially if accompanied by atony or by a cystic condition of the bladder, whether after lithotrity or otherwise, a perineal incision and drainage of the bladder is the most certain cure. Still, although in a few very rare instances a lithotrity may require to be followed by a perineal incision. it is better in my opinion to resort to the cystotomy as a secondary than as a primary operation. The presence of a tumour in the bladder greatly complicates any stone operation, so much so that one would be justified rather in looking upon the tumour as the important disease and the stone as the complication. In most cases, however, the tumour is unsuspected until disclosed by the operative procedures; in many cases even the suspicion does not arise until after removal of the stone symptoms persist the significance of which was previously masked by its presence. In a few cases the presence of a tumour may be suspected from the results of sounding or other examinations. As to symptoms, I would call attention to two only: the first is the presence of an unusually large quantity of blood in the urine, which frequently occurs in these cases and should raise suspicion, and the second is the passage by the urethra of a fragment, microscopical or other, of a tumour, which seldom occurs, but which assures diagnosis. The age of the patient has a certain importance. In my experience the simple papillomatous tumour of the bladder exists much more frequently in youth than in adult life. Age, of course, predisposes to malignant tumours. The signs yielded by a benign bladder tumour on examination are, as a rule, not very evident, and their detection is, of course, rendered much more difficult by the existence of a stone. A small mobile papilloma has been detected by a sound, but in my own experience, at all events, it has been detected more often than it existed. A villous tumour is, I believe, not capable of detection by any manipulation except in very rare cases. The examination should always be bimanual—that is to say, between the sound in the bladder and a finger in the rectum, between the same sound and a hand over the pubis, and between the finger in the rectum and the hand over the pubis. A large carcinomatous infiltration of the bladder may be generally very easily recognised; smaller tumours, however, although malignant, frequently escape detection. The cystoscope may be used in doubtful cases should the condition of the urine admit of it, and in practised hands may yield very useful information. During the operation for stone the tumour, if of any size, may usually be detected. Any form of cystotomy, laying the bladder open as it does to digital exploration, renders its detection very easy. This exploration can be carried out most easily through a suprapubic incision, but can in most cases be as effectually performed through a lateral perineal wound. During lithotrity also a tumour is, I think, generally detected unless very small. It may show itself by extra difficulty in the manipulation of the lithotrite. In most cases fragments of tumour are brought away either in the jaws of the instrument or through the evacuator. A bladder tumour having been detected in conjunction with a stone, what is the best line of treatment to pursue? The course to be pursued depends on the age of the patient, the probable nature and size of the tumour, and on the size of the stone. If the patient be young, the tumour probably benign, and the stone not very big, the removal of the stone should be considered as secondary to the removal of the tumour, and therefore a suprapubic cystotomy be performed. In a similar case, should the stone, however, be large, I think that the safer proceeding would be to remove the stone first by lithotrity and to perform a suprapubic cystotomy later for the removal of the tumour. I am led to this conclusion by the fact that whereas the mortality after suprapubic cystotomy for tumour is small the same operation for large stones is still attended with great risk. On the other hand, should the tumour have bled freely, especially after examination with a sound, the suprapubic operation should, perhaps, have the preference, as lithotrity in such a case has been followed by very severe or even fatal hæmorrhage. Should the patient be old, should the tumour be probably malignant, and should the question of extirpation of the tumour be not entertained I should recommend the removal of the stone by lithotrity. I have performed this operation in three cases of evident carcinoma of the bladder—in all with success. The presence of the tumour, while rendering the operation more difficult and necessitating great care, produced no untoward after-symptoms. I would say, therefore, that in a case of stone and tumour diagnosed as existing in the same bladder the choice of operation lies between suprapubic cystotomy and lithotrity, and that the first is in general indicated whenever the tumour is to be removed and the second whenever this is impossible; that in the case of a very big stone it may be advisable to do the two operations at different times; and, finally, that the presence of a tumour, unless it be very prone to hæmorrhage, is not an indication against the performance of lithotrity. Urethral obstruction may, of course, be an absolute bar to lithotrity. Generally, however, the stricture is capable of cure, and then the question may arise as to the superiority of the various methods for the removal of the stone. If the stone be small I should consider the stricture as the more important, and should treat it first by dilatation or (in bad cases) by perineal incision. In the first case I should remove the stone by a subsequent lithotrity and in the second I should remove it at once through the perineal wound. On the other hand, should the stone be large (say, over thirty grammes) I should consider it to be the more important disease—firstly, on account of its size, and secondly, because the introduction of large crushing instruments is often difficult, even after complete dilatation of a stricture. In such cases I should recommend a perineal incision, followed by crushing of the stone and its removal through the wound. Where the stricture is such as not to admit the smallest staff it may be advisable to dilate the urethra first and then to perform perineal lithotrity. Briefly, then, I would say, when the stricture is incurable and no staff can be introduced suprapubic cystotomy becomes almost a necessity. When the stone is large and a staff will pass perineal lithotrity is preferable; when the stone is small the stricture should be treated by dilatation and urethral lithotrity subsequently performed. Prostatic hypertrophy

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and tumour I have already referred to in treating of senile degenerations. The tendency to hæmorrhage I have referred to under the observations on bladder tumours. I have never met with anything approaching to severe bleeding in any crushing operation. Should it occur the best method of treatment is to wash out the bladder with a large lithotrity evacuator and syringe. Should it recur, and should the various hæmostatic local applications in the form of bladder douches be ineffectual, I would drain the bladder by a perineal incision and wash it out with an iced creoline solution every two hours. The last category of complications are those arising from the general health of the patient. On this point there is but little to be said. I know of no condition except impending death from other causes than the presence of a stone which contraindicates operation. Heart disease is, unless extremely advanced, rendered innocuous by anæsthesia. Affections of other organs, although requiring the most careful attention before, during, and after operation, do not exclude its performance. Hæmophilia, an extremely rare complication of stone, renders operative interference more than usually imperative, and in such a condition lithotrity is clearly indicated. The general condition of the patient, therefore, may be said to present no indication against the operative treatment of stone, neither does it, with the exception of hæmophilia, specially indicate any one operation. The operation which gives in general the smallest mortality is, however, most necessary when the chances of mortality are increased, and lithrotrity therefore in such cases imposes itself.

In recapitulation I would say:—(1) That litholapaxy—i.e., lithotrity at a single sitting—is certainly the operation of election in all simple cases of stone in the urinary bladder; (2) that the difficulties of lithotrity increase with the size of the stone, but that no stone is too large or too hard to be crushed, and that the results obtained by lithotrity in dealing with stones over two ounces in weight are greatly superior to those ever obtained by any other method; (3) that in cases of large and hard stones in which, from the lack of operative skill and experience, urethral lithotrity is abandoned the best results will be given by a crushing operation performed through a perineal wound; (4) that difficulties in grasping a stone may be obviated by the use of suitable instruments and by cautious dilatation of the bladder; (5) that a considerable proportion of stones encysted in various ways may be removed successfully by lithotrity, and that only when this has been attempted and has failed should cystotomy, preferably suprapubic, be reverted to; (6) that lithotrity is the operation of election in the presence of nearly all morbid changes of the genito-urinary apparatus and should always be attempted, the necessary treatment being afforded to the complication either before or after its performance as required; (7) that in children its results are particularly favourable when carried out by experts, but that for the present lateral lithotomy is the safer operation in many hands; (8) that in the presence of senile degenerations and of morbid alterations of the general system lithotrity is by far the best operation and should be carried out whenever possible; and (9) that the completion of the operation by means of a single instrument—the evacuating lithotrite—may be advantageous, especially when dealing with old subjects.

Cairo, Egypt.

STREPTOCOCCUS PYOGENES AND ANTI-STREPTOCOCCIC SERUM.

BY WILLIAM BULLOCH, M.D. ABERD.,
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THE results here detailed refer for the most part to attempts made by Dr. Armand Ruffer and myself to render large animals immune against streptococcus pyogenes for the purpose of obtaining a specific therapeutic serum. The experiments were begun by Dr. Ruffer in the spring of 1895 and in autumn the partially immunised animals were taken over by me for the completion of the process of immunisation. Two horses have been immunised against streptococcus pyogenes alone; two others were first rendered immune against diphtheria toxine and then against streptococcus pyogenes, in the hope that the serum would be of value in antagonising the action of the very common polymicrobic infection, the Klebs-Löffler bacillus and streptococcus pyogenes. At first considerable difficulty was experienced in keeping the cultures of streptococcus alive through several generations. Further, the method of passage, although early resorted to, was only partially successful on account of the rapid loss of virulence of the micro-organism in ordinary liquid nutrient media. In July, 1895, Marmorek published an article on the streptococcus and described certain media in which the virulence obtained by passage could be maintained for a greater or less length of time. Since this publication we have used these media exclusively and have in the main been able to confirm Marmorek's observations. Human blood serum (two parts) and peptonised bouillon (one part) undoubtedly form the best medium; on account of the difficulty of obtaining human blood in quantity we have also used ascitic fluid bouillon. It must, however, be remembered that ascitic fluid from different patients varies a good deal. Some samples conserve the virulence of the micro-organism well, whilst others are distinctly inferior in this respect. A mixture of two parts donkey's serum and one part of bouillon is also good, although inferior to ascitic fluid. The fact that the passage of the streptococcus pyogenes through a series of rabbits increases the virulence of the microbe is an old one. The method of obtaining the greatest degree of virulence in the shortest possible time is to commence the series of passages by intravenous inoculation with intermediate cultivation from the cardiac blood. After one or two passages the series should be continued by subcutaneous inoculations in the abdomen, with subsequent cultivation from the liver. The streptococcus used in these experiments was obtained by Dr. W. R. Smith from a case of erysipelas in University College Hospital. Its pathogenic action at first was weak. Two cubic centimetres of bouillon culture killed the first rabbit in three days. A small quantity of the culture which escaped into the subcutaneous tissue of the ear produced a typical "ear erysipelas." Cultures were made from the cardiac blood in ascitic fluid bouillon, and after a sojourn of eighteen hours in the incubator a second passage was made. After the third passage the cultures, in gradually diminishing doses, were inoculated subcutaneously, and cultivations for the continuance of the series were made in serum bouillon. By the end of three months a very high degree of virulence was obtained, the animal succumbing in from twenty-four to thirty-six hours with general streptomycosis. At the point of inoculation a slight exudate is observed. The viscera are all congested and pleural and peritoneal exudates are frequent. Cover-glass preparations show that the organs are teeming with cocci. In animals dying within thirty hours we have found these almost exclusively in the form of diplococci. Sometimes the diplococci looked as if surrounded by a capsule. Cultivations made from the liver showed that up to three or four hours after inoculation the diplococcic form prevailed. By the sixth or eighth hour the cocci were in short chains of from four to eight members. In from eighteen to twenty-four hours the chains were often so long as to extend unbroken across two or three fields of the microscope—a veritable streptococcus longus. The inoculation of these very long chains caused death in rabbits more slowly than the diplococci, but post mortem diplococci were again almost exclusively found if the examination was made immediately after death. Where the necropsy was performed several hours after death (animals dying during the night) short chains were found in the exudates into the serous cavities and even in the blood. From the observations we have made we believe that the distinction of streptococci into varieties depending on the length of the chains (Behring, von Lingelsheim, Kurth, Knorr, and others) is not of much value.

IMMUNISATION OF HORSES.

1. Black cob mare, weight 9 cwts. Between May 11th and July 22nd, 1895, 415·5 c.c. of bouillon cultures from successive passages in rabbits were injected hypodermically in doses varying from 0·5 c.c. to 100 c.c. Each injection was accompanied by a large swelling at the point of inoculation and extending between the forearms along the front of the abdomen. Severe constitutional symptoms, fever, rapid breathing, &c., also showed themselves. During the last six months 498 c.c. of virulent ascitic fluid bouillon cultures have been inoculated, spread over twelve injections. The local reactions have been enormous and the temperature after each inoculation has been high (up to 105° F.). As a

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rule the animal has shown great sensibility and sometimes abscess formation has resulted, the pus containing pure cultures of streptococci of very active pathogenic qualities. In the case of the inoculation of large quantities it has been found advisable to limit the amount injected at one point to 25 c.c. In this way the discomfort to the animal is materially lessened.

2. Heavy cart gelding, weight 15 cwts. Between April 6th and July 20th, 1895, 303·5 c.c. of bouillon cultures were inoculated in quantities varying from 0·25 to 60 c.c. As this animal was more refractory than Horse 1 we have been able in the last six months to inoculate 640 c.c. highly virulent cultures grown in Marmorek's media. The febrile disturbance following the injections has been marked.

3. Heavy cart gelding, weight 16 cwts. From Nov. 17th, 1894, to April, 1895, this animal received 3810 c.c. of diphtheria toxine. A sample of blood taken on April 17th was found to have very high protective properties when tested against diphtheria toxine. The immunisation against diphtheria was now stopped, and between April 22nd and July 20th 371·5 c.c. of bouillon cultures of streptococcus were inoculated, with an occasional dose of 300 c.c. of normal diphtheria toxine. From Sept. 20th, 1895, to Jan. 20th, 1896, 444 c.c. of ascitic fluid bouillon cultures were injected in doses varying from 3 c.c. to 110 c.c. At first this animal exhibited slight reactions in comparison with Horses 1 and 2. Later, however, the injection of highly virulent cultures caused severe local and general reaction. The discontinuance of the injections of diphtheria toxine was found to have led to a marked loss of antitoxicity of the serum, although the animal had remained highly immune. Since March 4th 300 c.c. of diphtheria toxine have been inoculated.

4. Heavy cart gelding, weight 15 cwts. As in the case of Horse 3, this animal was first immunised against diphtheria toxine. Between April 22nd and July 20th, 1895, 366·5 c.c. of bouillon cultures of streptococcus were inoculated. From Sept. 20th, 1895, to Jan. 22nd, 1896, 578 c.c. of ascitic fluid bouillon cultures were injected. From Feb. 3rd to March 5th 1360 c.c. of N_2 diphtheria toxine were inoculated. Like Horse 3, this animal lost a good deal of the antitoxicity of the serum against diphtheria toxine.

General remarks.—Horses 1 and 2, which had been immunised against the streptococcus alone, were throughout more sensitive than Horses 3 and 4, which were first immunised against diphtheria toxine. During the period of reaction all the horses have suffered in general health. They have also all suffered from patches of alopecia which, in the opinion of an eminent dermatologist who examined the hair and the skin, was comparable to the alopecia following severe febrile disturbance in the human subject. (Compare the severe alopecia frequently seen after facial erysipelas.) A temperature chart showed a characteristic rise of temperature after the inoculation of 50 c.c. of serum bouillon culture of streptococcus pyogenes. The temperature rose steadily from 38° C.—the normal temperature of the horse—at 4 P.M. to a fraction below 41° C. (105·4° F.) at 10 P.M. At 1 P.M. the decline began, and by the evening of the following day a point a fraction above the normal was reached. At various periods samples of blood were drawn to estimate the preventive and curative power of the serum, as also to determine the length of time during which the serum remains toxic after inoculation. Marmorek found that from 0·5 c.c. to 1 c.c. of serum taken fifteen days after inoculation killed rabbits weighing 1500 grammes in from five to ten days. In the following experiment Horse 4 was inoculated at 12 midnight, Dec. 4th, 1895:—

Rabbit 1, serum taken at 6 A.M., Dec. 4th = 5 c.c. subcutaneously injected; died in five days.
Rabbit 2, serum taken at 5 P.M., Dec. 4th = 5 c.c. subcutaneously injected; ill but recovered.
Rabbit 3, serum taken at 12 noon, Dec. 5th = 5 c.c. subcutaneously injected; alive and well on March 4th, 1896.
Rabbit 4, serum taken at 12 noon, Dec. 6th = 5 c.c. subcutaneously injected; alive and well on March 4th, 1896.
Rabbit 5, serum taken at 12 noon, Dec. 7th = 5 c.c. subcutaneously injected; alive and well on March 4th, 1896.
Rabbit 6, serum taken at 12 noon, Dec. 10th = 5 c.c. subcutaneously injected; alive and well on March 4th, 1896.

According to this experiment the blood serum does not remain toxic for so long a period as that found by Marmorek.

The curative effect of the serum in experimental streptomycoses is shown below. The serum of Horse 2 was first used. In this experiment the control rabbit received a minimal lethal dose and died in twenty-four hours.

Rabbit 1 received ten lethal doses intravenously + 0·05 c.c. serum subcutaneously.
Rabbit 2 received ten lethal doses intravenously + 0·02 c.c. serum subcutaneously.
Rabbit 3 received ten lethal doses intravenously + 0·01 c.c. serum subcutaneously.

The results were that Rabbit 1 was alive and well two months afterwards; Rabbit 2 died in twelve days from metastatic lesions; and Rabbit 3 died in six days from the same cause.

The serum of Horse 4 was next employed. The control rabbit died in thirty-six hours after a minimal lethal dose.

Rabbit 1 received four lethal doses intravenously + 0·01 c.c. serum subcutaneously.
Rabbit 2 received four lethal doses intravenously + 0·008 c.c. serum subcutaneously.
Rabbit 3 received four lethal doses intravenously + 0·006 c.c. serum subcutaneously.

The results were that Rabbit 1 showed no symptoms and is alive at the end of two months; Rabbit 2 died in five days with metastatic lesions; and Rabbit 3 died in seventy-two hours with streptococci throughout the entire body.

The preventive power of the serum of Horse 1 is shown in the following experiment, in which the control rabbit (which weighed 1350 grammes) after eight times the lethal dose died in twenty-four hours.

In Rabbit 1 (weight 1550 grammes) = 0·2 c.c. serum was subcutaneously injected on Feb. 19th at 10 A.M. + 10 lethal doses on Feb. 20th at 1 P.M., with the result that it was alive and well on March 16th.
In Rabbit 2 (weight 1600 grammes) = 0·05 c.c. serum was subcutaneously injected on Feb. 19th at 10 A.M. + 10 lethal doses of culture of streptococcus on Feb. 20th at 1 P.M. On March 5th it was alive and well, but died on March 7th with acute psorospermosis. There was no evidence of streptococci post mortem.
In Rabbit 3 (weight 1800 grammes) = 0·01 c.c. serum was subcutaneously injected on Feb. 19th at 10 A.M. + 10 lethal doses of culture of streptococcus on Feb. 20th at 1 P.M. It died on March 1st with streptococcic pleurisy and peritonitis and metastases.

In comparison with anti-diphtheritic or anti-tetanic serum the curative effect of anti-streptococcic serum appears to be slight; still, it must be remembered that the successive passage through rabbits renders the streptococcus so virulent that it is mortal to rabbits in very minute doses. Further, the horse must remain under treatment at least a year before the serum reaches its maximum anti-streptococcic strength.

With regard to the dose of serum, for severe cases of puerperal strepto-mycosis 10 c.c. should be injected on each side of the abdomen as an initial dose, followed by another of from 10 to 20 c.c. if the temperature has not fallen, but much larger doses can be given with safety. In streptococcic angina from 10 to 20 c.c. may be injected according to age. Experimentally we have found that 10 c.c. injected into rabbits cause no bad symptom whatever, and in the human cases already treated no unfavourable results have yet been recorded which could be referred to the serum itself. The true value of anti-streptococcic serum will remain doubtful for some time on account of the difficulty of diagnosing streptomycoses bacteriologically, for it must be remembered that the serum is specific against the streptococcus only and attempts to cure staphylo-mycoses by it will be failures (as in several reported cases where the diagnosis of staphylococcus was made only after death). In conclusion, I take this opportunity of thanking Dr. Armand Ruffer, lately Director of the British Institute of Preventive Medicine, for much help and advice throughout the whole work. To Mr. W. Robertson, Veterinary Surgeon to the Institute, I am also indebted for the notes and temperatures and clinical histories of the horses which have been immunised.

Sudbury, Harrow.

THE DIETARIES OF BENGAL GAOLS.

BY SURGEON-CAPTAIN W. J. BUCHANAN, B.A., M.B. DUB., DIPL. STATE MED.,
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IT has been lately stated in an English medical paper and in the public press in India that the scales laid down for the diets of native prisoners in the gaols of India, and of Bengal in particular, are deficient, one critic says, in albuminates, fats, and salts. The following note will, I think, show that there is no foundation for such statements, and that the diets supplied for native prisoners in the gaols of Bengal are sufficient and indeed liberal. It is not here necessary to occupy space in quoting the analyses upon which the following calculations have been based. They

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have been taken from the standard authorities, Parkes, Wynter Blyth, Wanklyn, Bell, and König in Europe, and Dr. T. Lewis and Dr. Lyon in India. The following is the scale of diet ordered by the Bengal gaol code for prisoners confined in these gaols. I may say that we have in Bengal no progressive scale of diets, the only distinction made is between the diets for labouring and *non*-labouring prisoners.

Bengal scale (for labouring prisoners).—Morning meal (1 chitak = 2·05 oz.): rice, 4·10 oz.; or flour, 3·4 oz.; or suttoo (grain pulse), 3·7 oz.; with molasses, 1 oz., or salt, ½ oz. The other two daily meals are given at 11 A.M. and 5.30 P.M. They are as follows: rice, 22·55 oz.; pulse, 6·15 oz.; vegetables, 6·15 oz.; salt, 0·76 oz.; condiments, 0·25 oz.; oil, 0·51 oz.; and tamarind, &c., 0·25 oz.; half at each meal.

This is the ordinary diet for natives of Bengal; the morning meal is varied as above. Still further variety is given by a change in the kind of vegetables issued and in the kind of pulse (*dâl*), five different sorts of which, of practically equal nutritive value, are in common use. The nutritive value of this diet is given in Table I. No. 1 gives its value if rice is given for the "morning" meal, and No. 2 if "grain suttoo" is given instead of the rice at this meal. The values of these diet scales are given both in terms of the proximate aliments and in terms of nitrogen and carbon. As Professor Parkes has said, "The phenomena of nutrition are chiefly owing to the various chemical interchanges between nitrogen and carbon"; therefore, the amounts of these two elements in a diet furnish us with a convenient and simple index of the approximate nutritive value of any combination of food materials.

TABLE I.—*Bengal Scale Diet.*

—	Albuminoids (N×6·3)	Fats.	Carbohydrates.	Salts.	Nitrogen.	Carbon.
	oz.	oz.	oz.	oz.	gr.	gr.
No. 1.—Rice, pulse, &c. (rice for morning meal)	3·55	0·866	26·5	1·11	250	5777
No. 2.—Rice, pulse, &c. (grain for morning meal)	4·01	0·888	24·90	1·17	284	5781

TABLE II.—*Behar Scale Diet.*

—	Albuminoids (N×6·3)	Fats.	Carbohydrates.	Salts.	Nitrogen.	Carbon.
	oz.	oz.	oz.	oz.	gr.	gr.
No. 1.—Wheat, rice, &c. (rice for morning meal)	4·12	0·93	25·1	1·13	292	5957
No. 2.—Ditto (grain for morning meal)	4·58	0·96	23·5	1·18	327	5781
No. 3.—Wheat, maize, rice, &c. (rice for morning meal) ...	4·07	1·27	25·6	1·25	288	6130
No. 4.—Wheat, maize, rice, &c. (grain for morning meal) ...	4·53	1·29	24·0	1·32	322	5954
No. 5.—Maize, rice, &c. (rice for morning meal)	4·03	1·60	26·1	1·37	282	6306
No. 6.—Maize, rice, &c. (grain for morning meal)	4·49	1·63	24·5	1·30	318	6130

Table II. gives the nutritive value of the diets in use in that part of the province of Bengal called Behar. It is given to all prisoners in Behar gaols or to Behari or up-country men in all Bengal gaols. The difference between it and the "Bengal scale" diet consists in the substitution at one of the daily meals of wheat, maize, millet, or a mixture of these for part of the rice. This is in agreement with the dietetic habits of the people of this part of India. The staple food of the inhabitants of Bengal proper is rice; that of Behar is wheat or other cereal, as maize, millet, &c. The above tables, therefore, give the values of the diets in actual daily use of prisoners confined in gaols under the Government of Bengal. A glance at the standard diets given in all the text-books—e.g., Moleschott's or Pettenkofer's—will show how well these gaol diets compare with the standard ones of the above eminent physiologists. The relative value of the gaol diets, however, becomes still more great when it is considered that the standard diets above referred to are intended for Europeans with an average body weight of 150 lb. (69·5 kilos), whereas the average weight of Indian prisoners was taken by Dr. T. Lewis, F.R.S., as 110 lb. That this is a fair and even liberal estimate of the average weight of Indian prisoners is clear from the following considerations. Dr. Lewis put the average weight of Bengal prisoners at 105 lb. Dr. Lyon found 105 lb. to be an average weight of certain prisoners in a Bombay gaol, and I have found as the result of over 15,000 weightments collected in the Central Gaol, Bhagalpur, that 109 lb. was the average of this large number. Therefore, we may accept 110 lb., with Dr. Lewis, as a liberal average weight for the prisoners whose dietaries are here being considered. At the same time, Dr. Lewis, taking from 140 lb. to 160 lb. as the average weight of Englishmen of all classes, took 145 lb. to represent the average weight of convicts in English prisons. When, therefore, the above gaol diet scales are compared with European standards this important difference in body weight must be remembered. Remembering this fact, let us take the highest scale of diet in use for long-term prisoners in English convict prisons and compare and adapt this to the proportionate requirements of an Indian prisoner. Dr. Burney Yeo, in his valuable manual on "Food in Health and Disease," quotes from the Eleventh Report of the English Prison Commissioners the following diet for long-term, hard-labour prisoners:—

TABLE III.

—	Albuminoids (N×6·3)	Fat.	Carbohydrates.	Salts.	Nitrogen	Carbon.
	oz.	oz.	oz.	oz.	gr.	gr.
English convict prison diet; Class IV.; men with long terms; hard labouring ...	4·09	1·30	20·17	1·55	262	5699

Comparing this with the gaol diets given above it is seen that there is very little difference. Yet this diet scale for men of 145 lb. average weight has been associated with a very high degree of health among English prisoners. Let us adapt this diet by a simple rule of three to the proportionate requirements of Indian prisoners of 110 lb. average weight. It works out as follows:—

TABLE IV.

—	Albuminoids (N×6·3)	Fats.	Carbohydrates.	Salts.	Nitrogen.	Carbon.
	oz.	oz.	oz.	oz.	gr.	gr.
Class IV., English convict diet, adapted to Indian prisoner of 110 lb. weight, average	3·10	0·98	15·3	1·1	199	4·243

Compare, then, this adapted diet with the Bengal and Behar scale values given in Tables I. and II. above, and it will be seen that our gaol diets are superior in every particular. The carbohydrates and albuminoids are especially superior in the Indian gaol diets. If we consider the amount of nitrogen given in the above Table III., which is considered to be sufficient for men of 145 lb. it will be seen that the amount of nitrogen contained in the ordinary Bengal diet (Table I.) should suffice for men of from 133 lb. to 157 lb. weight, and the ordinary Behar scale diets (Table II.) for men of from 157 lb. to 180 lb., whereas we have seen the average weight of these prisoners is only 110 lb., and men of over 150 lb. are very seldom seen in Bengal gaols.

The preceding remarks and figures have shown therefore that, judged by European and scientific standards, after due adjustment to meet the altered conditions of physique, climate, and habits of life, the ordinary diets of Bengal gaols contain in sufficient quantity all the elements of food necessary to maintain vigorous existence on ordinary work. In addition, however, the medical officers of gaols (who are in the great majority of cases also the superintendents or governors) have ample power given to them to make many variations suitable to the season and the general health of the prisoners. These variations are not made so much with the object of increasing the quantities of food supplied as to relieve monotony and give variety to the diets. In addition to

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varying the kind of pulse and vegetables issued the medical officer can vary the antiscorbutic pickles used (as lemon, mango, or tamarind), or he can change the morning meal as above described or issue extra antiscorbutic vegetables, as onions and potatoes, or give extra salt and oil. Also, when there is a [general falling off in health or at unhealthy seasons the medical officer is enjoined to issue meat, fish, or milk in lieu of part of the pulse in the above diets, and Rule 106 of the gaol code directs that the fish or milk be issued in lieu of part of the pulse in quantities of equal nutritive value. I have calculated the nutritive value of meat, fish, milk, and pulse to be as follows: one part pulse equals two parts meat, two parts fish, or four parts milk. The principle of giving the nutritive equivalents in all cases of variations in diets is fully worked out in the revised gaol code which is now being published. Using, then, the above nutritive equivalents the value of a diet containing meat, for example, is seen in the following table.

TABLE V.—*Permissive Diets.*

—	Albuminoids(N×6·3)	Fats.	Carbohydrates.	Salts.	Nitrogen.	Carbon.
Bengal scale:	oz.	oz.	oz.	oz.	gr.	gr.
Rice, pulse, &c. (meat in lieu of part pulse)	3·65	1·17	25·3	1·13	258	5673
Rice, pulse, &c. (meat in lieu of part pulse; grain for morning meal)	3·71	1·19	23·7	1·18	290	5677
Behar scale:						
Rice, pulse, and wheat (meat in lieu of part pulse)	4·22	1·24	23·9	1·25	299	5853
Rice, pulse, and wheat (meat in lieu of part pulse; grain for morning meal)	4·68	1·26	22·37	1·20	333	5677

The above table might be indefinitely increased if we considered the values of diets containing maize, millet, or if we gave those substituting fish, milk, &c., for part of the pulse, but the values are practically the same. It will, therefore, I think, be agreed that the strictures lately levelled at the dietaries of the gaols in the province of Bengal are without foundation in fact, that the ordinary diets are liberal for ordinary conditions of health, and that ample power has been given to medical officers to vary to a very considerable extent the diets to meet the requirements of sickness or a general lowering of the prisoner's health. It has been laid down as an axiom of English prison management that the diet of prisoners should be "sufficient, and not more than sufficient," to maintain them in health and strength. I think it will be agreed that the Bengal gaol diets are even more liberal than this. These gaol diet scales have been in force since the year 1881; it cannot, therefore, be considered that they are answerable for the comparative unhealthiness of some gaols in the province. The gaol death-rate for the whole province for many years past has shown a decline upon the whole continuous and satisfactory. In 1895 it will be found to have reached the lowest on record (about 25 per mille). This very satisfactory result is not claimed as a result of the diets, but is due to the great care and attention bestowed upon sanitation, clothing, housing, and the provision of a good water-supply for the prisoners. If it is objected that though the scales above discussed are admittedly ample and even liberal, yet the prisoners do not get the full quantities ordered for them, the reply may be made that first it is the primary interest of the medical superintendent to have as low a sick- and death-rate as possible, and secondly, year by year it is proved that the vast majority of prisoners either remain stationary or gain in weight—e.g., take Statement B of the Annual Administration Reports on Bengal Gaols. Here it is shown from year to year that no less than 80 per cent. of the prisoners discharged have either not lost or have gained in weight during their stay in gaol, leaving only 20 per cent. who have lost, the latter number being easily accounted for by sickness. In conclusion, I think it has been shown that the gaol diets in ordinary use are sufficient and ample and that due discretion has been allowed to medical officers to alter or vary the diets according as they may consider necessary. The foregoing report has been submitted to, and has the approval of, the Government of Bengal.

Central Gaol, Bhagalpur.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De sed. et Caus. Morb.*, lib. iv. Procemium.

ST. GEORGE'S HOSPITAL.

TWO CASES OF ACUTE PEMPHIGUS TREATED BY ARSENIC, WITH AN ACCOUNT OF SOME BACTERIOLOGICAL EXPERIMENTS.

(Under the care of Dr. THOMAS WHIPHAM.)

THE following two cases of acute pemphigus have lately been under observation in St. George's Hospital. Both were of unusual severity; one patient recovered and the other died. Both were treated by increasing doses of arsenic, and in both the remarkable effects of the drug in this particular disease were strikingly illustrated. This contribution to the literature of pemphigus is also a valuable one in many other respects. The account of the bacteriological examination of the cases is very complete and adds considerably to our knowledge. We refer our readers to the remarks appended to the case for much interesting information.

CASE 1.—A married woman thirty-eight years of age was admitted into St. George's Hospital on Nov. 21st, 1895. Her family history was good. She had been married ten years, but had never been pregnant. She was liable to sore-throat occasionally, but the attacks were of short duration and not severe. In the previous year she had "a touch of rheumatism," but there was no history or evidence of syphilis. A week before she came under observation a spot appeared on one of her fingers, which she "broke" and afterwards washed some clothes, using ordinary washing soda in the process. Immediately on this followed a copious eruption of "spots" on the face, then on the body, hands, arms, and legs. Her husband was in work and she suffered no privations, her diet consisting daily of bread, butter, meat, and vegetables. The sanitary arrangements of the house in which she lived were, so far as she knew, good. Up to the time when the first spot appeared on her finger she had been in good health. The eruption on the skin had become rapidly worse during the week, and on her admission to hospital she was in the most pitiable condition. She was extremely ill, with a very feeble pulse and a high temperature (101° F.). Her face presented a shocking appearance; it was covered with bullæ, many of which had become confluent and had burst, leaving much of the skin of the face, and of the eyelids especially, covered with masses of dried incrustation, which was black from previous extravasation of blood. There were bullæ, very numerous, on the arms, hands, and legs answering in all respects to those of pemphigus, some with opaque white contents and others with reddish contents. The front of the body, the back, the buttocks, and the vulva were in a most unusual condition. It was evident that the bullæ on the body had been very numerous, that they had become confluent, and that the epidermis had given way, leaving the true skin exposed. This was especially the case on the back and buttocks, the whole surface having become one large sore. There was a copious bullous eruption on the arms, the front of the body, and the back of the neck. The stench emitted by the exposed cutis was most offensive. The eyelids were so swollen and covered with black incrustations that the patient was unable to open them. Her state was one of the utmost gravity and at the time of her admission appeared hopeless. She was at once carefully placed in a warm boric acid bath, by which means the exposed surface of the skin was cleared and the stench arising from it destroyed, while the eyelids were bathed freely with warm boric acid solution. On her removal from the bath she was wrapped in cloths soaked in a 10 per cent. solution of boroglyceride. She was ordered as much milk and strong beef-tea as she could take, with two eggs beaten up and ten ounces

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of port wine. A mixture of quininæ hydrochloras (five grains) and liquor arsenici hydrochloridi (five minims) was ordered three times daily. Under this treatment the patient's condition greatly improved, and two days later dressings soaked with olive oil were substituted for those steeped in the boro-glyceride solution. By this time all offensive odour from the skin had been removed. The patient was, however, still extremely weak; her pulse was 120 and her temperature on Nov. 24th reached 103·2°. Between Nov. 21st and 23rd a few fresh bullæ had formed on various parts of her skin, excepting on her face. Her tongue, which had never since her admission been very thickly coated, was dry and the fur was of a dirty-white colour. On the 25th, although a few fresh bullæ had made their appearance on the wrists and over the left hip, the skin on the back had begun to heal and the patient's expression of face had improved. The dose of the liquor arsenici was increased to seven minims and fish was added to the diet. On the 26th she was still very weak and the tedious process of dressing her body and limbs exhausted her greatly. Her pulse was weak; she slept badly, but took nourishment well. Five ounces of brandy were ordered instead of the port wine. On the 28th she was extremely weak and diarrhœa had set in. Two scruples of the aromatic powder of chalk and opium were given in place of the midday dose of the mixture and the diarrhœa ceased. The dose of arsenic was increased by two minims. The temperature, which up to this date had been irregular, reaching on one occasion 103·2°, now became more regular and ranged between 101° and normal during the next three weeks, after which it fell to normal, the pulse-rate during the same period averaging about 110. On the 29th decided improvement had taken place, and the extensive ulcerated areæ on the back and buttocks and the smaller ones on other parts of the body showed distinctly the commencement of the healing process; the tongue was cleaner and she slept better. On the 30th the dose of liquor arsenici was increased to twelve minims. Pounded meat was ordered in place of the fish diet, and the brandy was replaced by ten ounces of port wine on Dec. 4th. The process of healing was proceeding rapidly, the new skin appearing as islets in different parts of the ulcerated surfaces, and on the 7th the skin of the back, which on admission was one large ulcerated surface, was practically healed. On the 9th the patient vomited after breakfast, and a small boil had formed on the right forearm and on the left knee and a "stye" on the left lower eyelid. On the supposition that these complications might be the effect of a too liberal diet it was decided to substitute fish for the meat rather than discontinue the arsenic; the change was productive of the desired result so far as any fresh formation of boils was concerned, although both of the boils suppurated and required incision. On the 12th further improvement had taken place; the skin over the buttocks was rapidly healing, all the other parts which had been the seat of ulceration being now quite sound. The new skin was deeply pigmented. On the 17th a trace of albumin was found for the first and only time in the urine, which had varied in specific gravity from 1014 to 1020. From this date the patient made rapid progress, gained strength and flesh, slept well, and retained her appetite for food. On the 30th it was noted that a small area on the outer side of the left buttock, another on its inner side, and a larger area on the right buttock remained unhealed; but on all of them there were islets of new skin. On Jan. 3rd, 1896, the healing had so far advanced that the only ulceration which remained was on the right buttock, to which unguentum zinci was applied. Recovery was now uninterrupted and the patient left on the 29th for the Atkinson Morley Convalescent Hospital with only a small unhealed surface on the right buttock.

CASE 2.—A boy two years of age was admitted into St. George's Hospital on Christmas-eve, 1895. He was one of four healthy children, one (a twin) having died from an injury at his birth. The family history was good; there was no history of syphilis in either parent or rheumatic history, and up to the date of the disease for which he came under treatment the child had not been ill. About five weeks previously to his admission a cat had scratched the palm of his left hand and had caused a wound which became so bad that a linseed poultice was applied to it and subsequently an ointment. When admitted to hospital the wound on the palm of the hand had quite recently healed and some dry flakes of dead skin were still adherent around the cicatrix. Three days before he came under observation in Crayle Ward he had been brought to Dr. Rolleston as an out-patient to be treated for an eruption on his legs which in some respects resembled impetigo. The eruption increased and the mother again brought him to the hospital. On examination of the child there was found a copious eruption of pemphigus, the hands, feet, thighs, ankles, and calves being most affected. The child was very ill, with a temperature of 101° F. and a pulse of about 140; the urine was natural. There was no evidence of visceral or other disease. The treatment at once adopted was liquor arsenicalis in minim doses three times daily. The affected skin was carefully washed with a 10 per cent. solution of boro-glyceride, and subsequently enveloped in dressings soaked with olive oil. The diet consisted of milk, beef-tea, and boiled custard. On Dec. 26th some fresh bullæ had made their appearance in front of the left ankle, and the contents of one large one on the outside of the ball of the left thumb had become turbid. On the 27th there were fresh bullæ on both thighs, one on the outer side of the left forearm and a few over the pubes; the older ones were desiccating. On the 28th two fresh bullæ had formed on the right knee (the inner side) and two on the outer side of the left knee. The dose of liquor arsenicalis was increased to two minims. On the 29th there were seen one or two fresh bullæ scattered about the extremities. On the 30th there occurred still further development of the eruption over the pubes, the left knee, and the thigh. Some of the bullæ on the palm of the right hand had burst, and many of those in other situations had turbid contents. The dose of liquor arsenicalis had by this time been increased to five minims three times daily, but in spite of this large dose a few fresh bullæ had appeared. On the 31st the child was restless and vomited three times after food; only a few fresh bullæ had formed. It was thought that the vomiting might be due to the arsenic. Parrish's chemical food was therefore substituted for it, with the result that on Jan. 3rd, 1896, thirty fresh bullæ had formed on one leg and fifty on the other. The gastric disturbance had passed off and the arsenic was resumed on the 4th in three-minim doses three times daily. After this the rapid formation of bullæ gradually ceased, and from the 9th to the 16th there was no increase in the eruption. On the 6th and 8th the child was placed for ten minutes in a bath containing boric acid, with the view of disinfecting the bases of such bullæ as had burst. On the 7th vomiting recurred once after food, but the child had greatly improved in spirits and appearance. With the exception of recurrence of the vomiting on the 12th and 13th progress was very satisfactory till the 16th, when he became irritable and restless, but was much more comfortable after another boric acid bath and a dose of grey powder. All went well and the skin was fast approaching a healthy condition until the 19th, when a large bulla formed on the back of the left hand. The child's diet had been gradually increased by the addition of pounded meat, eggs, custard, milk, and pounded chicken, according to his appetite. On the 27th the child was fretful and his appetite failed; it was with difficulty that he could be persuaded to take any food. Two days later there formed over the external malleolus of the right ankle a large bleb which burst and was dressed antiseptically. On Feb. 1st the portion of skin on which the bleb was began to slough. The child had become seriously ill, rapidly failed in strength, and died on the 11th. The treatment was chiefly by arsenic, and at the last the liquor arsenicalis was given in Parrish's food.

BACTERIOLOGICAL EXAMINATION BY DR. S. RUSSELL WELLS.

Dr. C. Slater being absent from London the bacteriological examination of Case 2 was undertaken by Dr. Wells and conducted in the bacteriological laboratories of St. George's Hospital and the British Institute of Preventive Medicine. A diplococcus has been described as occurring in cases of acute pemphigus by Demme,[1] and Claessen,[2] and recently in this country by Bulloch,[3] while Dühnhardt[4] found a similar organism in a case of chronic pemphigus. Almquist,[5] also, from his investigations considers a coccus that forms a yellow growth on culture media to have been the cause of an epidemic of pemphigus in young children. It was therefore thought advisable to investigate the bacteriology of this case, so on Dec. 24th, 1895, agar, gelatin, and bouillon tubes were inoculated, with due antiseptic

[1] Verhandlungen des Congress für Innere Medicin, Wiesbaden, 1886.
[2] Berliner Klinische Wochenschrift, 1893, p. 671.
[3] British Journal of Dermatology, 1895, p. 159.
[4] Deutsche Medicinische Wochenschrift, 1887, vol. xiii., p. 711.
[5] Zeitschrift für Hygiene, Band x., 1891, p. 253.

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precautions, from the contents of the bullæ on the child's legs, a separate bulla with clear contents being used for each tube. The bouillon and agar tubes were left in the incubator at 37° C., and next day in three out of the four tubes used a growth was found. The gelatin tubes which were left at a lower temperature showed no growth. From the agar and bouillon cultures agar and gelatin plate cultures were made; the gelatin plates were found to be most unsuitable, as the organisms grew so very slowly on this medium at the lower temperature necessary for the gelatin. From the agar plates the three following distinct organisms were separated: 1. A sarcina which presented all the characteristics as to appearances, growth, and staining reactions of sarcina lutea. As this organism is well known to frequent the human skin, and as subsequent experiments showed the sarcina was found to be harmless for guinea-pigs, it was considered to be simply a contamination. Its appearances and effects on guinea-pigs were carefully investigated in view of the yellow pemphigus organism described by Almquist. 2. A small sarcina which formed tiny, almost transparent colonies on agar and grew very slowly. This organism was found to have no effect on guinea-pigs and was also considered to be a contamination. 3. A coccus usually found arranged as a diplococcus. This organism was probably the same as that found by Demme, Claessen, and Bulloch in cases of acute pemphigus. The first two organisms may probably be disregarded, but it will be necessary to describe the diplococcus at length. Cover-glass preparations were made from the contents of the bullæ direct, and showed, on staining with methylene blue, gentian violet, and other like dyes, a few diplococci which presented all the appearances (described below) of the diplococci isolated from the serum of the bullæ. The blood and urine of the patient were not examined and no more tubes were inoculated, as shortly after the cultures were made most of the bullæ broke and were treated with olive oil, so the child's legs, on this account, and from the fact that he passed his urine in the bed, could not be rendered even approximately aseptic.

Necropsy.—The child died on Feb. 11th and the necropsy was made twenty-four hours after death by Dr. Cyril Ogle. His report in the post-mortem book of St. George's Hospital is as follows. "There were no signs of rickets. The body was well nourished. A great deal of superficial scarring was present, chiefly on the legs and the inner side of the thighs. Besides the worm-eaten appearance produced by the scars there was a decided increase of pigment of the skin. Just below the ankle was a large sloughy ulcer covered with iodoform. The body was very anæmic and sallow, but not œdematous. Rigor mortis was present. The height was 2 ft. 6 in. The blood was more fluid than in health. The pleural cavities contained a few ounces of blood-tinged serum. The right lung weighed five ounces and the left four and a half ounces. Throughout the substance of both lungs were numerous small hæmorrhages of about the size of hemp seeds, impalpable, evenly distributed, and where they abutted on the surface there was no pleuritis. The rest of the lung was healthy but somewhat distended; there was no broncho-pneumonia. The tubes were not choked. The pulmonary artery contained a little post-mortem clot. No thymus gland was observed. The heart weighed four ounces. There was no engorgement of the right side. The valves were all sound. There was a somewhat hypertrophied right ventricle with a little dilatation. The foramen ovale was closed. No staining of the endocardium or aorta was seen. There were no hæmorrhages on the surface of the heart. The peritoneal cavity contained about one and a half ounces of clear serum. The liver weighed seventeen ounces and was firm and healthy. The stomach contained much curdled milk in solid lumps. There was no evidence of any gastritis. The pancreas was normal. The spleen weighed one and a half ounces and was firm. The kidneys each weighed two ounces and were pale and healthy; no petechiæ were present. The adrenals were healthy. The mucous membrane of the bladder was spotted with fine hæmorrhages; there was no cystitis. The testes were in the scrotum, which was œdematous. There was no œdema of the legs. The intestines were quite healthy; the mesenteric glands were not enlarged. The brain weighed forty-two ounces; no softening, no distension of the ventricles, no meningitis, and no blocking of the veins were present; the substance was healthy and firm, and there were no petechiæ." Microscopical sections were made of the lungs and stained by Czinzinski's method with eosin and methylene blue, when it was found that there were small extravasations of blood into the alveoli, and in the neighbourhood of these hæmorrhages a few diplococci were found similar to those described below. No other micro-organism could be detected in the sections.

Bacteriological experiments.—The organism, as seen in pure cultures, was a micrococcus of about 0·8 to 1·5 μ in diameter; single cocci were seen, and very short chains of three or four cocci; but by far the commonest arrangement was in pairs, and that this was the natural arrangement was shown by the fact that nearly all those found in the tissues and blood of inoculated animals, and in the fluid of the bullæ, as well as the vast majority in bouillon cultures, examined by the hanging-drop method, were diplococci. The opposed sides of the two cocci were somewhat flattened, so they appeared slightly wider than they were long. No capsule like that of the pneumococcus could be detected. They stained readily with methylene blue, gentian violet, and also by Gram's method. On agar plates the diplococci grew rapidly at 37° C. Well-marked colonies often appeared in twenty-four hours; these had at first a circular outline, slightly raised in the centre, and of a milk-white colour. If kept at 37° C. and prevented from drying these circular colonies increased in size for about a week without changing their form; after this they commenced to throw out slight projections at the edge, so that a colony from ten days to a fortnight old had a rosette appearance, behaving in the same manner as the diplococcus described by Demme. As the age of the colonies advanced they sometimes took on a slight yellowish tinge, changing from a milk-white to a cream colour. The diplococci grew very quickly on agar at 37° C. both as streak and stab cultures, in the latter case in the well-known nail-like form. As a rule there was a copious growth resembling a streak of rather thin white oil paint along the course of the needle in twenty-four hours. At 22° C. the growth on agar took place, but was very slow. On gelatin at 22° C. the growth was extremely slow and feeble, being far slower than on agar at the same temperature; but when the gelatin was liquefied and kept at 37° C. the diplococci grew fairly well, and when, after having been started for twenty-four hours at 37° C., the tubes were allowed to cool so as to set the gelatin and then placed at 22° C. the gelatin was slowly liquefied after several days. It may be mentioned here that gelatin appeared to be one of the worst soils on which to grow the organism; it grew better on almost any other medium at the same temperature. On blood serum the diplococci grew as on agar. In bouillon they grew very rapidly at 37° C., giving rise first to a turbidity and then to a white sediment; in some cases a pellicle formed, but this soon sank to the bottom of the tube. The organisms grew in bouillon at 22° C., but much less rapidly. On potato they formed a whitish, semi-transparent pellicle. Milk was curdled slowly at 37° C. Anaerobic cultures were tried on agar (sloping and stab), bouillon, and potato, and in all cases there was growth at 37° C., but not so rapid as under aerobic conditions, and the colonies were smaller and less dense. Mice and guinea-pigs were subcutaneously inoculated with small quantities of young pure bouillon cultures of the organism, and other mice and guinea-pigs were "vaccinated" with young pure agar cultures. The *modus operandi* in the latter case was to shave a small area of the skin of the animal's abdomen and then to wash the place with strong carbolic acid solution and dry with sterile cotton wool; next to scarify the skin with a sharp sterile scalpel and to rub in a small quantity of the culture with a sterile platinum wire; and after this the place was protected by dry sterile cotton wool and collodion. All the animals inoculated or "vaccinated" with the organism died in from four to eight days, and the diplococcus was recovered as a pure culture from the heart's blood in each case. In the case of the mice, cover-glass preparations made from the heart's blood showed large numbers of diplococci; in the blood of the guinea-pigs only a few were found, but no other micro-organism was present. The only post-mortem appearances of importance were slight enlargement of the suprarenal capsules and very fine hæmorrhages in the lungs of a similar character to those found in the lungs of the child. In these patches a few diplococci were found. No bullæ were produced.

Summary.—From the above it will be seen that the following points have been established: (1) that a diplococcus answering in every respect to that found by Demme, Claessen, and Bulloch was found in the contents of the bullæ of the child during life; (2) that this diplococcus was

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grown from the contents of the bullæ and obtained as a pure culture outside the body; (3) that after the death of the child a similar organism was found in the lungs and minute hæmorrhages were found in the alveoli; (4) that pure cultures of the diplococci, after having been grown for many generations outside the body, when introduced into the system of either guinea-pigs or mice by hypodermic injection or "vaccination" caused death; (5) that after death the diplococci were grown as pure cultures from the blood of these animals, and that these cultures killed other animals; (6) that the appearances found in the lungs of these animals were comparable to those found in the child's lungs; and (7) that the diplococcus was found in sections of the lungs of the animals. The following conclusions have been drawn. Since bullæ have not been produced in the animals we cannot say that the diplococci found were the cause of the disease, but as this organism has now been found by four independent observers in cases of acute pemphigus, we think, in the light of our results, that there is a strong presumption in favour of this being the case. Demme only obtained pneumonic patches by injecting the organism into the lungs of guinea-pigs, so our results with subcutaneous injections carry the matter a stage further. It is interesting to note that Sahli has described a case in which pemphigus followed broncho-pneumonia. It is possible that the difference in the texture and structure of the skin in the human being and the guinea-pig may account for the absence of eruption in the latter case. We have to thank Dr. Hewlett for performing the injections and "vaccinations" for us, and Dr. Macfadyen and Dr. Slater for the use of their laboratories.

Remarks by Dr. WHIPHAM.—If only on the ground of the great severity of the disease these two cases would have been interesting. The bacteriological observations, and one or two other points which seem worthy of note, render them, perhaps, sufficiently important to merit publication. In Case 1 the extent of the eruption and the great damage to the skin, which was its consequence, are exceptional even in acute pemphigus. On admission almost the whole of the skin of the back, the whole of the skin of the right buttock and of the lower half of the left of the labia majora, and of the back and inner surface of the right arm was extensively and deeply ulcerated after the confluence of the eruption. Equally remarkable is the recovery of a person from so severe a lesion to an organ so important as the skin, the patient being at the time in a condition of such extreme debility and prostration that there seemed to be but one possible termination to the case. The treatment by arsenic was adopted in both cases, and the improvement, which in either case followed immediately upon its administration, goes to prove the accuracy of the observations made some years since by Mr. Hutchinson. A change for the better occurred in the case of the woman within forty-eight hours of her taking the first dose of the arsenic. In the case of the child the formation of the bullæ was very greatly checked in about the same time, and on the sixth day from his admission only one or two fresh bullæ had formed in the previous twenty-four hours. It will be seen in the report of the case that on Dec. 31st (the seventh day from his admission) the child was restless and vomited, and that in consequence the arsenic was withheld, with the result that during the next twenty-four hours thirty fresh bullæ had formed on one leg and fifty on the other. The gastric disturbance having subsided in the course of three days the arsenic was resumed and the development of the eruption was again checked. It is difficult to resist the conviction that we had here an instance of cause and effect. These two cases will add to a very interesting series collected by Mr. George Pernet in a paper which he read in the Section of Dermatology at the annual meeting of the British Medical Association in July, 1895. Mr. Pernet's cases showed that in a very large proportion of them acute pemphigus had followed an injury or wound of the skin. In our cases the woman had a spot on her finger, which she rubbed, then washed some clothes, and, as she described it, "poisoned the place." This possible infection occurred one week before the onset of the pemphigus. The child was scratched by a cat five weeks before he was received into hospital, and the wound had been so bad in the interval that it had barely healed at that date. The probability is that, as Mr. Pernet suggests, a micro-organism was introduced by the injury in each case, and the suggestion derives much support from Dr. Russell Wells's careful bacteriological experiments.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Spontaneous Dislocation of the Hip, with some Remarks on a Class of Case often mistaken for Rheumatism.—A Method of obtaining a complete Skin Covering after Ablation of the Breast.—The Transplantation of Skin Flaps for the Filling up of considerable Defects after Amputation of the Breast.

AN ordinary meeting of this society was held on April 28th, the President, Dr. DICKINSON, being in the chair.

Mr. BARWELL read a paper on Spontaneous Dislocation of the Hip, with some Remarks on a Class of Case often mistaken for Rheumatism. The patient was a naval officer who, on account of an obscure affection of the hip, had been sent from St. Leonards by Dr. Fennings for Mr. Barwell's opinion. He had served for the last three years in Chinese waters and during the homeward voyage was greatly troubled with boils; these culminated in erysipelas of the face while he was passing through the Red Sea. He was landed at Malta and went into hospital, where several sores and some abscesses formed about the face, accompanied with high temperature. One night he was attacked with severe pain in the right hip and thigh, and when he left his bed he was very lame. This pain was ascribed to sciatica and was treated accordingly. He came under Dr. Fennings's care on Oct. 8th still suffering from pain and lameness, his temperature ranging to about 100° F. A striking feature in the case was that the pain was felt in the anterior crural nerves as much as in the sciatic nerve. Mr. Barwell, on first seeing him, noticed the peculiar and uneven step indicative of hip mischief: as the patient stood on the left foot he placed the right one a good deal in front, keeping the knee bent and the body bowed; when standing on the right foot the other heel did not reach the ground by a considerable distance; and the prominence of the trochanter was absent from its normal place. Dislocation of the head of the femur being diagnosed, it was decided to make an attempt to reduce the deformity by Bigelow's method. This was successfully accomplished under full anæsthesia. When internal rotation and adduction had been carried pretty far the head of the bone re-entered the acetabulum with an audible and perceptible snap. The limbs then became of the same length. Three days later the patient walked without any limp; all his pain had disappeared. On Feb. 22nd, 1896, he walked perfectly straight and without limp. Occasionally he had a little vague pain in the upper third of the outside of the thigh. He had been examined at the Admiralty and passed again to active service.—Dr. JOHN HARLEY referred to the case of a young woman who was admitted to St. Thomas's Hospital under his care with acute rheumatism. The disease concentrated itself in the right shoulder-joint, giving rise to swelling and obscure fluctuation there. Later spontaneous dislocation of the shoulder-joint occurred. It was easily reduced, the arm bound up to the side, and the elbow supported. The result was a good recovery. Such a case showed that surgeons should not too quickly interfere in cases of joint affection which might get well of themselves if left alone. In some cases of pyæmia complete absorption of pus from joints might occur.—Dr. NORMAN MOORE said he wished for more information regarding dislocation of the hip-joint in cases of enteric fever. He had read all the post-mortem accounts at St. Bartholomew's Hospital since the year 1867 and no case had been met with, neither had he seen the condition in the wards. He asked if the cases Mr. Barwell had referred to occurred in children or adults, and whether the diagnosis of enteric fever was beyond question, for the recognition of typhoid fever was often by no means certain.—Mr. BARWELL, in reply, said that the case quoted by Dr. Harley was not analogous, for it was a suppurative affection. He had seen three cases of dislocation of the hip in undoubted enteric fever, and in a fourth case there was strong reason to believe that the disease was typhoid fever. In one case, in a girl aged nine years, he attempted reduction two years after the dislocation, but failed. In the case of a girl aged sixteen, in which the diagnosis was confirmed by Murchison, he attempted reduction about four months after dislocation, but failed. In this class of case there was no

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sign of inflammation in the joint, but the bone slipped on to the dorsum ilii from a healthy socket. The vague pains about the limbs in these cases were not rheumatic, but due to the absorption of some poison.

Mr. MAYO ROBSON read a paper on a Method of obtaining a Complete Skin Covering after Ablation of the Breast. He remarked that in complete ablation of the breast and of the skin covering it a difficulty frequently arose when the effort was made to obtain a skin covering, this being as a rule impossible without further operative treatment. So far as he could ascertain the general practice among surgeons had been to draw the parts together as far as possible and then to leave the remainder to granulate or to cover the remaining surface by Thiersch's skin grafts, the former being a tedious and the latter an uncertain and not always successful method. He showed that by means of one or two single incisions with sliding of the flaps, the whole of a very extensive wound might be closed, and that primary union might thus be secured. Although some tension was necessarily present the observance of antiseptic precautions had prevented sloughing, and in a number of cases on which he had operated he had not experienced any trouble. He concluded his remarks by saying that he believed it would be found that the adoption of the method portrayed, or some modification of it which would carry out the principle of completely re-covering the large wound surface, would not only render these extensive operations less formidable by shortening the convalescence, but would tend to greater thoroughness, as it would also enable surgeons to operate on cases otherwise hopeless. The paper was illustrated by photographs of cases and by diagrams.

Mr. BUTLIN, with whom was associated Mr. BEADON ADAMS, read a paper on the Transplantation of Skin Flaps for the filling up of Considerable Defects after Amputation of the Breast. In cases in which it was necessary to remove large areas of the integument in operations for cancer of the breast, rapid healing of the wound and subsequent contraction might often be prevented by transplantation of flaps of skin in the immediate neighbourhood of the wound. He had employed this method in fifteen or more cases and had generally employed the method of transplantation by rotation. The flaps should not be more than three and a half or four inches in length. They should have large bases. Flaps were more easily procured on the lower margin of the wound. Asepsis was not the only condition necessary to ensure the vitality of the flaps. The best cases for transplantation and the best scheme of transplantation for the majority of cases were discussed. Mr. Butlin had found that tension on the flaps was of comparatively small importance in determining sloughing.—Mr. W. G. SPENCER said that for nearly all cases in which there was not enough covering after removal of the breast the lower flap should be undermined to a much greater extent than was commonly done. The undermining could be carried down to the lower ribs and behind to the angle of the scapula. This not only gave an extraordinary amount of room, but in this way ulceration of a flap was avoided from the twisting of its pedicle. The undermined flap might if necessary be button-holed at its lower portion to prevent accumulation of blood.—Mr. WATSON CHEYNE said that he was able to confirm the last speaker's observations. He always removed a large amount of skin in amputation of the breast—all that which lay over the prominence of the breast. At first in these cases he performed skin-grafting, but afterwards he found that undermining was a better procedure. He carried this out in all directions, quite up to the neck and down to the abdominal muscles, and he drew the edges together with stout silver wire passed at a distance of about an inch from the edges of the flaps. The only condition necessary to enable this manœuvre to be carried out was that the wound should be oval. The stitches of relaxation would sometimes cut through, but this made no material difference to the result. In about 10 per cent. of the cases in which stitching together by these means could not be done he had employed flaps and skin-grafting. An objection to the operation by flaps was that the patient was already often collapsed after an extensive dissection of the region of the breast, and the plastic proceeding certainly added considerably to the length of the operation. In such cases, where collapse was present, he stitched the wound together as much as possible, and then in three or four days skin-grafted the remainder of the wound. Cases treated in this manner did very well indeed, and he had very few failures after skin-grafting.—Mr. WALLIS remarked that in plastic operations about the face he had seen the flaps become very congested and threaten to slough, but this had been prevented by multiple pricking of the flap. The objection to the application of this method to the breast was that it involved the exposure of the wound.—Mr. BARWELL said that he was in the habit of using large lead button sutures where the tension was greatest, and he frequently relieved the stretching by making incisions parallel to the wound edge and then sewing these latter up in a direction at right angles to the wound edge. As he believed that the resistance was chiefly in the subcutaneous tissue he was careful to divide any prominent fibrous bands that presented themselves.—Mr. BOWLBY said that the patients appeared to suffer more pain when the flaps were dragged together and that the patient was more hidebound with the dragging than with the flap method. Cases in which the tumour extended towards the clavicle or towards the sternum were more suitable for flaps, while the wounds extending towards the axilla came together better by dragging.—Mr. MAYO ROBSON, in reply, said that it was only in the exceptional cases that he used the flap method, and he agreed that in all cases undermining and dragging were better where possible, taking care that in all cases where dragging was resorted to the stitches should be placed well away from the edge of the wound. In his flaps he took the whole thickness of the tissue, and he had done it in stout people as well as thin ones without producing sloughing. He used no drainage whatever.—Mr. BUTLIN, in reply, said that his flaps appeared to be much like Mr. Mayo Robson's except that in very fat people he thought it better to take skin only. The flap method avoided the necessity of skin-grafting, which was to the patient a second operation. The after-contraction by the flap method was small, and the upper extremity could be moved with ease.

MEDICAL SOCIETY OF LONDON.

Suppurative Affections of the Mammary Gland.

AN ordinary meeting of this society was held on April 27th, Sir JAMES CRICHTON BROWNE, President, being in the chair.

Mr. MARMADUKE SHEILD read a paper on Suppurative Affections of the Mammary Gland. The paper is published in full in another part of our present issue.

Dr. W. S. A. GRIFFITHS said that it was the business of obstetricians to prevent the formation of mammary abscess, and in this they had been very successful, as the statistics of a hospital like Queen Charlotte's would show, where, under suitable treatment by antiseptics and cleanliness, the affection had almost disappeared. Abscess of the breast was usually associated with some structural lesion of the surface rather than with an affection of the ducts, and for this reason all erosions of the nipple in suckling women should be treated with rest and antiseptics. The new point in Mr. Sheild's method of treatment was to close the original incision and carry on the drainage from the dependent point only. He was under the impression, though he was not prepared to quote his authority, that recent researches tended to show that the breast was not to be regarded as a specialised sebaceous gland.

Mr. F. C. WALLIS said that in acute mammary abscess occurring during lactation he adopted the method of scraping out with the blunt spoon and then thoroughly mopping out with dabs of perchloride of mercury. The hour-glass shaped abscess was not commonly recognised, and this certainly explained the tardy recovery of some cases after incision.

Mr. W. M. ECCLES asked if Mr. Sheild had met with gumma of the mammary gland. He had recently seen a case in which, under iodide of potassium internally and scraping locally, rapid healing had followed. He inquired what treatment was to be adopted in cases of chronic sinus after mammary abscess. The early recognition of pus was extremely important, and he asked Mr. Sheild's views upon the best way to discover pus in the deeper portions of the gland. In cases of mammary abscess a general anæsthetic should be given in order to permit of thorough exploration and treatment.

Dr. A. ROUTH desired to emphasise the importance of preventive treatment in these cases. Some years ago he was in medical charge of an establishment in which many primiparæ were confined, and there mammary abscess was

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common owing to careless nursing. He then adopted the method of washing the nipple with a weak solution of sulphurous acid (1 in 10) after suckling, the nipple being again washed before the infant was put to it. With regard to the occurrence of diarrhœa and vomiting in children, in some such cases he had found the milk in the superficial part of the breast ducts to be teeming with micro-organisms. To prevent the diarrhœa it was necessary to draw off the first part of the milk with the breast pump and then put the child to the breast. Pressure of a breast bandage upon the nipple might tend to produce mammary abscess.

The PRESIDENT remarked that he had often seen puerperal mania of an acute type associated with abscess of the breast. This might be due either to traumatism or be a part of a general septic process.

Mr. SHEILD, in reply, maintained that though those present might be in the habit of treating mammary abscess by a dependent incision, yet that habit was not generally followed by those in general practice, nor was it advocated in the text-books. Gummata of the breast as a rule did not break down into abscess, but rather tended to form sloughs; he had notes of four such cases. In the treatment of chronic sinus of the breast he advocated thorough scraping, with fixation of the arm to the side, and if that failed the excision of a wedge-shaped portion of the mamma, together with the sinus as well. In the case of an inflamed breast where there was elasticity with œdema of the skin he would examine under a general anæsthetic rather than wait for fluctuation. He had only met with notes of one case in association with puerperal mania, but he had not looked up any asylum records.

PATHOLOGICAL SOCIETY OF LONDON.

Discussion on the Anatomical Results of the Radical Cure of Hernia.—Stricture of the Sac of a Femoral Hernia.—Oxalate of Lime Calculi in Pancreatic Cyst.—Chondro-sarcoma of the Humerus following Fracture.—Angina Pectoris with Thrombosis of Basilar Artery.

AN ordinary meeting of this society took place on April 21st, Mr. BUTLIN, President, being in the chair.

The PRESIDENT introduced a discussion on the Anatomical Results of the Radical Cure of Hernia. He said that during the last ten years this operation had become common and many hundreds had now been performed. It was therefore time to begin to look for the actual results of the operation where death had happened some time subsequently, and he hoped that this discussion would be the opening of a pathological aspect of the subject of radical cure of hernia. The patient was a boy three years old who suffered from an inguinal hernia on the right side. The operation was performed on May 29th, 1895. The inguinal canal was exposed through an incision in its long axis, and a thin sac was discovered, which extended down to the tunica vaginalis, but did not open into the cavity of the latter. When the sac was opened clear fluid escaped. This drew attention to the abdomen, from which fluid could be squeezed freely out through the open sac. The surface of the sac was found to be studded with miliary tubercles, and a mass of tuberculous material was dissected away from the back and upper part of the testis. The sac was separated from the surrounding tissues, twisted up as far as the internal ring, transfixed at its neck, tied in two halves with catgut, and the stump was fastened upwards and outwards to the under aspect of the wall of the abdomen. No attempt was made to reconstruct the inguinal canal after Bassini's method. The child made an excellent recovery and the wound healed by the first intention in spite of the presence of tubercle. The abdomen shrank after the operation. In July the boy was attacked with tuberculous disease of the hip, in which an abscess formed. On Dec. 17th he exhibited the first signs of tuberculous meningitis, from which he died in five days. The seat of operation presented the following characters. At the site of the internal abdominal ring, seen from its peritoneal aspect, was a small mass of pigment. There was no pocket or depression, and, indeed, no sign from which it could have been inferred that a hernia had ever existed. The inguinal canal was practically obliterated.

Mr. GOLDING-BIRD showed a Specimen from a man who had died five days after the Radical Cure of Hernia had been performed by Macewen's method. A double interest attached to the case, as not only did the specimen exhibit the thoroughness of the obliteration of the hernial sac and its final position under the general peritoneum near the inner ring, but also it showed that the case had been one of infantile hernia, the scrotal hernia occupying a place in a well-developed mesorchium from which the testis freely depended into the general cavity of the tunica vaginalis. It was known that extreme force had been used to effect reduction before the patient came under observation, and at the necropsy it was discovered that a small knuckle of bowel had been forced through a slit in the neck of the scrotal sac and had become almost gangrenous. At the operation the scrotal portion of the hernia was easily reduced by taxis, the operation of radical cure being at once after this undertaken, but the fact of a small knuckle having previously been forced through the neck of the sac was unknown, and that condition quite unsuspected, hence the fatal result. The collapsed state of the patient after the operation precluded the possibility of further surgical exploration, nor were the symptoms such as to indicate that bowel still remained unreduced. The symptoms pointed to general peritonitis alone.—Mr. EVE said that it did not matter how the neck of the sac was dealt with so long as the peritoneum was well separated up to the abdominal ring; it was certainly unnecessary to dislocate the twisted or ligatured neck of the sac from its usual locality. He regretted that no specimen was shown to exhibit the result of suturing the conjoined tendon to Poupart's ligament. In twenty cases he had employed silk-worm gut to fasten the conjoined tendon to Poupart's ligament and in none of them had suppuration ensued.—Mr. JONATHAN HUTCHINSON, jun., said that a few days since he cut down on an old case of hernia in which radical cure had been performed. A sinus remained, and at the bottom of this he had found a silkworm gut suture. There was no doubt that silk, however prepared, sometimes acted as a foreign body and induced irritation; it was therefore advisable to use only kangaroo tendon and catgut, which were easily absorbed. He had intended to show a specimen of radical cure of ventral hernia. Death supervened from heart disease five weeks afterwards. The sac had contained the colon and vermiform appendix; the latter was still adherent to the peritoneal scar. He had dissected another case of radical cure of ventral hernia. The hernia was in the right iliac fossa and developed after laparotomy for intestinal obstruction. He sewed up the peritoneum with a catgut suture, and this he believed favoured absence of adhesions afterwards. He had dissected another case of radical cure of hernia; it was of the inguinal variety and a piece of omentum was used as a plug. This was now usually regarded as not only inadvisable but dangerous, as it courted disaster or, at any rate, troublesome symptoms from the band later.

Mr. JAMES BERRY showed a Specimen illustrating Radical Cure of Inguinal Hernia. The patient was a woman aged fifty years who died in St. Bartholomew's Hospital from perforation of a duodenal ulcer. Two years and three months ago an operation had been performed by Mr. Willett for the radical cure of a labial hernia of moderate size. The sac had been tied with silk and cut away and the pillars of the external ring sutured with the same material. The result was excellent. The peritoneum on the inner aspect of the inguinal canal showed a puckered scar, the canal itself was filled up with fibrous tissue, and the external abdominal ring had been obliterated. There was no bulging of any part of the inguinal region.—Mr. W. ECCLES said that in the President's case the peritoneum lining the abdominal cavity showed but few tubercles, and he wondered if the opening of the peritoneum had benefited the child in any way. He had seen the case where a silkworm gut suture caused so much irritation that it had to be removed. The cause of the frequent trouble following suture in this region was perhaps that the parts were in constant movement. He had noticed that patients who had had a radical cure performed and this had failed, found great difficulty in wearing a truss with as much comfort as formerly. This was due no doubt to the use of stout non-absorbent ligatures.

Dr. MACPHERSON LAWRIE (Weymouth) showed a Stricture of the Sac of a Femoral Hernia. The specimen consisted of the distended sac of a femoral hernia. It was oval in shape and measured an inch and a half in chief diameter. The neck of the sac was surrounded by a thin, hard ring, which was about the size of a No. 12 catheter. Above this ring there was a broad fringe of peritoneum, which formed an incomplete upper compartment. The patient was a female aged twenty-one years. Two and a half years before she felt a lump in the left groin after straining. She did not feel the

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lump coming, but simply found it there. Ever since that it had troubled her a good deal. She was always able to push it up, although sometimes with difficulty. The sac was dissected out, pulled down, and ligatured in three parts without opening. On the distal portion being cut away the proximal end slipped into the abdomen.—Mr. TARGETT said that the specimen was an instance of thickening in the wall of the sac opposite to the saphenous opening, and was probably due to irritation at a point of flexion in the sac. This condition was common in inguinal hernia, but he had not seen it before in a femoral sac.

Mr. S. G. SHATTOCK exhibited Microscopic Sections of Calculi of Oxalate of Lime from a Pancreatic Cyst. So far as he knew, the observation of such calculi in connexion with the pancreas was unique. In herbivora intestinal calculi of oxalate of lime were not rare, but the possibility of the cyst in question being of intestinal or renal origin was disposed of. The cyst was found at the operation by Mr. Pitts to arise from the pancreas, and the contents of it converted starch into sugar. Both chemically and microscopically the calculi were of pure oxalate of lime and precisely like certain urinary forms. Sir Alfred Garrod in 1849 had demonstrated the presence of calcium oxalate in the blood of certain gouty patients and more recent evidence went to show that the oxalate of lime in the urine was ingested as such in vegetable food stuffs. Chemists had not as yet, however, investigated the common secretions for the presence of oxalate. It was not fully known what held the salt in solution in urine; in the case now recorded the absorption of certain constituents from the cyst contents was probably the cause of its slow crystallisation. The only observation bearing at all on the subject was that mentioned and confirmed by Virchow—viz., the occasional presence of octahedra of calcium oxalate in thyroid cysts. Mr. Shattock considered the possibility of the acid having a bacterial source and being due to the access of organisms from the intestine; but whilst most of those isolated from the small intestine produce lactic acid no known bacteria produced oxalic acid. In gelatin streak cultures of bacillus coli communis it was not rare to find the jelly grow slowly turbid beneath the culture; but Mr. Shattock had found that this depended upon the precipitation of a carbonate in the form of minute spheres; whatever the acid was that was elaborated in the growth of bacillus coli communis it was not oxalic. Sheridan Delepine, however, had shown that a formation of oxalate of lime occurred in nutrient gelatin when aspergillus niger was grown upon it with access of air.—Dr. KANTHACK said he had recently examined the fluid drawn from the abdomen of a patient who was presumed to be suffering from ascites. The fluid contained no albumin nor could sugar be discovered by ordinary tests. Microscopically there were a number of crystals of oxalate of lime present. He had found similar crystals in the fluid of an ovarian cyst. There were no micro-organisms in the fluid in either of the cases, and he knew of no micro-organism which could produce oxalic acid.

Mr. S. G. SHATTOCK recounted an instance of Chondrifying Sarcoma following Fracture. The fracture occurred in the humerus of a man from a heavy fall. After five weeks union was complete and the arm felt normal; a month and a half later a swelling was noticed for the first time in the region of the fracture. Disarticulation at the shoulder-joint was performed later. Death took place about two years afterwards with symptoms of recurrence in the chest. Mr. Shattock remarked upon the rarity of the sequence and discussed it, drawing an analogy between this and the rarity also with which bone tuberculosis followed fracture, although after contusions of cancellous tissue both sarcoma and tuberculosis were frequent events. Two possible reasons were suggested. One was the more active cell-processes that ensued after the graver injury and which successfully inhibited the growth of a particulate virus lying in or reaching the part. The other was the function of the red marrow in locating both bacteria and inorganic particles which reached the circulation; a fracture of the middle of a shaft involved adipose medulla; contusions of the ends of the bone involved cancellous tissue, and it was here that any virus would be particularly located.—Mr. BERRY asked what ground there was for believing that the tumour followed the fracture, and suggested that the fracture might really be secondary to the formation of the tumour, and the damage to the bone caused by the latter was the cause of the fracture. A patient came into St. Bartholomew's Hospital with a fracture of the femur. At the necropsy a small secondary epithelioma was found which had eaten away quite two-thirds of the circumference of the shaft, but in that case no tumour at all could be felt during life.—The PRESIDENT mentioned the case of an old man who twisted his leg and broke his femur with the application of but very slight violence. At the post-mortem examination a myeloid tumour was found in his jawbone and in one of the ribs, and the marrow of the bones was noticed to be generally changed in character. There was something in certain of the ends of particular bones which rendered them more liable to malignant disease.—Mr. PEARCE GOULD referred to the case of a woman whose breast was removed for carcinoma five years ago and who sustained a fracture of the right humerus when turning back the bedclothes. He cut down upon the fracture and examined it carefully, but the bone appeared to be normal to the finger. Three months later there was extensive malignant growth in the upper part of the arm. Fracture of the neck of the femur and of the patella occurred through the red marrow, and yet sarcoma following was very rare.—Mr. W. G. SPENCER said that malignant disease might occur in the red marrow apart from tumour, and it should not be forgotten that in the case under discussion the tumour was a chondro-sarcoma of the periphery of the bone and not a marrow growth. Von Recklinghausen had pointed out that those parts of the bone most used near the joints and where the pull of the muscles occurred were more vascular and prone to malignant growths.—Mr. TARGETT said that in confirmation of this it was to be noted that exogenous hydatids selected as sites the vascular epiphysial ends of bone, as at the knee and hip, and in most cases there was a history of accident before the development of the hydatid.—Mr. SHATTOCK, in reply, said that it should be remembered that the sub-periosteal tissue, like the marrow, was extremely vascular, and both were prone to bacterial infection.

Dr. PARKES WEBER showed a specimen of Thrombosis of the Basilar Artery and Atheroma of the Coronary Arteries from a case of Angina Pectoris. The patient was a man fifty-one years of age, who had suffered from syphilis and exhibited crossed hemiplegia. Attacks of angina had come on and had disappeared, and he died ultimately from cardiac failure and ascites. The right coronary artery was nearly obliterated and the left was much contracted by atheroma. There was old thrombosis of the basilar artery and there was also a cyst of the internal capsule.

The following card specimens were shown:—

Mr. J. CLARKE: (1) Multiple Embolic Aneurysms; and (2) Loose Bodies from Sub-deltoid Bursa.

Dr. MORRICE (Salisbury): Deposit of Fibrin upon the Heart.

Dr. FISHER (Clifton): Thrombosis of the Renal Veins in Bright's Disease.

Mr. B. POLLARD: (1) Diverticulum Ilei; and (2) Congenital Occlusion of the Œsophagus.

Mr. GURNEY (Plymouth): Metastatic Sarcoma of Both Breasts.

Mr. TARGETT: Adrenal "Rest" in Kidney.

Dr. HEBB: (1) Carcinoma of the Prostate; (2) Dilated Stomach from Stenosis of the Duodenum; and (3) Hour-glass Contraction of the Stomach.

CLINICAL SOCIETY OF LONDON.

Excision of the Upper Two-thirds of the Fibula for Sarcoma.—Deficient Development of the Lower End of the Tibia after Transverse Fracture.—Sequel to Acute Swellings over the Cranium of an Infant.—Multiple Neuritis of Toxic Origin.—Deficiency of Ribs.—Affection of Speech.—Sacro-coccygeal Tumour.—Adult Rickets.

AN ordinary meeting of this society for the exhibition of clinical cases was held on April 24th, Dr. BUZZARD, President, being in the chair.

Mr. BLAND SUTTON showed a case of Excision of the Upper Two-thirds of the Fibula for Sarcoma. The patient was a woman aged twenty-three who came under his care in November, 1895, with a swelling over the region of the upper end of the fibula. This he cut down upon on Dec. 1st, dividing the musculo-cutaneous nerve and turning its ends upwards and downwards to give him freer access. He excised the tumour with the upper two-thirds of the fibula, being obliged to sacrifice at the same time the anterior tibial nerve and vessels. He then sutured the divided ends of the

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musculo-cutaneous nerve and closed the wound. Three days afterwards there was sensation in the parts supplied by the musculo-cutaneous nerve. She developed talipes equinus, which had been remedied by means of a suitable boot, so that she could walk without difficulty. The growth was of the nature of a round-celled sarcoma with a thick fibrous capsule.

Mr. GORDON BRODIE showed a case of Deficient Development of the Lower End of the Tibia after Transverse Fracture. The patient was a man twenty-two years of age who was admitted into the Middlesex Hospital twelve years ago for a transverse fracture of the tibia caused by the overturning of a hand-cart, which snapped the bone above the ankle and caused a good deal of bruising about the joint. The patient was unable to recollect the precise spot where the fracture occurred, but placed it well above the epiphysial line. Examination showed that the end of the tibia was dwarfed in its growth, with an inward curve of the lower fourth of the bone, bringing the internal malleolus into strong relief and causing the tibio-fibular mortise to be inclined inwards slightly, thus giving the foot a list inwards. No irregularity could be detected along the anterior border of the tibia. There was considerable hypertrophy of the lower end of the fibula, and its subcutaneous surface was marked by ridges, and projecting from the anterior border of the malleolus was a large boss of bone which made the breadth one inch greater on this side than on the other. In order to compensate for the position the foot was thrown into by the inclination of the mortise there was well-marked valgus, the tubercle of the scaphoid coming out strongly when the patient pressed his foot on the ground. Roentgen's rays revealed that there was absolute continuity of the bone.

Mr. F. C. WALLIS exhibited a patient previously shown, a child who, on the last occasion, presented a large Diffuse Swelling over the Forehead, limited by the sagittal suture, the nature of which could not be defined. Nothing was done in the way of treatment, and some time later the child contracted measles, after which the tumour cleared up, and now not a trace remained.

The PRESIDENT introduced a case of Multiple Neuritis of Toxic Origin which had been shown by Dr. Mott in October, 1893, and he described the case as one of "multiple infective neuritis" in a paper in February, 1894. The patient at that time was brought to the society on a stretcher, being then paralysed in all his limbs. He had been admitted to hospital in April, 1893, with severe symptoms—hæmaturia, melæna, high temperature, &c.—symptoms, in fact, at first thought to point to typhoid fever. Gradually, however, it merged into a condition of paralysis, with marked wasting of muscles, and it was noted that each exacerbation of temperature was followed by an extension of the paralysis. The patient passed under his own care in May, 1894. Various joints had at different times to be straightened under an anæsthetic to break down adhesions. The knee-jerks were exaggerated. He remained in the hospital until February, 1895, by which time he had recovered power in the legs, and power was beginning to return in the upper extremities. There was, however, still some loss of reaction to galvanic and faradaic stimulation in the arm muscles. He was treated by massage, electricity, and hot-water douches. Dr. Buzzard observed that although the symptoms undoubtedly pointed to multiple neuritis, anterior poliomyelitis was also present, as shown by the spasticity of the paralysed muscles. Cultures of blood from the finger taken during an exacerbation demonstrated the presence of a coccus which Dr. Kanthack had been unable to identify.

Mr. J. MURRAY showed for Mr. PEARCE GOULD a case of Deficiency of the Lower Ribs. The patient was a boy aged five, in whom the eighth, ninth, and tenth ribs on the left side were completely wanting, leaving a gap two and a half inches wide. The eleventh rib was smaller than the corresponding rib on the other side, but the twelfth was larger. When he breathed the spleen could be seen moving freely up and down and the diaphragm could be seen rising and falling. There was nothing of interest in the family history. There was no history of any disease of the chest or of maternal impression.—Mr. CLEMENT LUCAS thought the "x" rays might demonstrate the presence of the vertebral ends of the ribs, which were often present in these cases though they could not be felt. The facility with which the spleen could be felt and handled suggested the value of the case for physiological observation.—Mr. MAKINS said that after empyema he had found nearly the whole of a rib gone.

Dr. HERRINGHAM brought forward a case of Curious Affection of Speech. The patient was a boy aged thirteen years who, before he was six years of age, began to speak in a slow and markedly syllabic manner. He had a great deal of difficulty in beginning words except those commencing with labial consonants. He was otherwise intelligent and in good health, had no mental symptoms and no symptoms of disseminated sclerosis. The defect appeared to be more one of articulation. He had, however, two other motor symptoms, viz., "jumps" and "shakes," which consisted of convulsive movements of the hands and shoulders, which came on suddenly, mostly in the morning. He had also twitchings of the muscles of the face. The defect of speech was noticed as soon as he began to speak. He had measles at four years of age, but the parents believed that even before that attack there was something abnormal in his speech. It was not a progressive disease. There were no ocular symptoms.—Dr. ORMEROD recalled the case of a young man who exhibited a very similar defect of speech which came on after an attack of what he called "sunstroke" when in India. He was when first seen still slightly ataxic and his speech exhibited the same syllabic character as this lad, though he had no hesitation in beginning and he always spoke in a monotone. He had seen the man from time to time since, and he presented no motor symptoms and could walk long distances. Dr. Hughlings Jackson suggested, when he brought the case forward, that it was an example of interference with speech associated with ataxy supervening after some acute infective disease. There was no evidence of meningitis.—The PRESIDENT also remembered the patient alluded to by Dr. Ormerod, and he, too, noticed the similarity of the defect. He suggested that it would be a good thing to record these defects by means of the phonograph, because defects of speech really could never be adequately described in words.

Mr. H. H. CLUTTON showed a case of Sacro-Coccygeal Tumour. The patient was a boy aged three and the tumour, which was enormous, had not increased in size since he first came under observation two years ago, but he (Mr. Clutton) had postponed interference on account of the boy's delicate state of health. The tumour consisted mainly of one large cyst with some solid matter round the base, and per rectum a fluctuating swelling could be felt extending up the rectum rather beyond the reach of the finger. The sacrum and coccyx could be felt projecting over the tumour, showing that it commenced between the rectum and the coccyx. He proposed to tap the cyst at the outer part, reserving the question of dealing with the internal cyst till later.—Mr. CLUTTON also showed a woman aged twenty-six with Spina Bifida, the position of which was, of course, outside the sacrum, thus contrasting with the previous case. The swelling was not quite in the centre; the skin over it was thin; it was congenital and showed a depression with hair sprouting from it. It did not increase in size with coughing. Five years ago he saw in a woman of the same age another case of spina bifida which was twenty-three inches in circumference. In both these cases of spina bifida he advised no interference, but the patients, on account of the approach of matrimony and their inability to assume the dorsal decubitus, insisted on the removal of the tumours.—Mr. BLAND SUTTON observed that the result of intervention in pre-antiseptic days had been invariably fatal, but since that time several successes had been recorded. He added that possibly the tumour felt per rectum might not extend as far as would seem. They did not usually extend above the levator ani. The fatality of the earlier operations was due to intervention having been resorted to at too early an age.—Mr. CLEMENT LUCAS said he had operated some time since on a tumour of this kind consisting mainly of two cysts. He first tapped the most external cyst, carefully sealing the wound to prevent infection, and later repeated the operation for the other, and the result was satisfactory. In another case in which the tumour sprang from the front of the sacrum, pushing up the bladder and rectum and giving rise to troublesome symptoms, he made a horse-shoe incision round the anus and cut away the solid tissue in pieces, and that case also recovered.

Mr. SALTER and Dr. HALE WHITE showed a case of Adult Rickets. The patient was a girl aged fourteen years who exhibited in a marked degree the lesions usually associated with rickets. She had been under observation for two years and the joints had been skiagraphed, showing the exact pathological condition. She was admitted to hospital in January, 1894, for genu valgum, which had commenced in September, 1893. Double osteotomy was performed and she was discharged in March, 1894. Since the operation she had never been able to walk on account of the pain in her ankles. In December,

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1894, she fell and fractured her left thigh, apparently with very slight violence. There was marked atrophy of both vasti interni and general muscular weakness. The bony lesions were not accompanied by any sweating, painful sensations, or restlessness, usually met with in association with rickets in infants, nor did she appear to have had rickets when a child. The disease did not involve the epiphysial line or the epiphysis, but the shaft of the bone above it. — Mr. CLUTTON remarked that there was a distinct ridge at the epiphysial line in the case shown. The skiagraph, of course, would not assist, as the cartilaginous enlargement would not appear in the picture. In one such case, in which there was slight thyroid enlargement, he had given thyroid extract with success.—Dr. COLMAN agreed that the bone changes in the case shown were precisely like infantile rickets. From a case of adult rickets seven years ago he had an opportunity of examining wedges of bone under the microscope, and the changes in that case also were like those seen in early rickets.

Dr. HARRY CAMPBELL showed a typical instance of Acromegaly in a man aged forty-six and he demonstrated that the conditions present were precisely those which obtained in the anthropoidal apes. The occipital crest was marked; there was excessive development of the frontal and maxillary sinuses; the head was prognathous, the lower jaw being underhung. The spinal dorsal curve was exaggerated and the antero-posterior chest measurement increased. The tensor vaginæ femoris was excessively developed and the nails were striated. The eyesight was normal; the urine contained albumin, but no sugar.

EPIDEMIOLOGICAL SOCIETY.

The Mortality and Sickness in Back-to-back and other Artisans' Dwellings in Bradford.

A MEETING of this society was held on April 17th, Mr. SHIRLEY F. MURPHY, President, being in the chair.

Dr. ARNOLD EVANS read a paper on the Mortality and Sickness in Back-to-back and other Artisans' Dwellings in Bradford. These were all "self-contained" and either of the "through-and-through" or the "back-to-back" kind, the latter being in long unbroken rows or in what were inaccurately described as "blocks of four," a passage dividing each two pairs, though only on the ground floor, the upper floors being continuous. "Through" houses had two rooms on the ground floor and two bedrooms, with perhaps an attic, above, a garden in front and a yard in which were the privy or closet and ashpit behind, with a door communicating with a back passage between the parallel streets. Back-to-back dwellings of the older type had a living room and scullery on the ground floor, with two bedrooms above, and each had its yard with privy and ashpit between it and the street; but in those of the newer kind, while one pair were flush with the street the other looked out on to a large yard common to the whole block, with two ashpits and four privies ranged along the further wall, the passages between the blocks giving the occupants of the hinder pair access to the street and those of the front pair to the yard, the purpose of this peculiar arrangement being to secure some amount of cross-ventilation through the scullery windows opening into this passage. Dr. Barry and Mr. Gordon Smith, in their report to the Local Government Board, stated that while the practice of building back-to-back houses, formerly very general in the north, had been almost wholly discontinued in Lancashire and Staffordshire, it still prevailed in the West Riding, and that 64 per cent. of the dwellings of the working classes erected in Bradford between 1876 and 1886, affording accommodation for 20,000 persons, had been of this description, a prohibitory by-law passed in 1862 having been rescinded seven years later, whether through prejudice or considerations of cost and rental it was hard to say, for the effect of the special regulations as to the arrangement of streets, yards, and passages was that actually more ground was required for the new "back-to-back" than for "through-and-through" houses and the saving in bricks and mortar was insignificant. Even a better class of dwellings, which might almost be styled villas, were being thus built, though the defects in the way of ventilation were insuperable, and the scullery window in a covered passage utterly insufficient, to say nothing of the inconvenience and indecency of the position of the privies and their tendency to become a nuisance, or the fact that when streets of such houses ran east and west those on the north side never saw the sun. These points were strongly insisted upon by the late Mr. Netten Radcliffe and Mr. Gordon Smith in their reports, but the building of "back-to-back" houses of both kinds went on till June, 1894, when the decision of Justices Wills and Wright [Travis *v.* Uttley, Q 13], that drains common to several houses were sewers for the maintenance of which the sanitary authority was responsible, induced the corporation to insist on separate drains to each house and put a check on their further erection. Dr. Barry having already suggested inquiries into the relative prevalence of pulmonary and infectious diseases in "back-to-back" and "through-and-through" houses, Dr. Bell undertook the work at Bradford, Dr. Herbert Jones at Shipley and Saltaire, and Dr. Tatham and Dr. Niven in Manchester. Dr. Bell found that the "through-and-through" houses seemed to compare unfavourably with the "back-to-back," and the Manchester houses were in other respects utterly unfit for human habitation; but Dr. Jones found that the mortality from all causes, and from phthisis and infectious diseases and diarrhœa, was greater in back to back houses, other conditions being alike. More recently Dr. Evans, selecting groups of typical houses with occupants of a similar class, fully confirmed the opinion as to their relative healthiness:—

Class of houses.	No. of houses.	Population.	Average persons in house.	Average square yards to each house.	Average houses to acre.	No. of houses to acre.	No. of persons to acre.	Weekly rent, including rates.	Death-rate per 1000. All causes.	Phthisis.	Diarrhœa.
Back-to-back continuous	619	2728	4·4	98·6	24·2	49·0	215·6	4/6–5/9	17·7	2·41	(?)
Back-to-back in fours	1928	9116	4 7	125 0	26 5	38·7	181·89	5/3–6/-	18·3	1 68	0·25
Through houses	751	4002	5·3	116·6	22 0	41·5	219 95	6/–7/6	15·1	1·39	0·29

Of the 45,000 houses in Bradford 20,000 were back to back, and the mean death-rate for the whole borough in the years 1890 to 1892 from all causes was 21·12, from phthisis 1·853, and from diarrhœa 0·540 per 1000. The population of the selected groups was not Irish, but average respectable artisans, alike engaged in a single industry, the manufacture of woollen goods.

Dr. H. F. PARSONS remarked that it was only in the West Riding, where wages were not lower or the cost of building higher than elsewhere, that "back-to-back" houses were still erected, old prejudices dying hard. Leeds, for example, had been the last to adopt any reform.—Dr. HERBERT JONES said they were unknown at Crewe, where 78 per cent. of the houses were rented at or under 5*s.* a week.—Dr. E. F. WILLOUGHBY insisted on the fallacy of death-rates that did not take account of the character of the population, their poverty, and overcrowding as shown in a comparison of the relative health of the occupants of successive storeys in the huge houses in German towns.—Dr. T. M. LEGGE supported this contention from his personal acquaintance with the housing of the poor on the Continent.—Brigade-Surgeon R. PRINGLE could not understand the small average number in the families or the low death-rate from diarrhœa.—Dr. BULSTRODE and Fleet Surgeon PRESTON having made similar remarks, the PRESIDENT observed that though "back-to-back" houses had almost disappeared in London, many of the large blocks, as those erected under the Guinness Trust, were practically such. The report of the London County Council on overcrowding showed that the death-rate from phthisis, diarrhœa, and all causes was in direct ratio with the number of persons to a room.

Dr. EVANS, in reply, explained that in Bradford there was but one industry and very little difference in the social conditions of the population, though, to ensure identity, he had taken districts too small to admit of more minute statistical comparisons.

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HARVEIAN SOCIETY OF LONDON.

Some Unusual Swellings of the Parotid Gland.—Prognosis in Chronic Non-suppurative Catarrh of the Middle Ear.—Demonstration of the Roentgen Rays.

A MEETING of this society was held on April 16th, Mr. J. H. DREW being in the chair.

Mr. RAYMOND JOHNSON read a short paper on Some Unusual Swellings of the Parotid Gland.[1]—Dr. CODDE ADAMS said that the subject of parotid swelling was one of extreme interest to those who, like himself, were engaged in general practice. He was struck by the unsatisfactory state of our knowledge as to the etiology of such conditions, and as a result he felt himself frequently compelled to enforce all the annoying measures of isolation and quarantine where he had doubts as to whether the case was really one of mumps at all. This, indeed, had been done in the majority of the cases just described by Mr. Raymond Johnson which were both interesting and instructive. Mr. Johnson, however, had not made reference to the possibility that such swelling might be caused by reflex action. It had been noticed that arrest of salivary secretion always took place in the dog if the intestines were handled. Mr. Stephen Paget had published in the Transactions of the Clinical Society an interesting account of a case of parotid swelling occurring in connexion with, and apparently as a result of, severe fæcal accumulation in the intestine. Mr. Paget had also published a record of no less than 102 cases of parotitis associated with operative interference with the abdominal organs. He (Dr. Adams) had no very defined ideas to lay before the meeting, but he would like to suggest the possibility that many cases of so-called mumps might really be instances of reflex hyperæmia resulting from intestinal indigestion. At all events, he hoped his remarks might assist criticism and discussion.—Dr. DUNDAS GRANT remarked that one of Mr. Raymond Johnson's cases seemed to have improved very rapidly after the application of liniment of iodide of potassium. This recalled to his recollection a case of suppurative parotitis under his own care when in general practice in East London, in which no benefit ensued from even a considerable number of incisions. The late Mr. Chance was called into consultation, and he recommended abstention from all instrumental interference, predicting that under the use of iodide of potassium ointment the condition would speedily come to a favourable termination. This prediction was amply verified, and he (Dr. Grant) thought the therapeutic hint might be found of value by those who met with these decidedly rare cases. He drew the attention of the society to observations which he had made on some cases of mumps in which it was clearly shown that the use of pilocarpin influenced the course of the disease most favourably in contra-distinction to belladonna. Pilocarpin was also the best remedy for the labyrintbine effusion which sometimes produces absolute deafness in mumps.—Mr. RAYMOND JOHNSON replied.

Dr. WILLIAM HILL read a short communication on Prognosis in Chronic Non-suppurative Catarrh of the Middle Ear. He excluded from the purview of the paper cases of only a few months' standing and also more or less chronic deafness in children and young persons, "because these are admittedly the most favourable classes of cases the otologist has to deal with, and the results of treatment are often brilliant and nearly always encouraging; with adults, however, it is frequently quite otherwise." On account of anatomical conformation of the tympanum and its delicate structure it was obvious that when catarrhal changes went on for even only six months permanent damage was likely to result, so that absolute cure could rarely be looked for, and they were fortunate when they could promise and obtain a moderate improvement in condition or even arrest the disease, which is usually progressive. After alluding to the forms of middle-ear catarrh and to the diagnosis, Dr. Hill briefly discussed the more obvious factors which influence prognosis, such as the age and general health of the patient, the duration and degree of the deafness, and the damage done to the membrane, ossicular apparatus, and Eustachian tube; more detailed consideration was, however, devoted to "certain points which are often of distinct aid in forming a prognostic opinion which is something more than a mere guess." The mode of onset was instanced: deafness coming on gradually and almost imperceptibly and resulting in marked dulness of hearing in the course of a year or two was usually due to sclerosis and was incurable; a history of sudden onset was, as a rule, much more favourable, especially when due to a definite cause, such as nasal and pharyngeal catarrhal hypertrophies. Amongst exceptions to this rule were noted tympanic disease or acquired syphilis and cases of extensive destructions produced by scarlet fever and other exanthemata. In this way prognosis was seen to be influenced by the cause. When tympanic trouble is due to throat and nose diseases, provided the aural lesion is not great the outlook is good if the cause can be removed, even when on account of want of ventilation from the blocked tube the impairment to audition may be considerable, and even in long-standing cases the result is occasionally gratifying. Chronic cases of malarial, rheumatic, and gouty origin usually resist treatment. Deafness of dental origin requires early treatment. When no extrinsic cause is ascertainable, as in tympanic sclerosis, the otologist is usually powerless even when the disease has only lasted a few months. Variability in the amount of deafness is nearly always an encouraging sign; it may depend on the general health, on locality, atmospheric conditions, occupation, &c.; in women pregnancy, lactation, menstruation, and the menopause often act adversely. A very hopeful form of variation in hearing power is improvement as the result of the air douche applied through the Eustachian catheter or otherwise, as is also relief afforded by the production of positive and negative pressure in the meatus by Siegle's or Delstanche's methods. Some patients hear better immediately after the introduction of a tympanic bougie, and, again, after fluids have been injected into the middle ear through the Eustachian catheter; when such exceptional results are obtained there is always hope of some permanent relief by a course of appropriate treatment, and the same holds good for pressure applied to some part of the membrane by means of probes and other supports. Tinnitus, paracusis Willisii, and vertigo are generally held to be of unfavourable import, but the prognostic value of these symptoms has probably been over-estimated.—Dr. DUNDAS GRANT expressed his accordance with the views set forth in Dr. Hill's paper. He thought that it was most essential to differentiate between the two classes of cases—the exudative, in which the Eustachian tube was narrowed, and the sclerotic, in which this was not the case, the disease being mainly centred in the articulation between the stapes and the vestibule. He attached great value to the use of Eustachian bougies, and he had found that Weber-Liel's fine gum-elastic intra-tympanic catheter was the most convenient form of instrument to use for the purpose. It is smooth and flexible, and being hollow the fact that it was in the right position could be determined by auscultation He presumed that Dr. Hill would not continue the use of the bougie in cases in which the Eustachian tube was quite free. The prognosis, in his experience, was much more unfavourable in the case of females than that of males.—Dr. HILL replied.

Mr. J. T. LEON and Mr. R. W. DODGSON of St. Mary's Hospital gave a demonstration of the Roentgen Ray Process of Photography.

[1] This was published in full in THE LANCET of April 18th, 1896.

KIDDERMINSTER MEDICAL SOCIETY.

Exhibition of Cases and Specimens.—The Pathology, Symptoms, and Treatment of Some Chronic Urethral Discharges.

A MEETING of this society was held at the Kidderminster Infirmary on April 17th, Mr. W. MOORE, President, being in the chair.

The PRESIDENT exhibited a man with a Rare Form of Eruption on the Back of the Wrist and Side of the Face. Each patch commenced as a small papule and gradually spread; the man attended horses, and the President regarded the case as one of infection.

Dr. EVANS showed a lad upon whom he had operated for Hammer-toe by dividing the lateral ligaments subcutaneously with a very good result.

Dr. EVANS and Mr. J. L. STRETTON demonstrated the use of the Phonendoscope on a case of Bronchitis.

Mr. J. L. STRETTON showed:—1. A large Multilocular Ovarian Cyst with twisted Pedicle removed from a pregnant woman. The patient, aged thirty-seven years, married, had had several children, and was admitted into hospital in April

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with the following history. She had been a healthy woman until January, but since then she had noticed the abdomen getting larger and she had occasional pain. She had not menstruated since the end of December and thought herself pregnant. Five days before admission she was suddenly attacked with acute abdominal pain and sickness; the abdomen had greatly increased in size, there had been no action of the bowels, and the urine had been drawn off by a catheter. The patient lay on her back. Her complexion was pale. She complained of abdominal pain. The tongue was moist. There was no sickness. The temperature was 99·4° F. The abdomen was considerably distended and tympanitic; it was very tender, especially on the left side. A tumour could be felt extending to the umbilicus, but could not be distinctly palpated owing to the distension. Per vaginam the tumour appeared to be distinct from the uterus. Mr. Stretton opened the abdomen by a median incision. On opening the peritoneal cavity an object like a gangrenous piece of intestine presented. This proved to be a locule of a multilocular ovarian cyst with the pedicle twisted. About five pints of fluid were evacuated and the cyst removed. (The uterus was enlarged to the size of a three or four months' pregnancy.) The abdomen was flushed with boracic solution and closed with silkworm gut sutures. The patient made an uninterrupted recovery. The first dressing was on the seventh day. There was no suppuration or rise of temperature. 2. The Bones consisting of the Lower End of the Humerus, with the Heads of the Ulna and Radius removed by Excision for Tuberculous Disease. 3. Portion of the Right Ramus of the Lower Jaw, with two Molar Teeth and one Bicuspid Tooth, excised for Malignant Disease. The patient was a man aged sixty-four; he had an epithelioma of the lower lip removed by Mr. Stretton last June. There was a lump the size of a small orange firmly attached to the lower jaw, which had been growing for two months. Mr. Stretton excised the growth together with the portion of the ramus and submaxillary gland. The patient made an uninterrupted recovery and was not much inconvenienced. The growth apparently commenced in a gland and spread to the periosteum, and so involved a small portion of the surface of the bone.

Mr. JOSEPH ROBINSON read a paper on the Pathology, Symptoms, and Treatment of Some Chronic Urethral Discharges.

Reviews and Notices of Books.

The Surgical Diseases of Children and their Treatment by Modern Methods. By D'ARCY POWER, M.A., M.B. Oxon., F.R.C.S. Eng., Demonstrator of Operative Surgery at St. Bartholomew's Hospital; Surgeon to the Victoria Hospital for Children, Chelsea; Examiner in the University of Durham; Member of the Conjoint Examining Board of the Royal Colleges of Physicians of London and Surgeons of England. With Illustrations. London: H. K. Lewis. 1895. Price 10*s.* 6*d.*

THIS work on the Surgical Diseases of Children will doubtless meet with general acceptation by the profession, for, as the author points out in the preface, there are few books in English exclusively devoted to the surgery of childhood. It does not pretend to be more than a guide to those who wish to pursue each subject more thoroughly than can be done in a text-book, but to make it useful the author has been at some pains to verify his references. Mr. Power is already well known for his writings on various subjects of medical interest and he does not therefore appear for the first time as an author. Some years have now elapsed since the last edition of a work such as this, and there has been considerable advance in this department as in other departments of surgery. In intracranial disease and its treatment, for instance, there has been a marked change, and the present position of surgeons as regards disease of the temporal bone and the cerebral inflammations arising from it, the treatment of meningitis of tuberculous origin, &c., is well placed before the reader. Other chapters are deserving of special notice; for example, those which deal with the tuberculous diseases of bones, joints, and synovial membranes, surgical diseases of the air passages, and the operations of tracheotomy and intubation. The work is not, however, without some drawbacks, which will, we hope, be remedied in the next edition. To us it bears the marks of somewhat hasty compilation and in several parts falls short of the ideal text-book. The author excuses his neglect of talipes and its treatment because there is a recent monograph on that subject, but there are few departments of surgery which might not be passed over if this excuse could be accepted for the omission, and the department of orthopædics is one which demands considerable attention in all hospitals devoted to the treatment of children. Lateral lithotomy is not given "because it is described in every text-book in surgery"; but so are the other operations given in the book. He is also inclined to introduce somewhat difficult terms (osteopsathyrosis, for example) to describe certain diseased conditions, for which students will hardly thank him. Mr. Power recommends two forms of silver tube for use after tracheotomy—Durham's and Parker's. These are undoubtedly the best, but it is a little difficult to understand what he means when he recommends later that if blood gains access to the trachea during the operation the two cut edges of the tube may be drawn upwards into the wound and the trachea may be freed, &c.; also when he speaks, without further explanation, of ulceration of the innominate or carotid arteries caused by the pressure of the lower end of the tube the reason is not obvious, for with the tubes recommended there is no fear of this accident. A more detailed explanation as to the insertion of sutures in the radical cure of inguinal hernia is, we think, desirable. It is surely as wrong to speak of a hernia "of the pleura" into the neck as it would be to speak of a hernia of the "peritoneum"—indeed more so; for in the former instance the pleura extends normally into the base of the neck beyond the chest walls. It is not easy to imagine a ruptured urethra in which there is no bleeding from the orifice, and we find no information as to the treatment of the traumatic stricture which results from such a rupture—one of the most difficult of all diseases to treat satisfactorily in a boy. We cannot agree with the statement that new growths on the tongue are as common in children as they are in adults. There are some other statements to which we take exception, but considering the general excellence of the book we must regard them as due to want of sufficiently careful proof-reading and not as the author's deliberate opinions. The type is clear and the illustrations (with the exception of Fig. 15) are good and adequate; the index is full, and the references are valuable.

Lehrbuch der Physiologischen Chemie. Von OLOF HAMMARSTEN, o ö Professor der Medizinischen und Physiologischen Chemie an der Universität Upsala. Dritte völlig umgearbeitete Auflage. Mit einer Spektraltafel. Wiesbaden: Verlag von J. F. Bergmann. (*Manual of Physiological Chemistry.* By OLOF HAMMARSTEN, Professor of Medical and Physiological Chemistry at the University of Upsala. Third Edition, entirely revised. With a Spectrum Plate. Wiesbaden: J. F. Bergmann.) 1895.

THOSE engaged in working at physiological and pathological chemistry, and especially those who have worked with the second edition of Olof Hammarsten's "Lehrbuch der Physiologischen Chemie," will welcome his third revised and enlarged edition of this work. In certain points it resembles Halliburton's work on the same subject, especially in so far as it is at once recognised that it can only have come from the pen of a man who is constantly engaged in the investigations of which it treats, and who is at the same time thoroughly well read in the literature of the subject. The natural overlapping of physiological and pathological chemistry, and the importance of a careful application of modern chemical knowledge and

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methods to pathological processes, are well brought out. The revision of this edition of the book has in many cases been a re-writing of parts of chapters; the chapter on the Carbohydrates which has been added will at the present time excite special interest. Chapters on Proteids and Fats and a separate one on the Chemistry of Respiration are also valuable additions to Professor Hammarsten's work. As already mentioned, the literature of the various subjects treated is very complete, not only in regard to the references that are given, but also to those that are omitted; for in this part of the work the greatest discrimination has been exercised, and much valuable time will be saved to those who cannot afford to read every little paper that has been written if the investigator will follow Professor Hammarsten's lead. In a supplement of some twenty-four pages a short *résumé* of the literature that appeared after the actual chapters had been written and sent to press, but before the book was published, is given; this is a good plan and might well be widely imitated. It may be added that this, unlike many other German works of reference, is provided with a capital index.

A Manual of Obstetrics. By A. F. A. KING, A.M., M.D., Professor of Obstetrics and Diseases of Women and Children in the Medical Department of the Columbian University, Washington, &c. Sixth Edition, with 221 Illustrations. London: Henry Kimpton. 1896.

THIS book has been written with the purpose of presenting in an easily intelligible form such an outline of the rudiments and essentials of obstetric science as may constitute a good groundwork for the student beginning his obstetric studies. It is confessedly a compilation, and the author expressly acknowledges his indebtedness to several of the larger treatises. He also expects that it may be useful as a work of reference to the practitioner who has little time to look for what he requires in larger works. The publication of the sixth edition is sufficient evidence that the author's intention and expectation in these respects have been amply fulfilled. Several new illustrations have been added to the present edition, and the book has been thoroughly brought up to date.

A feature in which the book differs from several of the works on midwifery in common use in England is in possessing a chapter on the Jurisprudence of Midwifery, in which many of the medico-legal questions with which the practitioner may have to deal are treated in a more or less concise form. We notice also that in the chapter on the Resuscitation of Asphyxiated New-born Children there is a particularly lucid description of Schultze's method of artificial respiration, illustrated by an instructive diagram. It is not by any means every diagram intended to illustrate this method that is easily intelligible to students.

LIBRARY TABLE.

Ueber Episcleritis Periodica Fugax. Von Professor Dr. ERNST FUCHS in Wien. Pp. 45.—This pamphlet, which appears to be an extract from von Graefe's *Archiv für Ophthalmologie*, Band XLI., p. 4, gives an account of a recurrent inflammation affecting the conjunctiva and sub-conjunctival tissue, but which is not attended with any considerable exudation and is of a very transitory nature. Dr. Fuchs gave a sketch of the affection in a short paper he read before the Ophthalmological Section of the British Medical Association last year. In the present paper he gives a fuller account of it and supplies the details of various illustrative cases. The disease differs from ordinary episcleritis in its recurrent and fugacious character and in its occasionally affecting the iris and ciliary zone; it differs, moreover, in leaving no traces behind it and in attacking both eyes either simultaneously or successively. The inflammation is accompanied with pain, lacrymation, and photophobia. The duration of the attack is usually not more than two or three days. The treatment recommended by the author is an appropriate regimen, quinine and salicylate of soda.

Philip's Handy-Volume Atlas of London. London: Geo. Philip and Son. 1896. Cloth, post free, 4*s.* 2*d.*—For a person to find his way about this vast metropolis is becoming a matter of increasing difficulty, and yet to carry about and unfold a large map is tedious and inconvenient. This little book, of a size to go in the pocket, obviates this difficulty. Each sectional map, of scale three inches to the mile, occupies one opening, and an index at the end gives the appropriate reference. It is accurate and convenient, and to the busy practitioner, whether in family or consulting practice, it will be a saving of much time and annoyance. It also contains a list of cab fares and some useful general information.

Ueber Blepharochalasis. Von Professor Dr. ERNST FUCHS. Sep. Abdruck aus der *Wiener Klinische Wochenschrift*, No. 7, 1896. (*On Blepharochalasis.* By Professor E. FUCHS. Reprinted from the *Wiener Klinische Wochenschrift*, No. 7, 1896.) Pp. 5.—The affection described in this pamphlet is a condition of relaxation of the skin of the eyelids causing drooping, but differing from ptosis in the absence of muscular paralysis. It occurs both in young and in old people and in both sexes. The author considers it to consist essentially in an atrophy of the skin and subcutaneous tissue of the lids with thinning and loss of elasticity. He recommends the removal of a horizontal strip of skin from the lid, combined with Hotz's operative procedure.

Ueber zwei der Retinitis Pigmentosa verwandte Krankheiten. (On two Allied Forms of Retinitis Pigmentosa.) Von Professor Dr. ERNST FUCHS in Wien. Pp. 6.—In this pamphlet the author describes under the terms retinitis punctata albescens and atrophia gyrata choroideæ et retinæ forms of retinal degeneration which are associated with myopia and are accompanied by the formation of rounded white spots of retinal and choroidal atrophy which, commencing separately, fuse with one another, forming extensive white areas with convex borders. It is often hereditary.

NOTES FROM SOUTHAMPTON.—The Mayor of Southampton (Mr. M. Emanuel) on April 20th laid a foundation-stone in connexion with the further development of the sanitary works of Southampton rendered necessary by the enlargement of the borough. The full scheme will treat 1,350,000 gallons of sewage in dry weather, or 3,000,000 gallons including storm water. Tanks receive the sewage for treatment at a level to allow the discharge of the effluent on the ebb tides. The refuse destroyer has been enlarged and will, it is arranged, provide the necessary power to lift the sewage to the tanks mentioned. The sludge from the tanks will be conveyed thence by a sealed main and discharged into sealed reservoirs, where it will be chemically treated and allowed to precipitate a second time. Then the sludge will be pressed into large cakes and sold to agriculturists if possible; if not it will be destroyed by fire with the house refuse. At the same time the sewerage system will be improved and extended, and the whole cost is put at £40,000. At the last meeting of the Southampton County Council the medical officer (Mr. A. W. Harris) reported the occurrence of five cases of small-pox. The infection of the first was still a mystery; the second occurred thirteen days later, the patient being a lodger in the same house; the third was that of the inspector of nuisances who was engaged in the removal of the first case; the fourth occurred in a lad living next door to case No. 1; and the fifth was imported on board the troopship *Dilwara*. It was remarked by Mr. Eliot that the period of incubation had passed since the last case without a further recurrence. A very virulent case was brought to the port but was not landed, being taken directly to the hospital ship, where all five patients are removed.

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Analytical Records
FROM
THE LANCET LABORATORY.

MEDICATED SOAPS.
(YARDLEY AND CO., LIMITED, RIDGMOUNT-STREET, E.C.)

APART from their medicated character these soaps present a well-balanced composition, so that the soap basis itself is not injurious to the skin. They are, in fact, superfatted and accordingly quite free from any excess of alkali. We have received and examined two specimens, the first consisting of superfatted ichthyol soap containing 5 per cent. of the ichthyol ammonium compound, and the second of superfatted soap containing 3 per cent. ammonium ichthyolate and 2 per cent. Peruvian balsam with sapo mollis B.P. Besides these Messrs. Yardley and Co. prepare the following: superfatted benzoin soap; superfatted ichthyol and tar soap; superfatted camphor, sulphur, and Peruvian balsam soap; salicylic sulphur soap; and hygienic soap. The formula of each and all is admirably adjusted to the specific requirements for which they are individually prepared. In various skin complaints the use of such soaps, and especially those containing ichthyol, is of well-known value.

INVALID CONSOMMÉ.
(G. VAN ABBOTT AND SONS, 6, DUKE-STREET MANSIONS, GROSVENOR-SQUARE, W.)

Preparations of this class though of a moderate degree of nourishing power are of distinct value to the invalid because they are easily digested besides being palatable and attractive. The degree of nourishing power is of course moderate in a preparation containing 3·70 per cent. total solid matter; but it makes an excellent *consommé*. It is a clear amber-coloured jelly liquefying readily on warming. Analysis gave the following results: water, 96·30 per cent.; organic matters, 2·49 per cent.; and mineral matters, 1·21 per cent. The organic matter contained albumin, 0·07 per cent.; peptones, &c, 1·08 per cent.; and crystalline principles, 1·34 per cent. It is a preparation which the invalid will be grateful to have included in his dietary.

"ORION" SOUTH AUSTRALIAN WINES.
(E. BURNEY YOUNG, SOUTH AUSTRALIAN GOVERNMENT BONDED DEPÔT, OFFICES, 35, WALBROOK, E.C.)

The steady increase in the importation of light, pure wines from our "big colony" into this country is distinct evidence of their growing popularity and of a healthier demand in the direction of alcoholic beverages. Australia is at a moderate cost sending us really good wines of the excellent type of those before us, and each year sees a marked improvement in the tone and quality of the vintage. The following analyses of three samples of the "Orion" brand, which have the unquestionable advantage of being certified as pure and sound by the experts of the South Australian Government, illustrate the composition of these wines and serve to bring out their really excellent qualities. Cabernet: alcohol, by weight 11·69 per cent., by volume 14·46 per cent., equal to proof spirit, 25·34 per cent.; extractives, 2·27 per cent.; mineral matter, 0 28 per cent., containing 0·8 per cent. oxide of iron; fixed acid, reckoned as tartaric acid, 0·4 per cent.; volatile acid, taken to be acetic acid, 0·039 per cent.; and glucose, 0·14 per cent. This wine was in excellent condition and, as will be seen, is free from excessive acidity, contains a minimum of sugary constituents, possesses body, while it exhibits an acceptable and characteristic flavour. Burgundy: alcohol, 13 54 per cent. by weight, 16·70 per cent. by volume, equal to 29·27 per cent. proof spirit; extractives, 2·63 per cent.; mineral matter, 0·25 per cent., containing 0·8 per cent. oxide of iron; fixed acid (tartaric acid), 0·38 per cent.; volatile acid (acetic acid), 0·10 per cent.; and sugar, 0·16 per cent. This wine is of a rich Burgundy character, containing somewhat more extractives than the last, but still only trifling quantities of volatile acid and sugary constituents. It is a sound and pure product and well adapted as an invigorant and tonic. Riesling: alcohol, by weight 11·77 per cent., by volume 14·56 per cent., equal to 25·51 per cent. proof spirit; extractives, 2·34 per cent.; mineral matter, 0·19 per cent., containing 1 per cent. oxide of iron; fixed acid (tartaric acid), 0·33 per cent.; volatile acid (acetic acid), 0·011 per cent.; and sugar, 0·20 per cent. This is an agreeable light white wine of the well-known Riesling stock; it is "clean" and pleasant to the palate. Its alcoholic strength is practically the same as the Cabernet wine; the volatile acidity is practically *nil*, and the amount of sugar is very small; its genuineness cannot be doubted. The wines one and all were found to be quite free from added and objectionable preservatives. Taking these results as a whole we may remark that they are entirely in accordance with the guarantee that these wines are pure and sound.

LEVICO (ARSENIO-FERRUGINOUS) WATER.
(HERTZ AND COLLINGWOOD, 38, LEADENHALL-STREET, E.C.)

Levico Water has recently come to the front as being of peculiar value chiefly in the treatment of chlorosis, anæmia, and in syphilitic conditions. It is mentioned very favourably in the clinical records of many physicians on the Continent. The water is derived at an altitude of nearly 5000 ft. above sea level on a branch of the Monto-Fronte Hills about twelve and a half miles distant from Trient, in the Southern Tyrol. The springs from which the water is drawn occur at Levico, a small health resort situated at the foot of the hills. There are two perfectly distinct springs, the one yielding a water rich in both ferruginous and arsenical constituents, and the other a water of a weaker arsenical and ferruginous composition. We have recently examined both waters, which may be procured in this country in bottles. They both contain iron, chiefly in the ferrous state, in large excess, a traceable amount also of copper, and a distinct quantity of arsenic. The strong water contains the equivalent of about one-twelfth of a grain of arsenious acid per pint, along with thirty-four grains of iron salt; and the mild water contains just a tenth of the quantity of arsenic per pint, with eight grains of iron salt. These constituents probably have their origin in the fact of the water flowing through a bed of iron pyrites, containing, as it usually does, a noteworthy proportion of arsenic. It will be seen that the quantity of arsenic is small, but, as is well known, arsenic is most effectual in conditions of anæmia when administered continually in small doses. It is associated in Levico Water with iron, the assimilation of which in acting as a powerful tonic is calculated to be assisted by the favourable action of arsenic on the nervous system. The therapeutic value of the Levico Water in various conditions of disease and weakness is spoken of so highly on the Continent, and its administration appears to be attended with such benefit, that practitioners at home may find it worth while to give this interesting natural water a trial.

(1) VARIOUS PALATINOIDS; AND (2) SCULCOPINE.
(OPPENHEIMER, SON, AND CO., LIMITED, 14, WORSHIP-STREET, E.C.)

We have received from this firm specimens of bi-palatinoids of ferri hypophos. co., in which the value of this particular form of administering drugs which together are unstable is clearly demonstrated. Thus the tendency of the strychnine to deposit in the ordinary syrup is obviated, and the risk of the patient taking the last dose with a dangerous amount of deposited alkaloid in it is avoided. Since the contents of the bi-palatinoid are not tasted there is no necessity for the use of syrup, which in some cases may give rise to objection. In addition, accuracy of dosage is secured and the

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bi-palatinoid is easily taken. Of undoubted convenience and value, also, are the palatinoids containing chlorodyne (1 minim) and the palatinoid containing pure creosote (½ minim). The creosote in the latter is of a specially refined kind, and by this means of administration the unpleasant and persistent effects of the drug in the mouth are avoided. Sculcopine is described as an alcoholic distilled extract of fresh hydrastis canadensis, containing all the active principles of the drug, which are of value in the treatment of hæmorrhages and inflammatory and irritating surfaces. It is a clear, yellowish liquid, with persistent bitter taste. With perchloride of iron it gives practically no reaction indicative of tannic acid. It is said to be a valuable hæmostatic in uterine hæmorrhages and a tonic and sedative, and is of peculiar value in inflammatory and irritable conditions of the mucous surfaces.

New Inventions.

AN ARTIFICIAL NOSE AFFIXED WITHOUT SPECTACLES.

SOME months ago I published a case in which a woman whose nose had been destroyed by lupus had had the missing parts artificially replaced by a vulcanite nose held in place by spectacles. Since publishing this case I have made several noses and have discovered many improvements in the method of adjustment which seem to me worth recording. In those cases where spectacles are necessary the main difficulty to be overcome is the line of shadow at the sides where the painted nose ends. This I have greatly modified by means of tinted wool prepared for me with great patience and ingenuity by Mr. Martindale of New Cavendish-street. The spectacles themselves have been rendered much firmer

by a special shank to go round the ear, which Mr. Hawes has contrived. The colour and texture have also been rendered more life-like by the use of coloured powders of varying tints also prepared for me by Mr. Martindale. Lastly I have in two cases dispensed with glasses altogether, and attached the nose with spirit gum. The accompanying illustration is of one of these cases, which was shown at a recent meeting of the Odontological Society. The great difficulty is the modelling. If the new nose is not in keeping with the rest of the face no ingenuity can disguise its nature; if, on the other hand, it is the right type and properly modelled its colour may be far from right and still it will not attract attention.

ARTHUR S. UNDERWOOD,
Professor of Dental Surgery, King's College.

Wimpole-street, W.

AN ASEPTIC CATHETER.

THE complete asepticity of catheters being of great consequence in the interest of the patients, any means by which its attainment is facilitated tends to lighten the work of the surgeon. With this end in view I have devised a catheter which is not tubular but consists simply of a grooved

staff with a solid beak. I think that it will in many cases be found convenient by country practitioners and by patients although the principle cannot be applied to small-sized catheters such as would be used in very tight strictures. It has been made for me by Messrs. Gardner and Son of Edinburgh and Glasgow.

R. W. FELKIN, M.D.

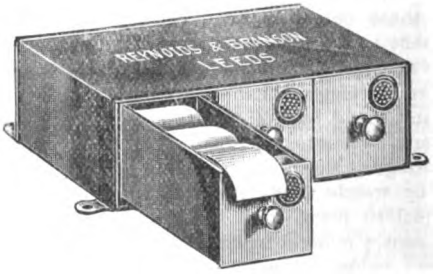
Alva-street, Edinburgh.

THE "VENTAIR" CAP.

THERE is room for a good deal of improvement from a hygienic point of view in the construction of hats and caps. The chief difficulty consists in making a cap which shall be waterproof and protective to the head and yet which shall admit of ventilation without danger of chill. In fact, the difficulty is to avoid the two extremes of, on the one hand, too free draught, and, on the other, of no ventilation at all. The "Ventair" cap aims with some distinct success, we think, at producing a comfortable and at the same time a hygienic covering for the head. The cloth or material from which the caps are made is so woven as to leave open-work spaces which may be seen through, but which do not permit water, odd as it may appear, to penetrate the material. At the same time ventilation freely and uniformly takes place. We have exposed a cap to a heavy shower of rain with the result that though the external surface was freely wetted there was no sign of wet inside, and on briskly shaking the cap most of the water on the outside could be removed. For cyclists, sportsmen, and others it should supply a much felt want. The makers are Messrs. Ingle and Co. of 20, Cheapside, E.C.

PATENT DUSTPROOF SELF-CLOSING DRAWERS.

MESSRS. REYNOLDS AND BRANSON, surgical instrument makers, &c., of 13, Briggate, Leeds, have taken advantage of the fact that dust is sucked into drawers and boxes with a fall in the temperature of the air by making a drawer with all its parts tight-fitting except a portion in front called an air filter, loosely packed with a suitable filtering medium. The result of this is that the air, taking the easiest passage, on contracting or expanding passes through the filter, leaving



the dust it contained in the filtering medium, which on becoming dust-laden can be easily renewed and that practically without cost. For the storage of surgical dressings and such-like things the invention should be valuable. The specimen which is before us is neat in appearance, being made of drab-enamelled tin. By means of a spring the drawer is made self-closing, but remains open when pulled out to the maximum by slightly depressing it. The illustration shows a nest of three drawers, but they are made in all sizes with as many compartments as may be desired. The price of a single drawer is 7*s.* 6*d.*, set of four £1 5*s.*, and set of eight £2 2*s.*

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THE LANCET.

LONDON: SATURDAY, MAY 2, 1896.

"THE Battle of the Clubs," as related by our Special Commissioner with a fulness of detail never before realised, cannot leave the profession where it found it. If such revelations do not lead to a better state of things they must lead to something even worse, if that can be. They have been effective at least in this respect: that they have placed the whole system before the profession. Possibly many of the facts that have been elicited and so clearly exposed by our Commissioner are known to the General Medical Council or to the committee appointed by that body for the special investigation of this subject. But whatever may have been the evidence taken by that committee it was never published. It seemed to convince the Council that there was much that required the attention, perhaps the condemnation, of the profession, acting through its corporations or its voluntary associations. But it was given in confidence and was not of much practical utility. It is altogether otherwise with the remarkable communications of our Special Commissioner. They are based on personal visits to places as different as Brussels from Birmingham, or Portsmouth from Leicester, or Lincoln from Walsall. They embrace every kind of club, from those conducted by laymen to those exploited by one or other of the great friendly societies, or by an amalgamation of these into a huge overgrown medical aid association, or the venture of a commercial company carrying on the double business of life assurance and medical attendance. He has seen all persons concerned in such ventures. He has listened to every side of the question and given a fair hearing to apologists. These communications have been going on now for a great part of a year and they have been practically uncontradicted. There has been no serious answer to the main charges, which are repeated with painful monotony in the account of every successive place visited—viz., that the medical club system has become a huge tyranny all over the country, interfering rudely with the old system of private practice, or private club practice under which there was a lasting and friendly relation between a given medical man and the people whom he attended, and establishing in its place a monster system of wholesale medical attendance where patients are seen some times at the rate of sixty an hour—and in epidemic times even yet more rapidly—and for which the medical man receives remuneration at the rate of 3*d*. or 4*d*. a visit. This would be bad enough if it was applied only to the poorer section of the working classes, but it is applied to the wealthier section—to well-paid artisans and mechanics and foremen. Nor does it stop there even. The intolerable feature of the system is that it is applied unblushingly to all classes—to tradesmen, very extensively to publicans, even to wealthy employers of labour residing in comfortable villas two or three miles out of town who expect the medical man to leave the poorer members and to attend to them for the pittance of 4*d*. a visit. Ex-mayors, aldermen, and councillors—gentlemen who would be ashamed to draw sick allowance from the funds of the lodges of which they are members—are not ashamed to take the medical man's services at 3*s*. 6*d*. a year, of which he perhaps gets a third, though they can command a consultant from a neighbouring town and pay him 10 or 20 guineas. These are the remarkable facts which remain in uncontradicted evidence in our pages and which have brought things to a sharp pass between the medical profession of England and the working classes.

The crisis is so acute that at the recent conference of the Friendly Societies' Medical Alliance held in Wednesbury on April 16th, the meeting, according to the *Nottingham Daily Guardian*, was mainly occupied with the strained relations between the medical profession and the various affiliated associations. Well might the conference be so occupied. When the friendly societies of England estrange the medical profession they injure themselves, yet if all evidence is not false they are sweating medical men on a wholesale scale and they are using their organisations to destroy the private practice of medicine. We expect better things of the working classes. They are getting rapidly richer, and their first duty to a profession which has always treated them well is to use some of their accumulating savings in remunerating medical service and to help the profession in its firm determination to refuse medical attendance on club terms to men who are no longer poor enough to need such accommodation. The profession has no wish to interfere with the right of the friendly societies to admit whom they please to their membership, but it has a most decided right, and it is determined to act upon it, to refuse to allow these societies to impose on its members the duties of attending rich men on terms only tolerable in the case of those who are not rich. These societies go beyond their function altogether when they claim to destroy medical practice and, by a side wind, to degrade its conditions. One of the measures resolved on at the conference seems to show that the Friendly Societies' Medical Alliance is very unfit to advise its constituents as to the best means of restoring the harmony between the societies and the profession. Our readers will scarcely believe that it was actually proposed to ask Parliament to grant medical diplomas to medical students to act as medical officers to the associations. We grant that the terms of the association are only fit for students and not for qualified practitioners. But Parliament is not likely to allow HER MAJESTY'S subjects to be experimented on by students even to please the friendly societies.

The only other practical outcome of the conference seems to have been a determination to appeal to the General Medical Council. It is noticeable that the Medical Defence Union has undertaken, if well-proved cases of touting can be supplied to them, to bring them under the notice of the General Medical Council. This shows that the appeal to the General Medical Council may not be the one-sided thing contemplated by the conference. In the end Mr. Alderman DICKINSON of Lincoln and Mr. WILLIMENT of Norwich were appointed to seek an interview with the General Medical Council. Whether the Council, on such an appeal, will adhere to the view that such questions are not for its decision we cannot say. There

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is more to be said for the Council's interference here than has yet been said. Be this as it may, the profession is roused as it has never been before to perceive the pits into which it is being dragged, and, apart from its ethical Authorities, is showing a determination to defend itself which cannot be too much praised. We are pleased to think that our Special Commissioner has contributed such valuable material for a fair public and professional opinion on this subject.

RECENT events have served to attract a large amount of attention to the racial and political problems of South Africa. It may not be inopportune if we take occasion to point out some of the leading features of that country from the health point of view and its attractions for the immigrant who is compelled by personal considerations to take account of climate in his selection of his future home. There is no doubt that South Africa is in these regards a favoured region and that it affords many suitable resorts for invalids, especially the sufferer from pulmonary affections, and also numerous districts where the British race can attain a high level of vigour and fertility. Many of the pests of Europe and the western world—e.g., hydrophobia, yellow fever, &c.—are here unknown, and the general climatic conditions are highly favourable to an out-door life of healthful activity. Malaria, which is such a curse to the littoral regions of Western and Eastern Africa, is much less prevalent in the southern portions of the great continent and in a large part of the interior is practically unknown. It is a most fortunate circumstance that so much of the interior of South Africa is an elevated plateau, as the elevation serves most materially to mitigate the heat which otherwise would render the country as unsuitable for extensive European settlement as the great plains of India.

The configuration of South Africa has been compared to an irregular flight of four steps, the first consisting of the coast plateau, with an elevation of about 600 feet; the second of the southern karoo, elevation about 1200 feet; the third of the central karoo, elevation about 2500 feet; and the fourth of the northern karoo, elevation 4000 feet and upwards. The climatic characters of these four regions necessarily present considerable diversity. The coast plateau is on the whole warm and moist. The rainfall on Table Mountain ranges from fifty-four to seventy-eight inches per annum, and the average for the whole Cape Peninsula is forty inches. Rain falls chiefly in the winter months, from April to September, the three hottest months—viz., January, February, and March — being almost rainless at Cape Town. On the east coast, however — at Durban, for example, — most rain falls in summer, and this is also the rule in the interior, where the winters are usually dry and clear, with slight frost in some localities. None of the places on the coast plateau enjoy a very high repute as health resorts, and as a broad rule the invalid—especially the *poitrinaire* — should be advised to avoid the coast and seek some of the elevated localities of the interior. The southern karoo presents a decided contrast to the coast plateau. The climate here is on the whole dry, with considerable oscillations of temperature and a greater contrast of season. The well-known health resort Ceres, distant about fifty-five miles from the coast and at an elevation of 1493 feet, may be taken as a good example of the climate of the southern karoo. The mean maximum temperature ranges from 58° F. in July to 85° in February, and the mean minimum temperature from 34° in July to 55° in January. The mean relative humidity is 75. The rainfall, though large—viz., forty-one inches—is chiefly confined to the winter months, and the total number of wet days in the year — viz., sixty-eight — is small. The central or great karoo extends east and west for a distance of about 350 miles, at an elevation of from 2000 to 3000 feet above the sea. Here we are in the region of drought, the rainfall varying from about ten inches in the west to eighteen in the east, and in summer these vast plains present a desolate appearance. The hottest month is January, with a mean maximum of 87°, and the coolest is July, with a mean minimum of 36°. The winters are bright and clear, with cold nights, and snow sometimes lies for a time upon the mountains. The air is very pure and dry, and although dust-storms are not infrequent the atmosphere is comparatively still, especially in winter. Among the best-known resorts in this region are Beaufort West and Matjesfontein. The northern karoo—of which the elevation varies from 2800 to 6000 feet—stretches to the Orange River and has an extremely dry climate, the rainfall in some parts being as low as two inches and the general average being about ten inches. Thunderstorms are frequent in summer, the extremes of temperature are considerable, and in winter severe frosts are not unknown. On the whole the winter climate is very agreeable; bright, clear, sunny, bracing days, with just a touch of frost in the air, being very frequent. The chief resorts on the northern karoo are Cradock, Queenstown, Tarkastad, and Aliwal North. The Transvaal, about which so much has recently been heard, is an elevated plateau with a very healthy climate; Pretoria is at an elevation of 4500 feet above sea-level; and Johannesburg is at an elevation of 5600 feet. In spite of this elevation the summer heat in these places is very great and dust-storms are frequent. Malaria is common in some parts of the Transvaal during the hot rainy season; nevertheless, the climate in general must be pronounced healthy and favourable to Europeans. It is probably less favourable for pulmonary cases than the districts already mentioned in Cape Colony.

The practical deductions from the above facts are not difficult to draw. South Africa is one of the best regions in the world for suitable cases of incipient or chronic stationary phthisis, but much care is necessary in the choice of locality. The fairly vigorous patient will there find a climate presenting an unusually large proportion of dry, sunny, bracing days and ample facilities for out-door exercise and sport. The drawbacks to the country are the inadequate accommodation — especially as regards hotels and sanatoria,—the monotony of diet, and the temptations to *ennui*. Railway facilities are being rapidly developed, and the country is being opened up in a way that promises to make it in the future much more tempting to the traveller for health than it has been in the past. Still, South Africa must for the present be recommended only to the robuster type of patients, especially to those accustomed to travel and not averse to roughing it when necessary. The cases most likely to be benefited are incipient or chronic stationary

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phthisis, impaired convalescence after operation or acute disease, "struma," anæmia, rheumatism, some varieties of dyspepsia, some varieties of bronchitis and asthma, and Bright's disease. Dr. LAING GORDON'S paper in THE LANCET of Feb. 29th contains some useful information and confirms the favourable reports of other observers regarding the value of the South African highlands in the treatment of phthisis.

MR. LECKY'S recent work on "Democracy and Liberty" exhibits all the great qualities which have characterised his other contributions to our literature. Extensive scholarship, wide sympathies, philosophic breadth, great charm of style, courage, and candour,—these are the historian's well-known characteristics, and they have rarely, if ever, been more evident than in the work in question. Its subject matter is, however, to a large degree eminently controversial, and no doubt the writer's line of thought and argument will provoke much comment and not a little dissent. The political side of the many important questions dealt with by Mr. LECKY lies outside our province, but we may fairly draw the attention of our readers to the noble tribute paid in more than one passage to the great benefits conferred during the present century on humanity by the workers in the field of sanitary reform and pathological research. "The great work of sanitary reform," says Mr. LECKY, "has been perhaps the noblest achievement of our age, and, if measured by the suffering it has diminished, has probably done far more for the real happiness of mankind than all the many questions which make and unmake Ministries." Workers in this field of endeavour have often reason to complain that their work is done in secret, and that though it shows its fruits in a reduction of mortality, an increase of the average length of life, of the working power of the community, and of the general sum of human happiness, it wins but small recognition and is too often taken simply for granted. It is no small satisfaction to find perhaps the greatest of our historians fully alive to the great part played by sanitary reformers in the general progress of the age. "Among the many addresses that were presented to the QUEEN in her jubilee year," continues Mr. LECKY, "none appeared to me so significant as that which was presented by the sanitary inspectors, summing up what had been done in England during the first fifty years of the reign. They observed that the general health of HER MAJESTY'S subjects had advanced far beyond that of any great state of Europe or of the United States; that the mean duration of life of all the QUEEN'S subjects had been augmented by three and a half years; that in the last year's population of England and Wales there had been a saving of 84,000 cases of death and more than 1,700,000 cases of sickness over the average rates of death and sickness at the beginning of the reign; that the death-rate of the home army had been reduced by more than half and the death-rate of the Indian army by more than four-fifths." It is extremely satisfactory to have these facts put so prominently forward and to have such an ungrudging tribute paid from such a source. Mr. LECKY has no sympathy with those sentimental faddists who think that in these days of triumphant democracy no compulsion should be used to secure the general adoption of hygienic precautions. "The real justification of the law imposing compulsory vaccination on an unwilling subject," he justly remarks, "is not that it may save his life, but that it may prevent him from being a centre of contagion to his neighbours. In all legislation about drainage, pollution of rivers, insanitary dwellings, the prevention of infection, and the establishment of healthy conditions of labour, spasmodic and individual efforts, unsupported by law, will always prove insufficient. As population increases and is more and mor massed in large towns; as the competition for working men houses within a limited area grows more intense; as industry takes forms which bring great numbers of working men and women under the same roof; and as multiplying schools increase the danger of children's epidemics, the need for coercive measures of sanitary regulation becomes more imperious." These principles are to the members of the medical profession simply self-evident, and it would save an immense waste of time, labour, writing, and talking if they were universally attended to and if ignorant people would refrain from giving vent to crude opinions regarding subjects which they have never seriously attempted to master.

Mr. LECKY is no less generous when he comes to comment upon the singularly modest rewards which have been bestowed upon the most distinguished representatives of medical science and sanitary reform. We trust the following noble and eloquent passage will be duly pondered "by all whom it may concern." We could not wish to have our case more forcibly or more adequately stated. "Closely akin to science, and perhaps even more important among the elements of national well-being, are the great healing professions. Here, too, our century ranks among the most illustrious in the history of the world. It has seen the discovery of anæsthetics, which is one of the greatest boons which have ever been bestowed upon suffering humanity. It has produced the germ theory of disease, the antiseptic treatment in surgery, a method of removing ovarian tumours which has successfully combated one of the most terrible and most deadly of diseases, a method of brain surgery which has already achieved much, and which promises inestimable progress in the future. It has vastly extended our knowledge of disease by the invention of the stethoscope, the clinical thermometer, the laryngoscope, the ophthalmoscope, and in many other ways which it is not here necessary to enumerate England may justly claim a foremost place in this noble work, and many of her finest intellects have been enlisted in its service. In no single instance has this kind of eminence been recognised by a peerage. It is clearly understood that another and lower dignity is the stamp of honour which the State accords to the very highest eminence in medicine and surgery, as if to show in the clearest light how inferior in its eyes are the professions which do most to mitigate the great sum of human agony to the professions which talk and quarrel and kill." We conclude by quoting the following closely adjacent passage, the weighty words contained in which need no comment from us: "In 1896 for the first time a peerage was conferred on an English artist. The doors of the Upper House were never opened to the men who in this century have rendered the greatest services to the State and to humanity—to SIMPSON, whose discovery of chloroform has prevented an amount

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of human suffering which it would need the imagination of a DANTE to realise; to STEPHENSON, whose engineering genius has done more than that of any other man to revolutionise the whole economical and industrial condition of England; to CHADWICK, the father of the great movement of sanitary reform which has already saved more lives than any, except perhaps the very greatest, conquerors have destroyed; to DARWIN, who has transformed our conceptions of the universe and whose influence is felt to the farthest frontiers of speculative thought. For their own sakes it is not to be regretted that the claims of such men were not thrown into humiliating competition with those of the acute lawyers and politicians, the great country gentlemen and the opulent brewers, who throng the approaches of the Upper House; but if such a House is to continue, and in a democratic age is to retain its weight and influence in the State, it is not likely that elements of this kind can for ever be neglected."

Annotations.

"Ne quid nimis."

THE SECOND READING OF THE MIDWIVES BILL.

THOSE who deprecate haste in dealing with the various Bills for saving the lives of puerperal women attended by ignorant and incompetent women calling themselves midwives may be reassured. Mr. Balfour has given pretty plain notice that even Wednesdays are not to be free for the discussion of Bills brought in by private Members. Even apart from this circumstance, and although the subject has been under the notice of Governments and of the General Medical Council for twenty years, there is much to be said for a year's delay. Of three or four proposals for dealing with this subject only one is before the House, and the Bill in question ignores most of the suggestions of the General Medical Council. Under these circumstances, while profoundly convinced of the need for some protection to poor lying-in women, we cannot but think that the Legislature will be well advised in waiting another year till the other measures with the same object are before the House and before the General Medical Council.

THE VACCINATED ANTI-VACCINATIONISTS OF GLOUCESTER.

FOR their own sakes, as well as for the sake of the community generally, we are glad to learn that many of the anti-vaccinationists of Gloucester are getting themselves vaccinated; but it is well to remember that were it not that these people had already been vaccinated in infancy there would probably be no anti-vaccinationists at all. The protection afforded by an original primary vaccination in infancy, though diminishing with advancing years, still affords some definite protection for a large majority of persons during non-epidemic periods; and hence it becomes very easy for the vaccinated anti-vaccinationists to decry vaccination when there is not much small-pox about and then to retire into comparative quietude and even get vaccinated when an epidemic phase of the disease sets in with intensity. At the present moment Gloucester exhibits two groups of anti-vaccinationists. One group—comprising people who are few and far between—is represented by the guardian and town councillor who recently stood up in a public meeting and announced that he had been in error, that he had become "converted" by what he had seen, and that he had been vaccinated in consequence. The other—and persons in this group are in the majority—includes those who have been vaccinated quietly and without any open confession of "conversion," some even seeking vaccination in distant places rather than make confession of their error. But Gloucester also exhibits a hybrid between these two in the person of the editor of the newspaper which has taken the lead in anti-vaccination articles. This editor has issued a public letter, which is extremely humorous, in which he announces that he has been "influentially urged" to get vaccinated, and hence he has sacrificed his "personal convictions" in the hope of contributing to "the public good." His vaccination is doubtless—as it nearly always is with anti-vaccinationists—a revaccination, and his public announcement is held by him "as sufficient excuse for my seeming inconsistency." We can assure him that he is in no way inconsistent in his humour. Like others of his class he is frightened of small-pox when it comes near him and he has submitted himself to inoculation by "the disease called by the name" vaccination, and now he can be pretty sure of retaining in redoubled force a protection which he doubtless had partially before. We have assumed that the editor is full of humour in his public letter, for we cannot for one moment assail the intellects of the people of Gloucester to whom his letter is addressed by thinking that they can possibly take him seriously.

COVERING IN THE LEGAL PROFESSION.

THE law is very severe against any solicitor who forms an alliance with an unqualified person in the way of partnership and for joint benefit. Such a case heard before the Queen's Bench Division will be found reported in the *Times* of Thursday, April 23rd last, headed "In *re* a Solicitor—*ex parte* the Incorporated Law Society." The solicitor was charged with a breach of the 32nd Section of the Solicitors Act, 1843. The motion was to strike the solicitors name off the rolls. Complaints were made by clients who employed the respondent as solicitor that the person who conducted the business was one Gillard. The respondent stated in defence before the committee of the Incorporated Law Society that the arrangement with Gillard was to pay him £2 10*s*., and that while he was kept at home by business Gillard had managed the common law branch of his business for him. Mr. Jelf, Q.C., in defending, also pleaded that even if there was partnership it did not matter unless the business was carried on for the sole benefit of the unqualified person. The committee which reported found no entry of the payments described, that the relationship between the respondent and Gillard was not that of principal and clerk but of partners, and that the offence against Section 32 of the Solicitors Act had been committed. Mr. Baron Pollock said it was most important that the client should know who was the responsible solicitor, and the Court made the order moved for and the solicitor's name was ordered to be struck off the Rolls.

MEDICAL DIAGNOSIS.

IT does not very often happen that we are able to present to our readers a communication by one whose medical experience includes recollections of more than fifty years' active work in the profession. It is therefore with pleasure that we publish to-day the address given to the North London Medical and Chirurgical Society by the retiring president. Mr. Charles King is to be envied in that he possesses not only the recollections of his first period of clerkship under Dr. Addison more than fifty years ago, but also the experience which he has been able to gain by taking recent advantage of the still great opportunities afforded by his old hospital as a school of medicine. We must admit, however,

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to having experienced a slight feeling of disappointment in perusing Mr. King's admirable address. An experience which goes back to the time when all the apparatus required by his clinical clerk to convince Dr. Bright or Dr. Addison that a specimen of urine contained albumin was a "candle and a spoon," and which is also able to put before an audience the fact that a "Roentgen skiogram" is produced as evidence of injury to the foot in a court of law under the discriminating guidance of Mr. Justice Hawkins, must be of the most interesting character; and an account of that experience, when its possessor has the facility for entertaining description and narrative of the retiring President of the North London Society, would prove most instructive. The recent advance in "shadow photography" is not that, however, on which Mr. King laid the greatest stress when contrasting the days of his studentship and the present time from the point of view of accuracy in diagnosis. The diagnostic instrument which he makes most prominent among the rest is no doubt the microscope. Whether this instrument is considered as an aid to the surgical diagnosis of tumours, or from the point of view of the examination of obscure affections of the genito-urinary tract, or as a necessary adjunct to the numerous bacteriological examinations which are becoming more frequently practised every day, or as indispensable in a multitude of other diagnostic investigations, it is the microscope and clinical microscopy which have done most to make advance possible; and in this opinion all will agree with Mr. King.

CROSSED KNEE-JERK.

IN the *American Journal of the Medical Sciences* for March Dr. Risien Russell has an interesting paper on this subject. Some time ago Dr. Hinsdale and Dr. Madison Taylor offered an explanation of the occurrence of this phenomenon as a result of a centripetal impulse producing activity of one cortical motor area which in turn stimulates the corresponding portion of the other hemisphere and produces a contraction of the adductors of the thigh opposite to the one originally struck. Dr. Russell carried out certain experiments with the view of testing this hypothesis, using dogs and rabbits for the purpose. In the first set he divided the corpus callosum, but even after this procedure, when an active state of the knee-jerks was induced by a certain degree of asphyxia, it became possible to elicit beyond all question the crossed knee-jerk. Further, in order to test whether the cerebrum was concerned at all in the production of the crossed knee-jerk the spinal cord was completely divided transversely in the dorsal region. In the course of a week well-marked exaggeration of the knee-jerks ensued, and it was also possible to evoke, not only a crossed knee-jerk, but a greatly exaggerated cross-jerk. Another effect was sometimes observed—viz., that a blow on the distal end of the femur or proximal end of the tibia was followed by contraction of the opposite adductors of the thigh and extensors of the knee, while there was no response in the extensors of the side on which the blow was delivered. This phenomenon is not explained; the fact is merely recorded. Dr. Russell next traverses Dr. Hinsdale and Dr. Taylor's views of the nature of what has somewhat unfortunately been named reinforcement. These writers regard this phenomenon as resulting from irradiation of motor impulse from the active centres to other similar centres, so that they and their related muscles acquire a heightened responsiveness to external stimuli. Dr. Russell points out, however, that any voluntary motor impulse directed to the muscles on whose contraction the knee-jerk depends diminishes the possibility of eliciting the phenomenon. And he mentions that in using the Jendrassik method the extensors of the knee are sometimes brought into action, and this, instead of increasing the knee-jerk, renders it difficult or impossible to obtain. Dr. Russell believes with others that the spinal centres are normally under a certain degree of restraint by cerebral centres, and that what is called reinforcement is really removal in some degree of this inhibition, a removal which may be effected by diverting the patient's attention to some other act. Removal also of one hemisphere in an animal causes increased activity of the opposite knee-jerk. Further, the return of the knee-jerk in Kramer's case of progressive paresis, which was quoted by Dr. Hinsdale and Dr. Taylor in support of their views, Dr. Russell accounts for by supposing the inhibition lessened as a result of progressive cerebral degeneration, so that there comes a time when the spinal centres are so far freed from inhibition that the few remaining fibres in the posterior columns are sufficient for the purpose of carrying a stimulus which was formerly ineffective because of the inhibition from above, and as illustrating the same point he quotes a case published by Dr. Hughlings Jackson and Dr. James Taylor of a man suffering from tabes in whom the knee-jerks returned after an attack of hemiplegia.

THE SALE OF DISEASED MEAT.

A CONVICTION was successfully obtained last week against a dealer for selling meat which was wholly unfit for human food. In many cases of this kind there are various technicalities which often cause some difficulties in getting a conviction, but in this case the whole affair seems to have been so barefaced that there was, as Mr. Alderman Samuel remarked, practically no defence. The farmer to whom the cow had belonged stated that as the animal was unable to stand he sent for the defendant to take it away, receiving nothing for it as it was quite useless to him. The defence was that the meat appeared quite healthy when it was dressed, but Dr. Sedgwick Saunders thought its diseased condition must have been quite apparent, as when he examined it he found it saturated with tubercles, soft and unhealthy, so that its consumption would have been attended with immediate danger to life. Previous convictions having been proved against the accused he was sent to prison for three months without the option of a fine.

THE CEMETERY AND THE WATER-SUPPLY.

PETRIFYING springs, the waters of which are so highly charged with lime salts or silicates as to infiltrate and encrust objects suspended therein for some time, are known in most countries, but their relation to the question of earth burial has, we believe, never presented itself until this year. We learn, however, from a German paper that excavations made with the view of ascertaining whether a portion of the churchyard at Löbau laid out in 1870 was ready for renewed interments revealed the fact that the coffins were intact and completely petrified. On being broken open they were found to be full of water and the corpses were sodden but hardened, though they had undergone a certain amount of putrefaction, pungent gases escaping as the coffins were opened. The surface soil was a heavy, impervious clay, beneath which was a water-bearing zone in which the bodies lay. In this instance the water affected them, but had it been of an ordinary character they might have dangerously affected it, the exclusion of air and the absence from the "dead" clay of the bacteria of nitrification having prevented any decomposition in the strict sense as distinguished from putrefaction. Thus, when part of the churchyard of St. Andrew's, Holborn, was excavated for the construction of the viaduct the bodies were found "sandwiched," to use the apt expression of Dr. S. Gibbon, the medical officer of health, between the boards of the coffins,

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crushed by the superincumbent weight of clay; but from the "deadness" of wood and clay decomposition and disintegration had been very slow, and there was but little difference between the state of preservation of those interred 200 years ago and of those buried twenty years previously, when the graveyard was closed. Under such circumstances—that is, in non-nitrifying and therefore unsuitable soils — the pollution of the ground-water is inevitable, and though the danger to the public health is minimised by the provision of public water-supplies from distant sources it is a serious matter when the population depends on private wells. Thus at Vienna, previously to the inauguration of a public supply from the highlands, the effects of the pollution of the ground-water gravitating from the cemeteries encircling the city on higher elevations were unmistakable. The water in the town wells became progressively more and more contaminated until it was turbid, yellow, charged with nitrites, and finally redolent of sulphuretted hydrogen and ammonium sulphide—in fact, absolutely unfit for any use. Yet clay lands, possibly from their lower price, seem to be generally chosen for cemeteries; all those around London with very few exceptions, being of this description, though in some places good gravelly sites might have been found within a mile of those unfortunately selected. At Finchley the soil, though not gravel, appears likely to possess active nitrifying properties, being of a soft, friable, loamy character.

BERI-BERI IN THE FIJI ISLANDS.

A VALUABLE contribution to the natural history of beri-beri is contained in the recently issued official reports on an outbreak of the disease which occurred in the year 1894 in the British colony of Fiji. All the patients were Japanese coolies, of whom about 300 were imported for the purpose of working on sugar plantations. Their ages varied from eighteen to thirty years, and they arrived in the colony on April 27th, 1894. It was understood that they were all medically examined in Japan, and on landing in Fiji they were, with few exceptions, a fine body of men, but during the first month of their employment, which was chiefly cane-cutting and draining newly-cleared land, there was a good deal of sickness among them, mostly malarial fever and diarrhœa. The first hospital case of beri-beri was admitted on May 30th; in the month of July at least seventeen of the men complained that they were suffering from kakke, the ordinary name for beri-beri in Japan, where it is well known to be endemic; and in the middle of November there were more than 220 cases. There were in all 268 Japanese known to be attacked, of whom 65 died, and in February, 1895, the whole of the survivors were sent back to Japan. The disease was entirely confined to these immigrants, not spreading either to the Indian labourers who worked on the same plantations with them or to the Fijian inhabitants of the villages. The Japanese were lodged in well-ventilated houses, all of which (with one exception) were constructed of wood and were spacious enough to allow at least 330 cubic feet to each occupant. After their departure these buildings as well as the hospitals were washed with a solution of corrosive sublimate of the strength of 1 in 1000, to which strong hydrochloric acid was added. Two days later the buildings were well washed with hot water and soap and left open for a week, after which the washings with corrosive sublimate and soap-and-water were repeated. They were then occupied by Indian coolies among whom no cases of beri-beri appeared during the eleven months that elapsed up to the date of the report. The colonial medical officers devoted much attention to the relations existing between beri-beri as it appeared in this epidemic and other diseases which either simulate it or have passed under the same name. They conclude that it is independent of scurvy, pernicious anæmia, or ankylostomiasis and that it is a specific neuritis affecting the motor and sensory nerves, peripheral at first, but afterwards involving muscles and vital organs supplied by the sympathetic system. It causes death either by paralysing the heart and respiratory muscles or by choking the lungs and other viscera with the œdematous effusion to which in one class of cases it gives rise. The most usual preliminary symptoms were a feeling of heaviness and weariness in the legs, numbness of the calf muscles, slight œdema over the crest and inner surface of the tibia, loss of appetite, giddiness, headache, shortness of breath, palpitation, rapid pulse, and digestive disorders. With respect to the motor paralyses, the calf muscles were generally first affected, then the peronei and the flexors of the feet and toes. The muscles of the hands and fingers were usually the next group affected. As a rule the patellar reflex was early impaired and with the progress of the disease wholly suppressed, some cases, however, with well-marked motor impairment exhibited good patellar reflexes and in some the reflex was exaggerated. Cutaneous anæsthesia was constantly present over the calves, the ankles, and the dorsa of the feet, accompanied by pain in the deeper parts when firm pressure was made. In a few cases very small rod-shaped bodies were observed in the blood, but cultivation experiments were unsuccessful. The reports were printed at the Government press in Suva and submitted to the Colonial Government last January; they refer several times to articles which appeared in THE LANCET in 1881, 1886, 1887, 1890, and 1893, as well as to the former prevalence of beri-beri in the Japanese navy and its eradication as a result of dietetic improvements.

"SÆVÆ NOVERCÆ."

TWO particularly brutal step-mothers were alluded to under the above heading in THE LANCET of April 4th. The county bench at Hastings on April 18th supplied a most salutary sequel to one case. It will be remembered that a married woman named Edith Batt was severely censured by a jury who investigated the cause of death of a seventeen-months' old child, her step-son. The case has been taken up by the National Society for the Prevention of Cruelty to Children, and the woman was charged before the magistrates with having cruelly ill-treated the deceased child. The evidence was most revolting. One neighbour swore that prior to the defendant's arrival the child was fat and healthy. She had, she said, heard Batt say, "Die, you little ——! I should like to have your insurance money for a spree!" Injuries which she had noticed on the child's eye, arm, and leg were put down by the woman to accidental causes; and on another occasion Batt said to the child, "I wish you would die—you are a misery to yourself and everyone else." Another woman, a lodger, said she had frequently seen the child cruelly treated by frequent slapping and by being dashed upon the floor. Defendant, she said, held the child by the clothes behind and dashed him face downwards on the floor, which was of wood covered with oilcloth. This took place every day, but "she was not in the habit of interfering with other people" and so said nothing. This witness's daughter said she had seen Mrs. Batt push food into the poor child's throat until he began to choke, and that she had seen her slap the boy in the face while tied to a chair until blood flowed from the mouth. A fourth witness said the woman told her she hated "the little —— and wished he was dead," and after the inquest Batt had admitted "I have slapped him and would slap him again if he was alive." Mr. F. J. Lewis, St. Leonards, said death was due to localised meningitis caused by a blow on the skull. There were an injury on each side, bruises on the cheek, buttocks, and abdomen which must have been caused by direct violence and numerous

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other injuries. The child had been insufficiently fed for some time before his death. Dr. T. P. Harvey, who assisted at the necropsy, agreed. The defence to all this was a denial of cruelty and allegations of spite and ill-feeling against the chief witnesses. The magistrates, however, thought it was a case of great and gross cruelty and sent the woman Batt to hard labour for six months.

THE NOTTINGHAM SCHOOL BOARD AND MEDICAL CERTIFICATES.

THE *Nottingham Daily Guardian* of April 18th, 1896, in its report of the proceedings of the Nottingham School Board relates that the following resolution was passed by the board by a large majority—10 votes to 2:—"That in all cases of illness being assigned as reason for absence of scholars and of a medical certificate being required to substantiate such excuse the board shall pay for the medical certificate requested." The Nottingham School Board has set an example of justice in this matter which cannot be too soon followed by all school boards.

CATERPILLAR ERYTHEMA.

ATTENTION has been directed by the interesting correspondence in these columns[1] to the occurrence of erythematous and urticarial rashes in susceptible individuals after handling certain hairy plants — primula obconica and sinensis. It seems that in these unlucky persons the sting of a primula is followed by unpleasant cutaneous results just as a painful rash is caused in everyone by brushing against the hairs of a stinging-nettle. It is well, therefore, for the practitioner to bear this cause in mind when dealing with cases of erythema on the hands and parts of the body accessible to the hairs. There is another very common cause which must also be borne in mind when the patient is a schoolboy or an entomologist. Many of the common hairy caterpillars in this country when handled "sting" with their hairs just as the nettle and primula do. The hair penetrates some layers of the skin and breaks off, leaving a little piece projecting. If the hand is passed over the face the stumps of hair projecting from the skin stin the face in a similar manner. Soon an intolerable itchin begins, more extensive than the parts actually irritated; vigorous rubbing goes on until in a short time the arms, face, neck, and often chest become covered with a red eruption in which minute nodules can be detected. The hairs and the poison may even be transferred (as Mr. Lawford has shown in the case of Bombyx Rubi) to the conjunctiva, the hair ultimately becoming encapsuled in a little nodule of fibrous tissue. The rash is often attended with considerable swelling and slight rise of temperature, and, as Dr. Dukes of Rugby pointed out,[2] may lead to an erroneous diagnosis of rötheln. It would be well if medical officers of schools warned the boys of the caterpillars which should not be handled and of the risk they run in rubbing themselves when the skin is irritated. The chief British offenders are the common "woolly bear," the caterpillar of the tiger moth (Arctia caia), and its near relations; almost all the Bombyx group, including the oak eggar, fox moth, drinker and lappet moths; and the Liparis group, including the common "gold tail" and "brown tail." The hair of some foreign caterpillars has much more severe effects. Gangrene has been reported from contact with the hairy Indian Shoa Pokâ, and the Australian Lasiocampa vulnerans is credited with producing fatal results. On the Continent there is a very common caterpillar, the Bombyx processionea, which fortunately does not appear to have reached this country. The erythema resulting from contact with it is followed by severe general symptoms, and in the case of one boy in the south of France, whose case was detailed in THE LANCET,[3] after a number of caterpillars had fallen on his chest while climbing a tree, there ensued violent irritation, general swelling, fever, somnolence, delirium, and death in a few hours in spite of energetic medical treatment. Although fortunately we do not meet with such severe cases in this country, the effects are so unpleasant to the victim and the diagnosis is often so difficult for the practitioner that a word of warning to those most likely to suffer will not be superfluous.

[1] THE LANCET, April 10th and 17th, 1896.
[2] THE LANCET, Oct. 29th, 1881.

MANCHESTER NIGHT ASYLUM.

AMONG the lesser Manchester institutions this fulfils a useful and beneficent purpose. As the report read at the annual meeting the other week says: "There always exist, and will continue to exist, numbers of people out of work, who are at times too poor to pay even for a night's lodging and who, rather than go to the workhouse wards, would prefer to stay all night under any shelter, however comfortless. These people are not paupers and do not wish to be pauperised, they are seeking work, and with that object come to and pass through our large towns." It is mainly to help such people with a night's lodging that this institution exists. It can give through the winter months, from October to March inclusive, "a warm and comfortable lodging, and fire and food, to one hundred and fifty people." Comparatively few women make use of it, perhaps because it is not so well known as it ought to be that there is a separate room for women, and partly because fewer women than men lead the wandering life often forced upon the latter by want of work. Last year 4702 persons were relieved. This can be done with an income of £200 a year, but from the deaths and removals of old subscribers an appeal for more funds has become necessary. At the end of the year the institution was in debt to the treasurer to the amount of £70.

"NATURE PLEASURES IN A RIVERSIDE GARDEN."

WE have on several occasions referred with pleasure to the papers which Mr. W. J. C. Miller, the registrar of the General Medical Council, contributes from time to time to "Nature Notes." Richmond-on-Thames is a little less than ten miles out of London, yet if we did not know the *locale* of the garden about which Mr. Miller discourses[1] we should be inclined to think of it as at least five times that distance from our smoky metropolis. The mere mention of evening primroses and clematis in Mr. Miller's picturesque language is refreshing to the weary town-dweller and the author evidently extracts from the contemplation of them a pleasure and delight which all must envy. Amongst feathered life too he is quite at home, and the stately birds which inhabit certain parts of our great river and which the poet addresses at eventide—

> "Day is dying; float, O swan, along the ruby river,
> Requiem chanting to the day; day, the mighty giver."

must call to mind, as they slowly drift past the garden, Wordsworth's lines:

> "The swan on still St. Mary's Lake
> Floats *double—swan and shadow!*"

Nowhere, says the author, can be better realised the song which Tennyson phrases:

> "Summer is coming, summer is coming, I know it, I know it, I know it;
> Light again, leaf again, life again, love again: 'Yes, my wild little poet.'"

And the life and songs of other birds in his garden are described in sympathetic and felicitous language. Such simple pleasures as these, which can be obtained by

[3] THE LANCET, July 26th, 1862.
[1] Reprinted from Nature Notes, April, 1896.

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quiet contemplation of nature, cannot but help vastly to repair the waste of energy entailed by a busy life in an overcrowded metropolis rendered hideous by the discordant pandemonium to which we have long called attention. Such pleasures cost nothing but the training of an observing eye. The benefits, both moral and physical, are of untold value.

VACCINATION IN IPSWICH.

IT must be somewhat trying to the self-respect of boards of guardians, whose duty it is to enforce the Vaccination Acts, to be reminded of their responsibility, and perhaps even of their neglect, by sanitary authorities. Yet this has occurred over and over again the latest instance being at Ipswich last week, when the Public Health Committee of the Corporation, alarmed at the neglect of vaccination in the borough, considered it their duty to draw the attention of the guardians to the risk occasioned to the inhabitants of Ipswich by the presence of a large number of unvaccinated children. At the meeting of the guardians when this communication was brought forward Mr. Preston Thomas, one of the general inspectors of the Local Government Board, in answer to a guardian, who was evidently somewhat misinformed, put before them some of the arguments in favour of vaccination, and it is to be hoped that his words have not fallen upon absolutely stony ground. Mr. Thomas estimated from the vaccination returns that there were in all probability some 5000 unvaccinated children in Ipswich, and he pointed out that the presence of this inflammable material was a serious matter to those responsible for its existence. He observed that it was hardly to be expected that ignorant and careless parents would have their children vaccinated unless they were compelled to conform to the provisions of the Acts, which, he reminded the guardians, have neither been repealed nor suspended. We are glad to see, too, that one of the members endeavoured by a reference to the Gloucester calamity to impress upon the guardians the commercial aspect of neglected vaccination, and insisted that if an outbreak of small-pox occurred among the infantile population of Ipswich the guardians would be mainly responsible for it. We wonder how many of the Ipswich guardians have taken the trouble to study the question of vaccination or how many of them possess a copy of the Vaccination Acts? It is lamentably suggestive that the administration of the Vaccination Acts should be entrusted to a body who have to be reminded of their duties by the Public Health Committee of the corporation. Let us trust the warning may not be too late.

DEATHS UNDER ANÆSTHETICS.

AN example of this form of death is afforded by the loss of a patient at the Yarmouth Hospital the particulars of which have been kindly sent us by Dr. K. W. Monsarrat, the house surgeon. A man aged sixty-three applied for relief from urgent dyspnœa arising from pressure upon the larynx due to carcinomatous glands causing constriction. The primary cancer of the tongue had been successfully removed ten months previously. Owing to the laryngeal stenosis the man had several times been nearly asphyxiated. Tracheotomy was decided upon and chloroform was accordingly administered from a towel. The man went under in about four minutes, taking the anæsthetic well. As a preliminary to the operation the head was extended, a sandbag being placed under the neck. Dyspnœa at once increased, the face became cyanosed, and in a few seconds respiration ceased entirely. The operation was rapidly proceeded with and then artificial respiration was practised. The patient never rallied. Respiration ceased thirty seconds before the heart stopped. The operation not being one of emergency the anæsthetic was deemed advisable. Death was "due primarily to sudden paroxysm brought on by forcible alteration in the position of the neck and only secondarily to the anæsthetic." We are not told whether the faulty posture was at once rectified before the operation was proceeded with. Similar conditions arise in operations undertaken for the relief of goitre and have caused grave consequences. A very similar case is reported from Warrington. Unfortunately the particulars supplied are quite inadequate. The patient, a man aged sixty-three, applied for relief at the infirmary at Warrington. He had suffered from carcinoma of the throat for two years, and presumably stenosis had arisen as it was proposed to perform tracheotomy. The junior house surgeon gave chloroform. The quantity used and the method employed are not mentioned nor are any particulars given as to the symptoms which appeared. We are simply told that when the operation was commenced respiration ceased. The medical testimony given at the inquest showed, we are informed, that spasm of the glottis was the cause of death. The extreme importance of accurate and thorough accounts of all such fatalities being furnished to the medical press is too obvious to need to be dilated upon, and we regret that we have not received fuller details.

THE National Society for Aid to the Sick and Wounded in War has sent out two surgeons to Bulawayo to assist in the care and treatment of the wounded. The gentlemen selected are Mr. W. Greenwood Sutcliffe, F.R.C.S., and Mr. W. Redpath, M.R.C.S. Eng., L.R.C.P. Lond. Both of these gentlemen have been house surgeons at one of our largest metropolitan hospitals, and the former has also been house surgeon at the Hull Infirmary. They have taken with them a large supply of medical necessaries, including antiseptic dressings, &c., and will proceed to Bulawayo as rapidly as possible. They left Southampton by the s.s. *Moor* on Saturday last.

THE executive committee of the National Society for Employment of Epileptics announces that the foundation-stone of the Home for Women will be laid with Masonic honours by the Right Honourable Lord Addington, Provincial Grand Master of Buckinghamshire, assisted by the officers of the Provincial Grand Lodge, on Tuesday, May 26th, at 4.15 P.M., at the Colony, Chalfont St. Peter. A train leaves Baker-street at 2.29 for Chorley Wood Station, and carriages can be provided at the station for those who accept invitations prior to Thursday, May 21st. Reply should be made to the Secretary, 12, Buckingham-street, Strand, W.C.

A CONVERSAZIONE will be given by the Medical Society of London on Monday, May 18th, at the rooms of the society, 11, Chandos-street, Cavendish-square, at 9.15 P.M. The Oration will be delivered by Dr. W. H. Allchin on "The Breaking Strain" at 8.30 P.M. Music by the "Bijou" orchestra will be provided and smoking will be permitted at 10 o'clock.

THE third International Congress of Psychology will meet in Munich from Aug. 4th to Aug. 7th inclusive. The titles of 132 papers are announced already, several of them being by English and American writers. The general secretary is Dr. Freiherr von Schrenck-Notzing, Max Josephstrasse, Munich.

AN application for election as a member of the Pathological Society of London having been received from a duly qualified lady the question of the desirability of admitting female medical practitioners to the society will be submitted to the annual general meeting of the society to be held on Tuesday, May 19th.

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WE have received a copy of a reprint of a paper by Dr. Pavy on the Physiology of the Carbohydrates, in which he once more questions the validity of Dr. Noël Paton's criticisms of his work. Dr. Pavy and Dr. Paton have done good service in showing how delicate and intricate is the task of unravelling the important subject of glycogenesis; and although this controversy has been somewhat unnecessarily prolonged the cause of physiology may, we trust, be advanced by the facts that have been brought to light. But that the subject has been finally determined cannot be admitted.

THE medical and surgical staff of the Victoria Hospital for Children, Tite-street, Chelsea, propose to give a course of lectures during the summer session upon the Diseases of Children. The lectures will be delivered in the board-room of the hospital every Thursday afternoon at four o'clock, and each will be followed by a demonstration of cases in the wards. Practitioners and students of medicine are invited to attend.

THE opening lecture of the summer session at the Hospital for Consumption and Diseases of the Chest, Brompton, will be delivered on Wednesday, May 6th, at 4 P.M., by Dr. C. Theodore Williams, on the Arrest of Pulmonary Tuberculosis. These lectures are open to students of the hospital and to all qualified practitioners, and will be continued on each Wednesday during May and June.

AMONG the Rand prisoners sentenced to a fine of £2000, two years' imprisonment, and a subsequent term of three years' banishment are, according to the *Daily News*, several well-known medical practitioners of Johannesburg — Mr. Hans Sauer, Mr. Duris, Mr. Davies, Mr. Mitchell, and Mr. Hillier.

WE have received the following telegram from Surgeon-Lieutenant-Colonel Lawrie:—"Discovered identical swarming Laveran's bodies in ordinary pus cells." We hope in an early issue to place before our readers Surgeon-Lieutenant-Colonel Lawrie's views on Malaria.

DR. ROBERT FARQUHARSON, M.P., is announced to take the chair at the annual dinner, on Oct. 18th of the St. Mary's Hospital Medical School. The introductory lecture will be delivered by Mr. Morton Smale, Surgeon to the Dental Department of the hospital.

THE second reading of the Public Health Bill—i.e., Bill for the abolition of quarantine—is set down in the House of Lords for Friday, May 8th. The second reading is to be proposed by Lord Harris.

H.R.H. THE PRINCESS OF WALES will open the bazaar and fête in aid of the new wing of the West London Hospital, Hammersmith, on Thursday, May 21st.

As we go to press we learn that Sir Frank Lockwood has stated in court that, terms having been arranged in the action of Kitson *v.* Playfair, the appeal will not be prosecuted.

THE ROYAL EYE HOSPITAL.—A dinner in aid of the funds of the Royal Eye Hospital (the Royal South London Ophthalmic Hospital, Southwark) was held on April 21st in the Whitehall Rooms of the Hôtel Métropole. Mr. James Bailey, M.P., took the chair and in proposing the principal toast said that he could speak of the hospital favourably from personal knowledge. Mr. M'Hardy (senior surgeon) responded and donations to the amount of £2059 were announced.

THOMAS WAKLEY,

THE FOUNDER OF "THE LANCET."

A BIOGRAPHY.[1]

CHAPTER XVIII.

The Constitution of the Royal College of Surgeons of England.—A Sketch of its later History.—Wakley's Attitude towards the College.—The Reason for it.—An Outspoken Letter.

THE record of the first ten years of THE LANCET has so far shown itself to be a stormy one. Its publication was, in fact, attended with sufficient turbulence to satisfy even its Editor, whose early management had a good deal of the tread-on-the-tail-of-my-coat spirit about it.

Of the innumerable small quarrels that arose and were threshed out in these columns during this decade it will serve no purpose to speak. They would not be illustrative of anything in Wakley's character left uncovered by the Irish phrase just quoted, nor would they give the reader any particularly correct view of the medical profession of the day. They were but episodes in a contentious career, the border warfare incidental to Wakley's invasion of the privileges of the leaders of the profession. In contradistinction, his fight for the right to print the lectures of hospital surgeons and his determined attacks upon hospital practice when wrongly carried on must be looked upon as organised campaigns. These formed part of his policy of aggression as a reformer; indeed, with the third campaign, a description of which now follows, they constituted the policy by which he fulfilled the promises given in his prefaces to his readers. This third campaign was directed against the Royal College of Surgeons of England.

The most obvious and facile way of making Wakley's attitude towards the Royal College of Surgeons of England perfectly clear and, for that matter, of showing him to have been right in his main contentions would be to narrate the constitutional history of the College from the beginning; for nothing that he asked for had not an excellent historical reason for being granted, and everything that he clamoured against was an abuse of the ancient rights of the general body of the craft of surgery. But it would not be right to claim for Wakley that at the time that he commenced his crusade against the corporation of which he was a member—and so young a member—he knew the sound archæological ground on which he was standing. So far from knowing it, he never inquired into it, and had he been told that all his words and actions were justified by history he would not have considered his basis of operations solidified thereby. He was essentially the practical man, hot-blooded and rash in procedure, maybe, but eminently sensible in his demands. He saw that certain abuses flourished and he desired to cut them down. If history had been on the other side and his opponents had been able to claim for themselves a proud position of antiquarian rectitude he would not have been impressed thereby. He would only have said that times had changed and that it was imperative that the Royal College of Surgeons of England should change with them, putting it, frank Radical that he was, in phraseology that would have been unnecessarily irritating to the reactionary mind; he never would have modified his opinion.

An inquiry into the constitution of the College is hardly within the scope of this biography. All interested,

[1] Chapters I., II., III., IV., V., VI., VII., VIII., IX., X., XI., XII., XIII., XIV., XV., XVI., and XVII. were published in THE LANCET, Jan. 4th, 11th, 18th, and 25th, Feb. 1st, 8th, 15th, 22nd, and 29th, March 7th, 14th, 21st, and 28th, April 4th, 11th, 18th, and 25th, respectively.

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whether for practical or dilettante reasons, can find scattered up and down the pages of THE LANCET articles and letters upon every conceivable point in the history and working of the corporation, while the late Mr. J. Flint South's work "Memorials of the Craft of Surgery in England," issued after his death under the competent editorship of Mr. D'Arcy Power, is a mine of scattered information upon the subject.[2] Yet a brief recapitulation of certain facts in that constitution must be given in order that the reality of the abuses against which Wakley took the field may be properly comprehended. To do this it will not be necessary to go further back than the dissolution of the old Company of Surgeons. By the Act of 1745 it was enacted that the Master and at least one of the governors should be present at every Court, with one or two ordinary assistants, in order to constitute a quorum. It happened at the meeting held on July 7th, 1796, that in consequence of the death of one governor and the serious illness of the other no legal Court was possible. Notwithstanding this, the Master and some Assistants determined on proceeding to business. This rash action proved fatal to the Corporation. The opinion of counsel was taken, and there was no doubt that the Corporation was destroyed by the illegal construction of the last court. In the following year a Bill was brought before Parliament, at the instigation of the Court of Assistants, to indemnify the Court and to legalise its acts, as well as to procure the re-establishment of the Corporation under the name of a college. This Bill had passed through the House of Commons and had been twice read in the House of Lords before the members of the Corporation were aware of its purport. A petition in opposition to the Bill was at once prepared and presented to the House of Lords. This petition set forth that the Bill had been drawn up without the knowledge or sanction of the members of the late Company, who had not been convened to consider it. It further declared that the master, wardens, and assistants, without the knowledge or consent of the Company, had alienated the property of the Company, made purchases greatly beyond the extent allowed by law, and had been guilty of gross maladministration; that they had not taken one material step for the public good or the advancement of the science of surgery; that a certain number of the Court of Assistants had, as examiners, received for their private use a large share of the revenue of the Company; that if the Bill were to become law those persons who had been guilty of this maladministration would acquire absolute supervisal and control over the members and their affairs; that the ancient privileges of members would be annihilated, and their right of meeting in a General Court would be taken away; and that the Court of Assistants would be able to oblige members to swear to the observance of such laws as the Court might make, although the members themselves would have no voice in the making of these laws, and no choice in the appointment of those who should make them. Lord Thurlow, who took up the cause of those members who petitioned against the Bill, argued that the petitioners against the Bill had great reason to complain. Their privileges had been violated, and even their property invaded. He considered that however grating it might be to the ears of some people, meaning the Court of Assistants, they had the strongest title in the world to have their complaints heard with patience and attention. The result of Lord Thurlow's powerful intervention was that the Bill was thrown out in the last stage. But, in spite of the rejection of the Bill by the House of Lords, the discredited Court of Assistants of the defunct and dissolved Corporation did not despair; they continued to admit persons under letters testimonial, and though low in reputation and in funds, agreed on Dec. 13th, 1799, by a unanimous vote, to accept the charge of Hunter's Museum, for which Parliament had six months before voted a sum of £15,000. The next step followed as a matter of course: the Court of Assistants had now no difficulty, by the aid of courtly intrigue, in satisfying George III. that it was impossible to discharge its trust without some method of replenishing its finances. What Parliament had refused the King was easily prevailed upon to grant, and thus in the month of March, 1800, the College of Surgeons was established by a Royal Charter, which sanctioned most of the obnoxious provisions contained in the Bill rejected by the House of Lords.[3] The fact therefore stood out conspicuously in the negotiations which preceded and led up to the establishment of the College, that Parliament refused to pass a Bill which excluded Members of the College from a share in its government. Consequently, though it was and is true that Members have no legal right to the franchise by the Charter of 1800, they had and have at least a moral claim.

Such was the constitutional history of the Royal College of Surgeons of England, and it must be remembered that when THE LANCET was founded it was comparatively modern history, and the abuses had not had time to lose their distinctness of outline under any decent veil of antiquity, They were new and not hallowed by custom and years of acquiescence.

Wakley first fell foul of the Royal College of Surgeons of England because of a by-law which was passed in March, 1824, to make it compulsory for medical students to attend the lectures of certain hospital officials. The innovation appealed to him in two ways. Personally he was concerned because he was publishing these lectures in THE LANCET, and the contemporary medical press was, as narrated in the previous chapter, excessively disturbed in its sense of what was right thereby, and freely called him a robber. But if the lectures were compulsory for the students before they could take their diplomas the private character claimed for them by Abernethy and others was destroyed. A newspaper would have an undoubted right to report them, because it was to the public benefit to know whether instruction which the London medical man must willy-nilly receive was worth receiving. Lecturers chosen in this manner by the Council of the College were constituted public officials in their capacity as lecturers, and in addition to the importance and substantial fees thus ensured to them, could not claim all the privileges enjoyed by private individuals. In a second less direct way he was concerned in the working of this by-law. Some of the hospital surgeons appointed by the Royal College of Surgeons of England as the only persons whose lectures would be recognised as official charged their classes very large fees for attendance. Wakley had not been an affluent student, and had known many men much poorer than himself. He was always jealous of the rights of the poor man, and he inveighed against the extraction from the pockets of students of large fees for attendance upon the classes of certain men—not, as he asserted, the best men.

When he had got as far as this—as far, that is, as the statement that the best men were not selected to deliver these compulsory lectures—all the arguments which he had used against nepotism when attacking the domestic management of the large metropolitan hospitals came into service. He declared that the authorities of the College, by playing into the hands of the hospital surgeons, made of themselves a ring, so that the corporation, which ought to have existed for the good of its members at large, really only existed for its small class of governors and the officials appointed by them.

The official ring was thus arranged. The hospital surgeons

[2] See also a lucid and forcible little article by Mr. Tweedy, THE LANCET, March 23rd, 1889.

[3] THE LANCET, Oct. 30th and Dec. 11th, 1886.

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appointed the lecturers to the medical school—that is, they appointed themselves, their relations, and the gentlemen who had paid them large fees to become their apprentices. The hospital surgeons were also the authorities at the College of Surgeons, that is they were the men who decided that the lectures of certain gentlemen should be compulsory for all medical students in London. The compulsory lectures were delivered by themselves, their relatives, or their apprentices. It was this corrupt arrangement against which Wakley worked. It moved him, as the nepotism that was prevalent at the Borough Hospitals moved him, to wrath and scorn, and his first attacks on the College had no historical foundation at all. They were consecutive to his attacks on the hospital lecturers who, though paid as public officials, desired to exclude the medical public from any participation in the benefits to accrue from hearing their words; and they were a rider to his proposition that the hospital surgeons who did not desire to see hospital reports in print were unskilful and prudently aware of their own limitations. But when the attack had been inaugurated on these lines the constitution of the College was attended to, its anatomy laid bare, and, as will be seen, Wakley's disclosures to the members of the unfair manner in which they were being treated by their rulers led to some sensational developments. These will be narrated in the chapters which follow, but it will not be out of place here to quote an open letter which appeared in THE LANCET as early as 1826, purporting to be addressed to the Court of Examiners of the College, but really designed to catch the attention of the members. The letter, as will be seen, summarises the more obvious grievances of the members, and was written by one of the ablest members of Wakley's staff, Mr. James Wardrop.

An Open Letter addressed to the Court of Examiners of the Royal College of Surgeons.

SIRS,—"If the members of the Court of Examiners and assistants of the Royal College of Surgeons are not too much employed in collating the Hunterian MSS. or at home listening to the chirping of cock sparrows,[4] or writing an oration on the splendid anatomical discovery of ordinary putrefaction they may perhaps find time to read this letter. We know that old men can recollect remote events better than those of later date. They can tell you what was done in such and such a year and will amplify all the circumstances; but they forget what happened in the last year. In other words, they can tell you what took place in their age of pleasure or in that of their ambition; they forget what they do in their age of avarice. It shall be my business to be their historian. I will endeavour to save their public actions from oblivion to receive the contempt and detestation of men of science in future ages. The court will well remember the following facts:—

"In the year 1797 the master, wardens, and assistants of the Corporation of Surgeons, without the knowledge or consent of the commonalty, presented a Bill to Parliament to elect the said corporation into a College. It was, in fact, to obtain a Bill of indemnity for squandering the property of the commonalty and trampling on their rights and privileges. Lord Thurlow, who had risen by his merit to the highest rank of his profession, saw immediately through the paltry artifices of this petty corporation. His lordship described their Bill as 'a miserable and wretched performance, in which the arrogance of the provisions maintained an equal contest with their absurdity.' The whole number of the Members at that period, exclusive of the court, amounted only to 500. The Bill had passed the House of Commons and had been twice read in the House of Lords before it was known to the commonalty. A meeting was called by a few spirited individuals and the number soon increased to 127. They petitioned the house against the further monopoly of this avaricious corporation, and at the third reading the Bill was rejected. The commentaries upon it, with the speeches of counsel, may be found in Woodfall's Parliamentary debates.

"Some curious facts were at that time elicited. The corporation were compelled to produce their accounts, and although, as I have said before, the number of the commonalty did not exceed 500, it was stated that since the passing of the 18th of George II. in the year 1744, the corporation had received in fees and quarterages and by other means the sum of £80,000! and that during the said period they had put £16,000 into their own pockets!!! What they could not get by Act of Parliament they have since obtained by charters. They are become a College and style themselves President, Vice-president, and Council; but the commonalty, who of course were not consulted about the charters, are still called Members. For my own part I would as soon be called a Member as a Fellow of such a College. They take our money, give us *ex post facto* laws, lock up our property, insult us with mock orations, live at our expense, and refuse to call us by our proper names!

"For the information of my professional brethren and fellow-sufferers I communicate this piece of intelligence: 'Every member from the moment he is admitted and has paid the fee of £22 to the court and the 5*s*. demanded by the beadle is as unequivocally entitled to the museum and the property of the College as any member of the court.'

"I need hardly remind you, Sir, that the magnificent collection of John Hunter was purchased by Government and that a loan of a large sum of money was supplied from the same source to erect a suitable building for its reception. Do you think the motive for such liberality was that twenty-one persons should have power to lock up the museum for eight months in the year? When their Bill was before the House of Lords it was said that they had a theatre without lectures and a library without books. It is true we have now some lectures on comparative anatomy and surgery; but the man best qualified to give the lectures on the former subject is doomed to fill the servile officer of conservator of the museum. They have also books, and some years ago Sir William Blizard promised that the library should soon be opened. We are still outside the door, however, and a part of the bust of Sir William, like the molten calf of the Israelites, may go down our throats (by the adulteration of bread or in the drinking of soda-water) before we shall see a book, especially the Hunterian MSS.

"The Museum is opened twice a week during four months in the year. The hours of admittance are from twelve to four o'clock. This does not extend to the whole collection, for the gallery is only accessible from twelve to two o'clock. Should the extensive and varied information and indefatigable kindness of the conservator of the museum, Mr. Clift, tempt an unfortunate individual to remain a minute after the clock has struck the hour his crime is announced by the loud and angry sound of the beadle's bell. This noisy warning is very quickly repeated, and lest he should not understand it the beadle calls out in a most autocratic tone, 'This way, sir.' The College member descends the steps muttering perhaps, as I have done, 'Any way but this way, sir.'

"If a knowledge of these facts will not rouse in the profession that spirit of opposition to the arbitrary power of the College which it is the object of these letters to excite I shall have the satisfaction to reflect that I have done my duty in making the attempt. "BRUTUS.

"Aug. 27th, 1825."

(To be continued.)

[4] Mr. Earle was nick-named "The Cock Sparrow."

ANNUAL REPORT FOR 1894 OF THE MEDICAL OFFICER OF HEALTH OF THE ADMINISTRATIVE COUNTY OF LONDON.

I.

THE third annual report recently issued by Mr. Shirley Murphy is a publication which deserves to be attentively studied by those who are interested in the health and welfare of the vast population of the metropolis. The appearance of this report, which relates to the year 1894, may perhaps seem to have been unduly delayed; but it should be remembered that the report in question is not that of a vestry medical officer, who advises his own sanitary authority alone, it is the report of the central medical officer superintending the forty-three sanitary areas of London, and being based on the separate contributions of as many local officers its

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preparation cannot even be begun until the whole of the forty-three reports have been received from the vestries. The report for 1894 is arranged on the same general lines as those of its predecessors, hardly differing therefrom save in the amount and necessary variations of the letterpress.

The statistical data which accompany the county medical officer's reports differ from those published for the metropolis by the Registrar-General, chiefly in the fact that the latter deal exclusively with mortality, whilst the former take account in addition of the sickness which leads thereto, so far as this is ascertainable under the London Notification Act. The areas dealt with by these two authorities are not exactly co-extensive, the administrative county being somewhat larger than registration London. But although the difference in the two areas is not sufficient to appreciably affect the rates of mortality, still the want of uniformity is unfortunate, and will, we trust, be rectified before long. The statistical portions of the report are, as before, very complete and instructive. Passing over preliminary details respecting population, marriages, births, &c., we find that a lower death-rate is announced for London in 1894 than that of any year since 1837, when civil registration was first instituted. Much care has been taken in the distribution of deaths registered in institutions to the places from which the patients originally came and in correcting the district mortalities for these deaths as well as for the age differences in their several populations. Mr. Shirley Murphy exhibits an excellent method of utilising the life-table, published in a former report, for the purpose of comparing the mean rate of London mortality in the four years 1891–94 with that in the ten previous years. The death-rates at twelve groups of ages in the two periods are placed in two parallel columns of a table, a third column of which shows the difference per cent. between the rates at the several ages. From this table it is seen that whereas the mortality at all ages has declined in the more recent period, that of males from thirty-five to eighty-five years of age and that of females from forty-five to eighty-five have actually increased, the decline in the death-rate at all ages being mainly due to a lessened mortality at the earlier ages. Statements of this kind, however, give only a vague idea of the gain or loss to the community resulting from an altered death-rate, and it is in the possibility of obtaining a more tangible result that one of the chief uses of a life-table is exemplified. Mr. Shirley Murphy puts a case by way of illustration somewhat as follows. Assume that in a certain community 800 deaths occur in a year, half of which are among persons under twenty-five years of age, whose mean future lifetime is, say, thirty years, and that the remaining half of the deaths occur among persons over twenty-five years old, whose mean future lifetime is, say, fifteen years, then these 800 deaths will represent a total of (400 × 30) + (400 × 15) = 18,000 years of "life capital" *lost to the community*. Now suppose that in the following year 700 deaths occur in the same community, and that 600 of these deaths occur among persons under twenty-five years and the remaining 100 among persons over twenty-five, then the loss of life capital to the community will be (600 × 30) + (100 × 15) = 19,500 years. Thus, while there is a *saving* of 100 *lives* in the second year compared with the first, there is an actual *loss* to the community of 1500 years of "life capital." It is, therefore, apparent that the actual number of lives saved in any period is at best but a rough measure of progress, and that the value of *each life* gained or lost must be considered in order to arrive at just conclusions. From the London life-table (1881–90) Mr. Shirley Murphy has calculated the mean future life time of males and females in groups of ages, and these have been printed in tabular form in the report.

The difference between the two sets of figures obtained by comparing the deaths occurring in 1891–4 with those that would have occurred at the same ages, if the death-rates of 1881–90 had still been maintained, will be the number of lives gained or lost at each age by differences of mortality. If, therefore, the mean future lifetime at the several ages be applied to these differences the actual gain or loss may be expressed in "life capital." Another table (II.) shows that during the period 1891–94, as compared with the period 1881–90, there has been a mean saving of 1042 lives annually in London, and that this represents 79,606 years of "life capital" annually saved to the community.

In view of the serious increase recently observed in the proportion of children in the London population who are returned as unvaccinated, we are pleased to find that Mr. Murphy has devoted considerable space to the discussion of the relations of vaccination to small-pox. During the five complete years in which the notification of infectious diseases in London has been compulsory the reported attacks by small-pox have increased from 60 in the year 1890 to 2815 in 1893; and although the number has again fallen in the year 1894 to 1193, still even this latter number, in the vast population of London, imperfectly protected as it now is by vaccination, must be looked upon as a source of imminent danger. The disease appears to have been widely disseminated over the entire county of London, the small district of St. Olave being the only one in the area which was free from invasion throughout the year. The attacks were distributed over the whole period, but as many as 143 cases were notified in the last week of July. This exceptional incidence was mainly due to a serious prevalence of the disease in the district of Marylebone. Some of the Eastern districts, notably Bethnal Green and Poplar, suffered heavily in May and June, and the invasion of West Ham was probably associated with this circumstance. In many instances mild or unrecognised cases of small-pox served as centres for the infection of numerous persons. Mr. Murphy gives an interesting table received from the Asylums Board, which shows the state as to vaccination of the small-pox patients admitted during the year 1894. In this period 797 vaccinated patients were admitted and 252 persons without cicatrices, whilst 68 were admitted bearing no evidence as to vaccination. The difference in regard to case fatality is very striking amongst these several classes of patients. Thus, the 797 vaccinated cases included 136 under fifteen years old, and of these not one died, whereas of the 252 unvaccinated cases 192 were under fifteen, and of these 39 or 20 per cent. died. At the later ages (over fifteen years) the mortality amongst vaccinated persons, although high, was scarcely more than one-fifth of that prevailing amongst unvaccinated persons of the same age. In his two previous reports Mr. Murphy had drawn special attention to the large increase which had taken place in recent years in the number of unvaccinated children in London. In the present report he returns to the subject and gives a table showing the proportion of children born in London since 1881 who were stated in the returns of the Local Government Board to have been "not finally accounted for" as regards vaccination. These returns are worthy of serious consideration; they show that whereas in the year 1881 the proportion of children not finally accounted for by the vaccination officers amounted to not more than 5·7 per cent. of the total births, the proportion of unprotected infants has steadily increased ever since that date, until in 1894 it reached the dangerous figure of 18·4 per cent.

THE ANGLO-EGYPTIAN EXPEDITION.

THERE is not much to chronicle with regard to this campaign. The relief of the pressure upon Kassala, which was one of the main objects of the expedition, seems to have been attained, the attention of the Dervishes having been directed from that position to the Nile and Suakin. But very little is really known of Osman Digna's whereabouts, his plans and intentions, or of the strength of his forces. The accounts given by tribes friendly to the British or by scouts and deserters are not, of course, reliable; but so far as there is information it would seem that the Dervish forces are animated by a very different and less unanimous spirit than that which obtained among them in the earlier campaigns on the Nile and in the Soudan. They appear to have been disheartened by recent reverses, and it is stated that they are in some straits as regards provisions for themselves and forage for their horses and camels. Nothing seems to be known at headquarters in India as to the dispatch of any native troops for Suakin, and it certainly does not yet seem to be settled that any portion of the Indian army will be sent to this station or Egypt. It is very gratifying to report that the men of the North Staffordshire Regiment are in good health and excellent spirits and that their discipline and behaviour have been exemplary. There were by the latest intelligence some fifty men of the regiment on the sick list. The heat is now great, reaching 114° F., but there is generally a slight breeze; still, the excessive heat is

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much felt by the troops. We are very glad to learn that ice machines are being erected, for plentiful supplies of ice are a matter of necessity. A large amount of hospital accommodation has been provided at Wady Halfa and the other stations for the sick of the expedition, and it will very probably be needed, for the percentage of sick may be fairly expected to be high during the hot months. Sharp attacks of heat fever and heat stroke will be common, and for these supplies of ice must be forthcoming. No mention is made of the occurrence of enteric fever among the force. We are not told what is the exact nature of the accommodation provided for the troops, but thick or heavily thatched roofs will be required as a protection against the sun. The mud huts that have been used on previous occasions in Egypt proved very good. The telegraph has now been completed to Akasheh and the laying of the railway line is actively proceeding. It is generally assumed that Sir Redvers Buller will be in supreme command of the Anglo-Egyptian force when the advance on Dongola takes place. According to an article in the *Fortnightly Review* it is stated on unimpeachable authority that Lord Cromer has been, and is, in favour of the advance, which will no doubt take place as soon as the season is considered favourable. When the work of the expedition is accomplished it will be found that from first to last the labour entailed will have been very considerable and the undertaking an arduous one.

THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY, LIMITED.

THE annual report of the council, which will be presented to the members at the general meeting to be held at the Frascati Restaurant, 26, Oxford-street, W., to-day (Friday), at 5 o'clock P.M., states that although the society has had the good fortune to avoid any very expensive lawsuits in the past twelve months, there has nevertheless been a large amount of work done on behalf of its members, and very many cases have been dealt with and brought to a satisfactory issue. Several members have been assisted in putting a stop to slanders which were being circulated to their detriment, ample apologies being given by those responsible for the slanders. The society intervened in a dispute between the staff and managing committee of a hospital, the outcome being in the main satisfactory. In addition to other matters dealt with by the society, advice has been given to many members in a great variety of difficulties such as so frequently befall medical men. Several cases of "covering" have again this year been reported to the General Medical Council. The society has been the means of exacting penalties from several unqualified practitioners, and has done much in the direction of suppressing quackery.

The council are pleased to be able once again to call attention to the satisfactory financial position of the society. The annual balance sheet shows that on Dec. 31st, 1895, the total outstanding liabilities of the society amounted to the sum of £25 11*s.* 3*d.*, whilst the amount of cash in hand and with the society's bankers amounted to £151 9*s.* The fact that the third annual balance sheet of a society such as this should show a clear cash surplus of £125 17*s.* 9*d.* is one which will speak for itself.

THE ROYAL ACADEMY.

THE 128th exhibition of the Royal Academy of Arts will strike the visitor as a more level display of talent than usual. If there are no startling successes, if there is no picture whose theme or treatment, or happy combination of both, marks it out at once as a "picture of the year," there are certainly fewer hot, crude, thoughtless works than might be expected, taking into consideration the large number hung and the curious conditions of their hanging.

The popular Academicians and prominent painters are represented by typical pictures. No one could mistake Lord Leighton's "Clytie" for the work of any other brush, and its appearance on the walls of Burlington House is a pathetic reminder of the loss recently sustained by English art. The new President has a curious, weird, and striking work, "A Fore-runner," in the first gallery; it is a reversion to his early style. Mr. Sidney Cooper paints cattle as deftly as ever—see "Mist Clearing Off" in the second gallery. Mr. W. P. Frith's little highly-finished picture, "Juliet and the Nurse," belongs to a class of work now looked upon as old-fashioned, but certain to survive much of the more suggestive splutterings of his extreme juniors. Mr. Swan sends some admirable leopards, and Mr. Stanhope Forbes in "The New Calf" reminds the casual eye strongly of the picture which not so long ago won him immediate fame and an Associate's honours. Mr. Sargent sends the portrait of the year and it depicts the man of the year. His "Joseph Chamberlain" is certain to attract immense and well-deserved attention.

There are several portraits on the walls of men well known in the medical world; in fact, there are more portraits of members of our profession than of any other class. The best of these is Sir John Millais's "Sir Richard Quain." It is a quiet, distinguished, and lifelike little work, unconventional but natural. The President of the General Medical Council is shown in profile, and the expression of the face is reflective, even to seriousness. The presentation portrait of Sir Joseph Lister by Mr. J. H. Lorimer hangs on the line in Gallery X. and has one unmistakable merit, it is a remarkably good portrait; but there is nothing distinguished about the treatment, and to our mind the artist has not quite risen to his subject. If this is the case with the picture of Sir Joseph Lister it is emphatically so with Mr. Ouless's portrait of Sir Henry Acland. Sir Henry Acland's friends will forgive us if we say that his arduous busy practical career has never been able to detract from an exceedingly striking and picturesque exterior. Mr. Ouless's representation is the portrait of an able man, but would not allow those who do not know to guess that it was also the representation of a very distinguished-looking man. One of the best portraits in the gallery is by Mr. Herkomer, the subject being Dr. J. Leon Williams, whose learned paper on the minute structure of dental enamel recently communicated to the Royal Society we publish in our columns this week. The portrait is hung in a fine position and is a good likeness and a truly artistic picture. There are one or two portraits of medical men which are very distinctly of the presentation stamp. Mr. Ouless's "Dr. W. M. Dobie" and Mr. Luke Fildes's "Mr. Frederick Treves" are cases in point. Both are faithful representations of their subjects, but neither can be said to have much claim to be considered great pictures. Mr. Stanhope Forbes's "Sir Peter Eade" in Gallery VIII. is a much more inspiriting piece of painting. There is an excellent portrait of Dr. Edward Liveing, the Registrar of the Royal College of Physicians, by Miss S. E. Rands, which hangs in a good place in the First Gallery; while Mr. Fildes's "Dr. Thomas Buzzard" is also a careful and scholarly piece of work, giving, however, a good deal of austerity to its subject.

Things medical, we are glad to say, have not recommended themselves much to the exhibitors in this year's Academy, for the pathos to be got from the representation of the sick bed is generally rather cheap. Mr. Herkomer portrays a district nurse taking out a child for her first walk after a long illness, and it must be admitted that the child looks uncomfortable, but the nurse does not seem to us to be supporting her patient in a particularly effective manner.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6783 births and 4062 deaths were registered during the week ending April 25th. The annual rate of mortality in these towns, which had been 20·0 and 19·0 per 1000 in the two preceding weeks, rose again last week to 19·5. In London the rate was 19·3 per 1000, while it averaged 19·7 in the thirty-two provincial towns. The lowest rates in these towns were 11·6 in Swansea, 13·5 in Cardiff and in Huddersfield, 13·6 in Leicester, and 13·8 in Brighton; the highest rates were 23·3 in Liverpool, 24·7 in Oldham, 25·6 in Preston, 26·2 in Salford, and 27·8 in Manchester. The 4062 deaths included 699 which were referred to the principal zymotic diseases, against 666 and 635 in the two preceding

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weeks; of these, 297 resulted from measles, 231 from whooping-cough, 64 from diphtheria, 40 from scarlet fever, 33 from diarrhœa, 33 from "fever" (principally enteric), and 1 from small-pox. The lowest death-rates from these diseases were recorded in Preston, Halifax, Brighton, and Bradford; and the highest rates in London, Oldham, Birkenhead, Manchester, and Sunderland. The greatest mortality from measles occurred in London, Birkenhead, Manchester, Oldham, and Sunderland; from whooping-cough in London, Croydon, Liverpool, Bolton, and Manchester; and from "fever" in Swansea. The mortality from scarlet fever showed no marked excess in any of the large towns. The 64 deaths from diphtheria included 41 in London, 5 in Birmingham, 3 in Liverpool, 3 in Manchester, and 3 in Leeds. One fatal case of small-pox was registered in Bristol, but not one in any other of the thirty-three large towns. There were 16 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 20th inst., against 23, 21, and 16 at the end of the three preceding weeks; 8 new cases were admitted during the week, against 2, 5, and 4 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2534, against 2676, 2587, and 2527 on the three preceding Saturdays; 236 new cases were admitted during the week, against 186, 226, and 201 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had risen in the three preceding weeks from 270 to 328, declined again last week to 287, and were 79 below the corrected average. The causes of 50, or 1·2 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Leicester, Nottingham, Salford, Leeds, and in twelve other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Sheffield and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·7 and 19·0 per 1000 in the two preceding weeks, rose again to 19·9 during the week ending April 25th, and slightly exceeded the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 16·1 in Aberdeen and 17·1 in Dundee to 21·0 in Greenock and 22·5 in Leith. The 580 deaths in these towns included 30 which were referred to whooping-cough, 12 to diarrhœa, 10 to scarlet fever, 9 to measles, 4 to "fever," 2 to diphtheria, and not one to small-pox. In all, 67 deaths resulted from these principal zymotic diseases, against 91 and 56 in the two preceding weeks. These 67 deaths were equal to an annual rate of 2·3 per 1000, which was 1·1 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 29 and 21 in the two preceding weeks, rose again to 30 last week, of which 21 occurred in Glasgow and 4 in Aberdeen. The deaths referred to scarlet fever, which had increased from 5 to 7 in the three preceding weeks, further rose to 10 last week, and included 4 in Glasgow, 2 in Edinburgh, and 2 in Dundee. The 9 fatal cases of measles corresponded with the number in the preceding week, and included 5 in Glasgow and 3 in Dundee. The deaths referred to different forms of "fever," which had been 12 and 7 in the two preceding weeks, further declined to 4 last week, of which 2 occurred in Glasgow. Of the 2 fatal cases of diphtheria 1 was recorded in Dundee and 1 in Leith. The deaths from diseases of the respiratory organs in these towns, which had been 110 and 109 in the two preceding weeks, rose again to 120 last week, but were 25 below the number in the corresponding period of last year. The causes of 36, or more than 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the three preceding weeks from 25 5 to 20·6 per 1000, rose again to 23·3 during the week ending April 25th. During the past four weeks of the current quarter the death-rate in the city has averaged 23·7 per 1000, the rate during the same period being 19·2 in London and 17·6 in Edinburgh. The 156 deaths registered in Dublin during the week under notice showed an increase of 18 upon the number in the preceding week, and included 4 which were referred to the principal zymotic diseases, against 10 and 6 in the two preceding weeks; of these, 3 resulted from whooping-cough and 1 from scarlet fever, but not one either from small-pox, measles, diphtheria, "fever," or diarrhœa. These 4 deaths were equal to an annual rate of 0·6 per 1000, the zymotic death-rate during the same period being 4·3 in London and 1·3 in Edinburgh. The 3 fatal cases of whooping-cough exceeded the number in any of the six preceding weeks, while the mortality from scarlet fever was below that recorded in any recent week. The 156 deaths in Dublin last week included 30 of infants under one year of age, and 45 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed an increase upon the numbers recorded in recent weeks. Five inquest cases and 6 deaths from violence were registered; and 63, or more than a third, of the deaths occurred in public institutions. The causes of 14, or nearly 9 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-CAPTAINS SKERRETT and Kearney have embarked with the reinforcements for the Cape. Surgeon-Colonel Preston has arrived from Hong-Kong and proceeded to Dublin as Principal Medical Officer in Ireland. Surgeon-Lieutenant-Colonel Wolseley has resumed his duties at Wadley on return from Ashanti.

ARMY MEDICAL STAFF.

Brigade-Surgeon-Lieutenant-Colonel John Peter Hamilton Boileau, M.D., F.R.C.S.I., is placed on retired pay. Surgeon-Major Arthur M. Kavanagh, from half-pay, to be Surgeon-Major, vice A. H. Morgan, D.S.O., retired, with precedence next below Surgeon-Major J. D. Day, M.B.

INDIA AND THE INDIAN MEDICAL SERVICES.

The Queen has approved of the following promotions among the officers of the Indian Medical Service:—To be Surgeon-Colonel: Brigade-Surgeon-Lieutenant-Colonel Terence Joseph McGann, Madras Establishment. Surgeon-Lieutenants to be Surgeon-Captains: *Bengal Establishment:* Charles Milne, Vivian Godfrey Drake-Brockman, William Young, John Joseph Bourke, George Yeates Cobb Hunter, Bernard Robert Chatterton, Cedric Barkley Prall, Charles Edward Williams, John Norman MacLeod, Walter Holland Ogilvie, Thomas Alfred Ollivant Langston, Richard Heard, Edgar Rowe Parry, Walter Hood Orr, and Paxton St. Clair More. *Madras Establishment:* George Bidie and John Plowden Morton. Her Majesty has also approved of the retirement from the Service of the undermentioned officers:—Surgeon-Major-General Peter Stephenson Turnbull, Bombay Establishment; Brigade-Surgeon-Lieutenant-Colonel Colin William MacRury, Bombay Establishment; Surgeon-Lieutenant-Colonel Benjamin Evers, Bengal Establishment; and Surgeon-Lieutenant-Colonel John O'Neill, Bengal Establishment.—*London Gazette.*

The following promotions are made, subject to Her Majesty's approval:—*Bengal Medical Establishment:* Surgeon-Majors to be Surgeon-Lieutenant-Colonels: Arthur Tomes, M.D., William Arthur Mawson, Sorabshaw Hormasji Dantra, Henry Hamilton, Bernard Doyle, Robert Cobb, Augustus Edward Stephens, and William Hotson Cadge. Surgeon-Captains to be Surgeon-Majors: John Henry Tull Walsh, Harold Hendley, Hormasjee Edaljee Banatvala, George Herbert Fink, and William George Patrick Alpin. *Madras Medical Establishment:* Surgeon-Majors to be Surgeon-Lieutenant-Colonels: John Maitland, George Lemon Walker, Charles Lethbridge Swaine, and Maurice Henry Smith. *Bombay Medical Establishment:* Surgeon-Majors to be Surgeon-Lieutenant-Colonels: John Macgegor, Alexander Kenneth Stewart, William George Hume Henderson, Kharshedji Ardeshir Dalal, and Henry Walker Butler Boyd.

NAVAL MEDICAL SERVICE.

The following appointments are announced:—Surgeons:

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H. Elliot to the *Marathon*: J. A. Keogh to the *Australia*. Surgeons and Agents: J. H. Spreate at Llanwit; C. M. Kemp at Shoreham and Southwick; M. A. Lyden at Costello Bay and Spiddal; S. Killen at Carrickfergus; J. H. McAuley at Ringsend.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain Frederick H. Appleby to be Surgeon-Major.

YEOMANRY CAVALRY.

Nottinghamshire (Southern Nottinghamshire): Surgeon-Captain J. F. D. Willoughby resigns his commission,

VOLUNTEER CORPS.

Artillery: 1st Ayrshire and Galloway: Alexander John Mackintosh, M.B., to be Surgeon-Lieutenant. *Rifle*: 5th (Isle of Wight, Princess Beatrice's) Volunteer Battalion the Hampshire Regiment: Surgeon-Lieutenant K. W. I. Mackenzie to be Surgeon-Captain.

THE HEALTH OF THE DUTCH INDIAN ARMY.

In the April number of the *Archives de Médecine Navale et Coloniale* Dr. H. Gros supplies an interesting *résumé* of the medico-statistical report[1] compiled for the year 1894 by the medical department of the Dutch army stationed in the East India islands, otherwise known as Insulinde and Malaysia. In his paper Dr. Gros enters considerably into detail, but with a view to exhibit at a glance the principal facts and contrasts adduced we have constructed the subjoined tables:—

Vital Statistics of the Dutch Troops serving in Insulinde.

1894.	Strength.	Morbidity. Cases.	Morbidity. Per 1000 of strength.	Mortality. Deaths.	Mortality. Per 1000 of strength.	Loss by invaliding, &c., per 1000 of strength. Discharged on medical grounds.	Relegated to light duty.	Sent to Europe for change.	Sent to local sanatoria.
Europeans	16,631	29,493	1755	272	16·35	14·66	14·66	26·44	19·21
Asiatics ...	20,832	29,013	1392	478	22·94	73·06	8·73	*Nil.*	9·74
Africans ...	68	130	1917	?	?	—	—	—	—

Total loss from all causes—

Europeans	93·32
Asiatics	114·47
Africans	—

Chief Causes of Mortality.

	Percentage of total deaths. Europeans.	Asiatics.
Killed in action or died from wounds	29·41	9·22
Paludal affections	19·89	11·92
Intestinal diseases	17·28	5·02
Suicide	5·14	0·41
Beri-beri	4·41	46·88
Respiratory affections	2·94	3·13
Enteric fever	1·10	?

No deaths from tetanus, hydrophobia, or diphtheria occurred during the year; and, unlike our experience in India, the ravages of typhoid fever were comparatively slight. Under diseases of the nervous system are included five cases of sunstroke in Europeans. Two Asiatics suffered from leprosy and two more from cholera, the latter cases proving fatal. Dr. Gros concludes his article with graphic charts representing the march of the chief causes of disability during the past five years—namely, malaria, beri-beri, and venereal affections. That referring to the beri-beri shows a lamentable state of affairs.

TORTOISE TENTS FOR THE ARGENTINE GOVERNMENT.

A number of interested persons, including Surgeon-General Sir Guyer Hunter, Surgeon-Major-General Jameson, Surgeon-Major-General Taylor, and Surgeon-Colonel Gubbins, assembled at the works of the Military Equipment Stores and Tortoise Tents Company at Battersea on April 23rd to inspect a collection of tortoise army hospital wagons and tents which the company has just completed for the Argentine Government. The South American Republic Medical Inspector, Dr. Albert Costa, was also present. On one side of the grass plot adjoining the firm's manufactory thirty of these tortoise army hospital wagons were drawn up in line, and on the other eighteen of their tents were pitched, while the centre of the ground was occupied by the "Congo" and military stoves, their utility, weight, and component parts being severally described by the officials present. The hospital wagons appeared good, serviceable vehicles, differing but little from the pattern in use in our own service. Their covering, however, instead of being a fixture from the sides of the wagon, consisted of a loose tortoise-shaped tent, the sides being folded in and strapped to the top rail of the vehicle. When required, by just disengaging the straps the folds can be carried outward, and by means of half-inch ropes and pegs form a serviceable and water-proof tent. There were in addition two elongated cylindrical metal water receptacles to every wagon, one of which was carried beneath and just behind the shaft of the cart. Each of these water barrels contained sixty pints of fluid. On removing the lid of one of them a partition was noticed about three or four inches from the rim, in the centre of which was a hole for the filling and emptying of the barrel, and into the aperture was screwed a metal cup for use when required. There was also a metal lip soldered on to the side of the cylinder to prevent waste of water when pouring it out. Two sizes of camp ovens were shown, the larger pair weighing some 500 lb., and they could only be carried in a wagon or on a camel's back. The smaller size, two in number, weighed when complete some 85 lb., and these appeared by far the most useful, as they could be borne on the heads of men and were capable of being put together in some two and a half minutes and of cooking food for fifty men. As regards the tortoise tents, with their sombre green-coloured water-proof texture, they are no doubt handy and very serviceable erections, but they are to a certain extent dark and gloomy within, and their poles, though admirably finished as far as workmanship is concerned, appear too fragile for the rough work incidental to campaigning; it may perhaps be doubted whether these tortoise tents are in any way superior to our own well-ventilated, square, roomy tents made on the old Indian principle.

MEDICAL AFFAIRS IN INDIA.

The Indian papers received by the last mail are pretty full of matters medical, including Surgeon-Lieutenant-Colonel Lawrie's address on the Malarial Parasite at the Grant Medical College, Bombay, and the discussion that followed its reading, references to subjects embodied in the late report of the Sanitary Commissioner with the Government of India, correspondence regarding M. Haffkine's methods of vaccination against cholera, and articles on the state of the medical services.

Adverting to one of these subjects we may say that Surgeon-Lieutenant-Colonel Lawrie is endowed with great energy and powers of work as well as the courage of his opinions. If he is able to establish his view as to the alleged mistaken notions entertained by European observers in regard to Laveran's parasite he will assuredly obtain all the credit he deserves. Shortly put, he contends that the microscopic appearances discoverable in the blood are not really due to the presence and metamorphoses of a parasitic element, but to changes brought about in the normal ingredients of the blood through the perverted function of a diseased spleen. His address consists of two parts: one of destructive criticism, in which he alleges that the observations of histologists in respect of the Laveran bodies are founded in error and are susceptible of a different explanation to that given by them, and the other constructive, in which he sets forth his views as to the part played by the spleen in malarious subjects, in the production and development of blood cells which in their career and appearances deviate from the normal and healthy standard and give rise, he alleges, to those appearances which microscopists have mistaken for those caused by a parasite—the plasmodium malariæ. We have just received the address and hope to publish it in an early issue of THE LANCET.

ROYAL UNITED SERVICE INSTITUTION.

Lord Knutsford presided at a meeting held in the Royal

[1] Geneeskundig Tijdschrift voor Nederlandsch Indie.

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United Service Institution on April 24th to hear an address from Mr. J. Furley on the Convention of Geneva and the Care of Sick and Wounded in War. In the course of his lecture Mr. Furley said that the badge was undoubtedly abused, but this only proved the necessity of making the powers conferred by the Convention of Geneva universally known, and also placing some restriction on the assumed rights of benevolent neutrals. It was essential that the Red Cross should be equally respected by soldiers as well as civilians. He considered that we possessed in England the means, *personnel* and *matériel*, out of which an effective supplement to the Army Hospital Corps could be formed to a degree that had never been attained in any other country, much as we could learn from other countries in regard to its organisation and extension to the requirements of war.

THE SPREAD OF SMALL-POX.

We commend the following letter to the consideration of the authorities. Gloucester has suffered severely, and if its sins are not to be visited on other towns the danger which our correspondent refers to must be dealt with immediately.

To the Editors of THE LANCET.

SIRS,—The dates fixed for assembling of "old hands" for Militia trainings being now at hand, is it too much to ask what precautions, if any, have been taken to prevent the importation of small-pox into hitherto healthy districts by men coming from Gloucester or the neighbourhood? Might I suggest that where any man's last-known address was in or near Gloucester he should be given leave off this training unless he can produce a certificate of recent vaccination. The assembling of the county Militia has been abandoned, but there may well be men in other regiments who reside in the infected district and whose coming thence into a fresh place might be a source of danger, not only to their comrades, but to the population of the place where the training is held.

I am, Sirs, yours faithfully,

SANITAS.

PORTRAIT OF SURGEON-GENERAL SIR JOSEPH FAYRER, BART., K.C.S.I.

The subscribers to the portrait fund will be pleased to hear that the committee have invited Sir Joseph Fayrer to sit for his portrait to Mr. Sydney Hall. It is expected that the picture will be finished early in July, when it will be placed in the officers' mess at Netley. This portrait is a testimonial presented to Sir Joseph Fayrer by his brother officers of the army medical services and other friends and admirers as some recognition of the great services he has rendered by his writings and official life to the army and to the Army Medical School, of the Senate of which he was an active member for many years.

DEATH IN THE SERVICES.

Inspector-General Arthur Anderson, C.B., M.D., on the 26th ult. He entered the Army in October, 1835, as Assistant Surgeon, and was appointed Surgeon in December, 1845. He attained the rank of Surgeon-Major in 1854, of Deputy Inspector-General in 1858, Inspector-General in 1862, and retired on half-pay in 1867. He served in the Eastern campaign of 1854, and was present at the battles of Alma, Balaclava, and Inkerman, and at the siege of Sebastopol. He was Principal Medical Officer, 4th Division of Balaclava and Inkerman (medal with four clasps, Turkish medal). He was also created a Knight of the Legion of Honour. He was present at the capture of Canton in 1857 (medal with clasp).

THE MATABELE RISING.

Public attention has been absorbed by the state of affairs in South Africa and the exciting news about the results of the Pretoria trial and the sharp fighting in the vicinity of Bulawayo. The garrison of that place was not only holding its own, but had made some very successful sorties. The number of killed and wounded on the part of those defending Bulawayo is, compared with the losses inflicted on the Matabeles, small; but we know relatively nothing about the hospital arrangements in Bulawayo itself. It is believed that the place can be successfully held until relieved.

HONG-KONG.

According to telegraphic intelligence received at the Colonial Office the Governor of Hong-Kong reports seventy-five fresh cases of bubonic plague in the colony during the week ending the 28th ult., and the number of deaths during the same period as also seventy-five.

The Queen has granted to Mr. Sidney Langford Hinde, L.S.A. Lond., Médecin, Service d'Etat du Congo, Boma, Her Royal licence and authority to accept and wear the Medal for the Campagne Arabe, 1892–94, L'Étoile du Service, and the Cross of the Royal Order of the Lion, conferred upon him by His Majesty King Leopold II., King of the Belgians, in recognition of his services while actually and entirely employed beyond Her Majesty's dominions in the service of the Congo Free State.

The National Society for Aid to Sick and Wounded in War has, as mentioned in another column, sent two surgeons to South Africa for service in connexion with the troubles in Matabeleland.

Surgeon-Major-General James Jameson will take up the appointment of Director-General of the Army Medical Department on May 7th.

Correspondence.

"Audi alteram partem."

THE MIDWIVES REGISTRATION BILL.

To the Editors of THE LANCET.

SIRS,—We would not trouble you did it not appear that those who are supporting this registration of midwives fail to grasp the seriousness of its meaning. Moreover, the second reading of the Bill is fixed for an early day in May. The actual aim of the registration of midwives is to establish a semi-educated class of midwifery practitioners to attend women in their confinements, on their sole responsibility and without the direct supervision of a medical practitioner. If this proposal were enacted it would repeal the Medical Act, 1886, which enacts that if any person wish to lawfully practise any branch of medicine—say, midwifery, or even affections of the eye or skin—such person must study for at least five years the three subjects of medicine, surgery, and midwifery, pass stringent examinations in them, and be registered.

This education is the minimum requirement. Section 2 (2) of the Medical Act, 1886, enacts: "The standard of proficiency required from candidates at the said qualifying examinations shall be such as sufficiently to guarantee the possession of the knowledge and skill requisite for the efficient practice of medicine, surgery, and midwifery, and it shall be the duty of the Medical Council to secure the maintenance of such standard of proficiency as aforesaid." This period of study being necessary in the public interest, the action of those who propose to establish an inferior order of midwife practitioners threatens to repeal the Medical Act and to revert to the death-dealing system associated with early midwifery practice. This Act is a life- and health-saving Act. To practise midwifery with efficiency and with the least possible danger to the public the practitioner must possess a full and perfect training in medicine and surgery as well as in midwifery. A large proportion of women about to be confined and many newly-born infants suffer from complaints which require medical and surgical skill. This inseparable unity of the three branches of medicine is one of national import and was recognised as such by the Royal Commission (1882) on the Medical Acts, among whom were the late Bishop of Peterborough, Earl Camperdown, Sir G. Jessel, Sir W. Jenner, Sir J. Simon, Mr. Huxley, Sir W. Turner, and others. This Commission reported as follows: "Another grave defect of the licensing system lies in the fact that nearly all the medical corporations grant diplomas in medicine alone or in surgery alone. There is no point of medical reform on which there is so general an agreement as that the holding of a licence ought to imply the possession of a complete qualification for practice; that is to say, the attainment of a sufficient standard of proficiency in all the three essential branches of medical practice—medicine, surgery, and midwifery. It is our opinion that the holding of a licence ought to be conclusive evidence of sufficient proficiency in medicine, surgery, and midwifery."

To understand the meaning of this life-saving recommendation we would state that previously to the above date the Medical Act (1858) recognised three classes of practitioners—viz., those educated in and who practised medicine only, or surgery only, or midwifery only. As practitioners who were educated and licensed to practise only one of these three branches were called upon to treat patients suffering from complaints which they had neither been educated nor licensed to treat, this condition of affairs constituted a grave danger to the public health. Hence the final abolition of what was

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known as the partially-educated practitioner—a class of practitioner whom Continental Governments are suppressing—but one whom those in favour of the registration of midwives now ask Parliament to resuscitate and so to bring back those horrors associated with childbirth when midwifery was divorced from medicine, when the lying-in chamber was often the first stage to the chamber of death, and when the Fellows of the Royal College of Physicians of London—to their everlasting disgrace be it told—reported to the Home Secretary in 1827 that the practising of midwifery was "an art foreign to the habits of gentlemen of enlarged academic education." This evil of partially-trained practitioners caused grave discontent among medical educational bodies. In 1877 the Royal College of Surgeons of England reported to the General Medical Council as follows: "As regards any revival of the old system, whether for male or for female candidates, the President would report to the Council that in their opinion the objections to such a course are insuperable. The President would remind the Council that the registrability of midwifery licences, independently of qualifications to practise medicine and surgery, has been brought under the notice of Her Majesty's Government by the General Medical Council as "a serious error in the Medical Act . . calculated to be injurious to the public interest and an error which should be corrected by legislation."

These historical facts show the dangers of the proposal. The supplying of the highest medical skill to all—especially to the poorer and working classes when "in the great pain and peril of childbirth"—is of great national importance if we would maintain the physical health of our population. When it is remembered that every day in England at least thirteen women lose their lives in childbirth, that one woman in every fifteen confined in the first labour dies, that one death in every ninety-five of the total deaths from all causes is due to childbirth, that from 1871 to 1894 at the very minimum at least 50,542 women died from childbed fever and at least 52,819 from the so-termed accidents of childbirth,—when the Registrar-General states that these figures "are in all probability very much understated," when we refuse to shock the public by giving facts showing the terrible sick-rate and chronic ill-health rates which follow what some are pleased to call "natural" labour, surely such undisputed realities are sufficient to give us pause. The present provisions are amply sufficient. Articles 182 and 183 of the Poor-law Commissioners of 1847 empower Guardians of the Poor to grant an order to any poor woman in her confinement so that the district medical officer may attend to her; while Article 1 of the general order of the Local Government Board, January, 1892, gives guardians power to appoint district nurses to nurse such women. The skilful nursing of these and their newly-born infants is of urgent necessity, and if those anxious to supply the poor with semi-educated midwife practitioners would use their efforts to put the above orders into operation the best results would follow. Also, if other voluntary lying-in medical charities followed the example set by the committees of the lying-in hospitals at Newcastle and Oxford—where medical practitioners and nurses are appointed in each district to treat and nurse those women who are not eligible for Poor-law medical relief and who are unable to pay the usual medical fees—great benefits would accrue. We are anxious to improve the training of all midwifery nurses and if need be to support a practical scheme for their local registration, and we do not take any objection to the registration of midwives provided they act as midwifery nurses only and under the immediate supervision of medical practitioners. We earnestly protest against the proposition—one so antagonistic to the interests of the public and the best traditions of the medical profession—that a semi-educated class of midwifery practitioners is quite good enough for the poor women and the wives of the working classes, while well-to-do women have the highest professional skill available for their confinements.

We are, Sirs, yours truly,

L. ATTHILL,
Late President of the Royal College of Physicians in Ireland; late Master of the Rotunda Hospital; Member of the General Medical Council.

G. W. BALFOUR,
Consulting Physician to the Royal Infirmary, Edinburgh; Consulting Physician to the Royal Hospital for Children.

R. BARNES,
Consulting Physician to St. George's Hospital, London; late President of the Obstetrical Society.

J. BARR,
Physician to the Northern Hospital, Liverpool.

D. C. BLACK,
Physician to the Public Dispensary; Professor of Physiology in Anderson's College, Glasgow.

C. CAMPBELL,
Surgeon to the Poor-law Infirmary; Public Vaccinator, Saddleworth.

T. CLARKE, C.C.,
Physician to the Consumption Hospital, Liverpool.

L. DRAGE,
Medical Officer of Health, Hatfield.

E. L. FOX,
Consulting Physician to the Royal Infirmary, Bristol; late Examiner in Medicine, University Oxford; Vice-president of the British Medical Association.

T. W. HIME,
Surgeon to the Hospital for Women; Lecturer on Midwifery to the Medical School, Bradford.

R. T. JONES, J.P., C.C.,
Medical Officer to the Poor-law.

R. J. KINKEAD, J.P.,
Professor of Obstetrics in Queen's College, Galway; Physician to the Galway Hospital.

R. MILNE MURRAY,
Assistant Physician to the Maternity Hospital; Lecturer on Midwifery at the School of Medicine, Edinburgh.

W. J. MOORE, K.C.I.E.,
Honorary Physician to Her Majesty the Queen; Honorary Surgeon to the Viceroy of India; Surgeon-General to the Indian Army.

P. REDFERN,
Emeritus Professor of Anatomy and Physiology in Queen's College, Belfast.

W. STOKES, KT.,
Surgeon-in-Ordinary to Her Majesty the Queen in Ireland; Surgeon to the Richmond Hospital, Dublin.

L. TAIT,
Consulting Surgeon to the Birmingham and Midland Hospital for Women.

W. THOMSON,
Vice-President of the Royal College of Surgeons in Ireland; Surgeon to the Richmond Hospital, Dublin; Member of the General Medical Council.

C. G. WHEELHOUSE, J.P.,
Consulting Surgeon to the Leeds Infirmary; Member of the General Medical Council; Vice-president of the British Medical Association.

W. WHITEHEAD,
Senior Surgeon to the Manchester Infirmary.

R. R. RENTOUL,
Liverpool.

To the Editors of THE LANCET.

SIRS,—Your leading article in THE LANCET of this week and the correspondence that has lately appeared on the subject bear pleasing proof that the question of legislation for midwives is now being considered on other than party lines, and that there is an attempt by the opponents and advocates of registration to find a way agreeable to both. It seems to be fairly well agreed that the present state of affairs is not to be tolerated and also that midwives must exist, for, putting aside fees, it would be practically impossible for the present number of medical men, even if they wished it, to attend all the confinements that take place; and if the number of medical men was sufficient there would not be sufficient general practice to support the medical men. The chief question at issue appears to be that of control—education and registration arranged. We still are confronted by the difficulty of individual control, which must be such that the midwife shall not usurp in any way the authority or position of the medical man, or practise beyond the limits that may be prescribed for her by law; this latter it is suggested and feared she will do for the purpose of her own pecuniary profit. With a view to prevent the possibility of this and at the same time to obtain the necessary control I would repeat my suggestion[1] that no midwife should practice except as the paid servant of some body, such as a board of guardians, a village nursing association, or a maternity charity; that these bodies should be compelled to adopt specified rules for her management and conduct; and that every such body should appoint a medical man or medical men as paid or honorary officer or officers, or make some arrangement for the payment of any medical man that the midwife may call to her assistance. I merely offer this as a suggestion for discussion. It appears to me a possible way of solving the difficulty of control and to remove the

[1] Brit. Med. Jour., 1895, vol. i., p. 1176.

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chance of the danger that might arise from the greed of gain on the part of the midwife.

I am, Sirs, your obedient servant,

Freshford, April 27th, 1896. CHAS. E. S. FLEMMING.

THE BEAVEN RAKE MEMORIAL.

To the Editors of THE LANCET.

SIRS,—In response to a letter which you kindly inserted soon after the early and lamented death of Dr. Beaven Neave Rake, Superintendent of the Leper Asylum at Trinidad, a sum of £83 14*s.* has been collected. Of this sum 50 guineas were sent to Dr. Rake's widow, and the remainder will be presented to Mr. A. Lucchesi towards defraying the cost of a very beautiful bronze tablet which he has designed and executed, and which has been placed in the entrance hall of the Museum at Guy's Hospital. As there may still be some old Guy's Hospital men and other friends of the late Dr. Rake who may desire to add their names the subscription-list has not yet been closed. The names of those who have already subscribed are appended. The tablet allegorically represents "Medical Science" combating "Disease" and bears the following inscription:—

IN MEMORIAM
BEAVEN NEAVE RAKE, M.D. LOND.,
SUPERINTENDENT OF THE
ASYLUM FOR LEPERS, TRINIDAD, AND MEMBER OF THE ROYAL
COMMISSION OF INQUIRY INTO LEPROSY IN INDIA, 1892.
REMARKABLE FOR HIS SCIENTIFIC INVESTIGATIONS.
RESPECTED FOR HIS ZEAL AND HUMANITY, AND BELOVED FOR HIS
PERSONAL CHARACTER,
HE WAS CUT OFF BY FEVER IN THE
37TH YEAR OF HIS AGE,
AUG. 24, 1894.

We are, Sirs, yours faithfully,

PHIN. S. ABRAHAM, 2, Henrietta-street, Cavendish-square. } Hon.
GEO. R. BUCKMASTER, Fair Lawn, Teddington. } Secs.
P. H. PYE-SMITH, Treasurer, 48, Brook-street, W.

List of Subscribers to Date.

Dr. Abraham, Dr. J. P. Atkinson, Dr. Blandford, Dr. Clifford Beale, Dr. Buckmaster, Dr. W. Carter, Mr. Jno. Cock, Mr. W. Collin, Mr. N. Davies-Colley, Dr. Floyd, Mr. J. Hutchinson, Dr. Horrocks, Sir George Humphry, Mr. W. H. A. Jacobson, Dr. Kanthack, Mr. W. Arbuthnot Lane, Mr. J. E. Layley, Dr. Pavy, Dr. S. Perkins, Mr. A. Pringle, Dr. J. Pringle, Dr. Pye-Smith, Mr. H. V. Rake, Mr. Thomas Smith, Dr. Stowers, Dr. Hale White, and Dr. Wilks.

April 24th, 1896.

"THE EFFECT OF MUSCULAR WORK UPON THE ALKALINITY OF THE BLOOD."

To the Editors of THE LANCET.

SIRS,—As Dr. Hutchison has now, no doubt, seen my reply to Mr. Fotheringham in THE LANCET of April 18th, showing that my results as regards the above heading agree with his own, I need not say anything further on that subject; but in his letter to THE LANCET of April 25th he raises one or two other points on which I should like to say a few words. With regard to the reaction of normal perspiration I know that the statements of authorities differ, and I have contented myself with quoting their statements and pointing out that a fall in the acidity of the urine always accompanies marked perspiration, whether this is due to muscular exercise or a Turkish bath, and that the converse fact that suppression of perspiration causes a rise in the acidity of the urine has been pointed out by Sir A. Garrod.[1] Dr. Hutchison's statement is also opposed to that of Heuss,[2] who distinctly says that normal sweat is acid at the time of its discharge from the ducts. Dr. Hutchison's suggested explanation of the early fall of urea which exercise may produce does not seem to me to meet the facts of the case, for this fall of urea, as well as the fatigue which accompanies it, can be prevented by controlling the uric acid,[3] but if exercise is always accompanied by formation of ammonia to neutralise acids then there should be a fall of urea in every case and we should be unable to control it. I would further point out that Auerbach[4] has shown that though the carnivora have the power of forming ammonia to neutralise acids, this power is only possessed by man and frugivora to a very insignificant extent, this probably accounting, as I have said in my book with reference to my experiments on the excretion of uric acid in dogs, for the very different reactions of the urine, and probably also of the blood, in members of these different orders, and furnishing also a somewhat powerful lever for the argument that man is not by nature a carnivore. I was greatly interested in Dr. Hutchison's paper, and if there had been any real antagonism between his results and my own I should have noted it carefully for further investigation. May I point out a misprint in my letter in THE LANCET of April 18th, where in line 8 "function" should read *formation?* I am, Sirs, yours faithfully,

Brook-street, April 27th, 1896. ALEXANDER HAIG.

[1] Gout and Rheumatic Gout, third edition, p. 258.
[2] Monatsschrift für Praktische Dermatologie, No. 9, 1892.
[3] THE LANCET, March 7th, 1896, p. 614.

JUVENILE SMOKING: THE DUTY OF THE MEDICAL PROFESSION.

To the Editors of THE LANCET.

SIRS,—Whoever is desirous of raising the status of the medical profession and of adding to its true dignity cannot do better than read the admirable address of Mr. Springthorpe, the President of the Public Health Section of the Intercolonial Medical Congress of Australasia, given in THE LANCET of April 25th. Mr. Springthorpe took a lofty view of the services which the physician can render to the State. In all matters relating to the preservation of the health of the people the nation looks to the members of our profession for light and leading. But we live by the treatment of disease; its prevention is in direct contravention of our interests. Nevertheless, medical men have not only never hesitated about sacrificing their interests for the public good, but they have been zealous and even enthusiastic in their efforts to promote the means of protecting and promoting the public health. The valuable and disinterested services thus rendered to the State have won for the profession much honour and no little dignity both at home and in the colonies. The profession has once more an opportunity of rendering a great—indeed, an invaluable—service to the State. Of late years an evil of the gravest kind has been extending in our midst, an evil which attacks not merely the physical but the mental and moral health of the nation. Juvenile smoking is spreading like an epidemic. Over twenty years ago the occurrence of sporadic cases induced the Editor of THE LANCET to speak out very plainly on the subject. He said: "Whatever opinions may be entertained as to the effects of moderate tobacco smoking on the adult, there can be none as to its deleterious influence on the boy. The molecular changes coincident with development of tissue are interfered with, slowed, if not arrested by tobacco." Facts were cited in proof of the physical injury thus caused, as were others clearly showing the mental damage inflicted. The experience of France and Germany was referred to, and the importance of hygienic instruction was urged. But since that time the evil has enormously extended. Lads are infatuated by the notion that the ability to "blow a cloud" is an indication of cleverness and it raises them considerably in the estimation of onlookers.

The advent of the cheap cigarette has, however, been the chief cause of the rapid spread of juvenile smoking of late. The Chancellor of the Exchequer in his recent speech on the Budget, referring to the large increase of revenue received from tobacco, said: "I believe it is mainly due to the great increase in the consumption of cigarettes, which are especially attractive to our youthful population." He added, "I am told of one manufacturer who makes two million cigarettes a day who hardly made any a few years ago." Thus it is not only that mere children are using tobacco, but they are using it in the worst possible form. Moreover, whilst most adults smokers are inclined to exercise some restraint over their smoking, the young are too apt to rush into extremes. It is impossible to estimate the injury which boys are thus doing to themselves. Surely something should be done, and done promptly, to put a stop to all this mischief. In some parts of Germany and in some of the United States laws have been passed prohibiting young persons under the age of

[4] Virchow's Archiv, vol. xcviii., p. 512.

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xteen or eighteen from smoking and rendering it a punishable offence for anyone to give or sell tobacco to youths. Why should not the members of the medical profession move earnestly in this matter and urge on the managers of schools on the one hand the importance of special teaching, exposing the folly and viciousness of the practice of smoking, and, on the other hand, make such representations to Parliament and to the Government as may lead to efficient legislation? By taking the initiative the profession would do itself great credit and would serve the best interests of the country most effectively. I am, Sirs, yours faithfully,

R. MARTIN,
Senior Surgeon, Ancoats Hospital,
Manchester.

April 27th, 1896.

THE QUESTION OF MEDICAL DEFENCE."

To the Editors of THE LANCET.

SIRS,—Referring to Mr. Keele's letter in THE LANCET of April 25th on the above subject, I cannot think that the medical profession will regard his objections to the absorption of the Medical Defence Union by the British Medical Association as sound ones. He objects to the formation of a gigantic trades-union and of the tyranny of the few over the many. Union is what the medical profession has been striving after hopelessly for years, and if it is a good thing at all the larger it is the better. As for the tyranny, when in the same issue of THE LANCET I see that one medical man advertises his advent by the village crier and others subsidise insurance agents to advertise their clubs at a penny a week or less, and while mangles and medical attendance are curiously mixed up together at Walsall, I cannot but think that a little wholesome advice and tyranny if necessary might be useful to teach some members of the profession to practise their calling in a way that does not degrade the whole profession in the eyes of the public. After the tyranny which the profession has suffered for years from clubs and provident associations the yoke of the British Medical Association will be but a feather weight.

I am, Sirs, yours faithfully,

Warsop, Notts, April 27th, 1896. E. S. NUTTING.

"THE BATTLE OF THE CLUBS."

To the Editors of THE LANCET.

SIRS,—The Friendly Societies Medical Alliance met at Wednesbury Town-hall on Monday, April 5th. The following resolutions affecting the profession were submitted to the meeting and carried *nem. con.*:—

1. That these institutions shall be called Friendly Societies Medical Institutions, leaving out the word "Aid" existing hitherto.
2. Persons of all grades, irrespective of position, are cordially welcomed to join.
3. That no annual reports of the work of the associations be published in which is shown the total value of property acquired or in which is shown the salaries paid to medical officers, the number of prescriptions dispensed or the visits made by the medical officers, as these figures have been used against the friendly societies' medical institutions by the medical profession, whose power for evil might have been much greater had the system of publishing statistics been more universal. [This proposition of the Kidderminster Association was carried unanimously.]
4. That the application of the medical officer of Tonbridge Wells Friendly Society be refused, and if any further dissatisfaction on his part be shown a month's salary be given instead of a month's notice. [The application of the medical officer here was to the effect that he considered the surplus capital at the year's end after defraying all legitimate expenses should revert to himself.]
5. That the Alliance should be registered, and that the Parliamentary representatives of the constituencies in which large associations exist be interviewed with a view to effecting certain proposals submitted to the last meeting, thus giving friendly societies greater power over the profession.
6. In towns where private practitioners decide to ask for more for adults and juveniles than the lodges pay at present, these clubs should attach themselves to one of the Friendly Societies Medical Institutions, and in the event of the non-existence of such an institution the disaffected clubs should form one and leave their surgeons *en bloc*.

[At this stage a telegram was received from Lincoln stating that the medical officers of the institution there had resigned. A reply was sent advising the management what course to adopt under the circumstances.]

7. That a deputation be formed, consisting of Alderman Dickinson (Lincoln), Mr. Willement (Norwich), and the President, to wait on the General Medical Council and seek their opinion on the question in dispute.

Now, Sirs, this bit of intelligence will doubtless be very interesting to the whole of the profession and especially to those who have clubs and who live in a town where a friendly societies institution exists. The profession here may now know what to expect. It will appear to all your readers that there is either a deal of Freemasonry or timidity when the Alliance resolve not to publish reports showing their numerical and financial position, what they are worth and what they pay their officers. This sort of thing will certainly not tend to a better understanding between the clubs and the profession. Let the General Medical Council not forget this when they are interviewed.

I am, Sirs, your obedient servant,

April 27th, 1896. SOPHOCLES.

P.S.—I may say that this Friendly Societies Medical Alliance is a conference of delegates sent from various friendly societies medical institutions, especially from those referred to by your Special Commissioner in the articles which have appeared recently.

THE ASHANTI EXPEDITION.

(BY OUR SPECIAL WAR CORRESPONDENT.)

IV.[1]

The Troops in Health, their Feeding, &c.

ON arriving at the top of the Monsi Hill, which I found by barometrical reading to be about 1122 ft. above the sea level, we had hoped to obtain an extensive view of the surrounding country, but we were greatly disappointed in this expectation on account of the impenetrable character of the tangled and prolific undergrowth which clothed its summit. Previously to our advance the pathway up the side of the hill was most irregular as well as precipitous in places, with huge boulders and stony projections barring the way and causing considerable inconvenience to anyone attempting the ascent. But thanks to the activity of our engineering party, the sappers of which worked like navvies, the bush was speedily cleared away where required, the stones removed, and a nice wide zigzag road was prepared throughout. Our troops were by this act of thoughtfulness on the part of the executive ultimately enabled to perform the journey up with comparative ease and comfort. The morning on which I crossed the range was beautifully fine overhead, with a soft, balmy air from east-north-east; while a thick white mantle of fog was observed to envelop and hide from view the whole of the country beneath us. About a mile from the top there was a sound of water rushing over some stony projection on our left flank. Desirous of ascertaining its whereabouts I halted my carriers and pitched my tent for the purpose of enjoying some refreshment, as I had partaken as yet of nothing since starting from Abru Edru. While my breakfast was being prepared by my coloured servant I was enabled to make an examination of the locality. Pushing my way through some very thick undergrowth, during which attempt I suffered considerably from the "lawyers" (thin canes with long barbed thorns), I managed after a brief search to come across quite a charming little cascade, over the ledge of which some beautifully clear, bright, drinkable water was foaming and tumbling into a tortuous narrow streamlet below. Just above the cascade was evidently the spring oozing out from under a large block of granite. The streamlet, pursuing a tortuous course down the northern side of the Monsi Hill, finally reaches Kwissa, and from it our supply was obtained for the rest camp of that place.

I have borne testimony to the hard work done by our men in Ashantiland more than once, but it does not necessarily follow from what I have said that a soldier's life (even during campaigning) is one of "all work and no play." It is no more one of incessant fatigue and hardship than it is one of "all beer and skittles," as Tommy Atkins would express it. He has his time for work as well as his time for rest and recreation, and unless untoward and extreme circumstances combine to prevent it he generally manages to secure his fair share of the two latter. I am not quite sure that he thinks so. He will sometimes growl. Grumbling is a permissible qualification not alone restricted to the army or navy but observable in other departments as well, and may as a characteristic of good sound health be considered a sort of safety-valve to let off the superfluous steam when necessary. But grumble or not as he may, our red-coat—as well

[1] Nos. 1, 2 and 3 were published in THE LANCET of April 4th, 11th and 25th, 1896, respectively.

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as our blue-coat, too, for the matter of that—when he does turn to, goes at his allotted quota of work like a man, and only those whose duties have called them again and again to serve as correspondents with an army in the field, and have watched the all-round performances of our men abroad, can legitimately estimate the sterling worth of the British metal or appreciate the true ring of the coin as represented in the "stuff" of which our English army is composed.

As there were 26,000 medical sick comfort diets supplied for use to the recent expedition, I may here state what each medical comfort case consisted of: 1 bottle of brandy, 1 bottle of whisky, ½ bottle of champagne, ¼ lb. of arrowroot, ¼ lb. of pearl barley, 2 tins of extractum carnis, ½ lb. of bovril, 3 tins of condensed milk (sweetened), 2 tins of unsweetened milk, ¼ lb. of best tea, 3 lb. of white sugar, 1 lb. of candles, ½ lb. of soap, ½ lb. of salt, ¼ lb. of pepper, ½ lb. of compressed coffee, ½ lb. of pea soup, ¼ lb. of mustard, besides a good corkscrew, knife and fork, tin opener, nest of three hospital measures, pepper castor, and mustard pot. At sea when on board transport ships the soldier's rations, including a free allowance of good drinking and washing water, are daily as follows:—

Sunday.—12 oz. of salt beef, 6 oz. of flour, 1 oz. of suet, 2 oz. of raisins, 12 oz. of biscuit, 4 oz. of sugar, ½ oz. of tea, and 2 oz. of preserved potatoes.

Monday.—12 oz. of preserved meat, 1 lb. of fresh bread, 4 oz. of rice, 2 oz. of sugar, and ½ oz. of tea.

Tuesday.—12 oz. of salt pork, ⅜ lb. of split peas, 1 oz. of vegetables, 12 oz. of biscuit, 2 oz. of sugar, and ½ oz. of tea.

Wednesday.—12 oz. of salt beef, 6 oz. of flour, 1 oz. of suet, 2 oz. of raisins, 1 lb. of fresh bread, 4 oz. of sugar, ½ oz. of tea, and 2 oz. of preserved potatoes.

Thursday.—12 oz. of preserved meat, 12 oz. of biscuit, 2 oz. of sugar, ½ oz. of tea, and 2 oz. of preserved potatoes.

Friday.—12 oz. of salt pork, ⅜ lb. of split peas, 1 oz. of compressed vegetable, 1 lb. of fresh bread, 2 oz. of sugar, and ½ oz. of tea.

Saturday.—12 oz. of preserved meat, 1 lb. of fresh bread, 2 oz. of sugar, ½ oz. of tea, and 2 oz. of preserved potatoes.

From a perusal of the foregoing it will be seen that the quantity of food served out to our soldiers is ample in quantity, if it be not always excellent in quality. Having had opportunities for years past of judging of the character of the provisions I should unhesitatingly say they are, as a whole, remarkably good and very little fault can be found with them. The tea used by the troops in the last expedition was pronounced excellent. The biscuits, although hard, were found to be of superior quality and were consumed for some time after leaving Cape Coast Castle—until, in fact, our camp bakery was established. When that department was got into working order fresh bread was served out to the men. I was presented with the first loaf baked, and it proved to be an excellent specimen of what our commissariat bakery can turn out. Unsweetened milk was chosen in preference to sweetened. It seemed to stand the heat better than the latter, which frequently passed into a state of butter. It was anticipated that during the march up country any quantity of animal and vegetable food would be procurable by purchase from the friendly natives, but in this hope we were sadly disappointed, and therefore the commissariat had wholly to rely on their stock of preserved provisions. No fresh meat of any kind could be obtained this side of Kumasi. At that place two days' rations of beef were, I believe, given to our men. Therefore tinned meat had to be consumed not only *en voyage* but also during the greater portion of the time the troops were on shore. Now very often a little of this preserved nitrogenous food "goes a long way" and not infrequently it turns out dry and stringy, as if all the juice had been squeezed out of it; and there is, moreover, a decided absence of fatty matter to render it as palatable and nourishing as it should be. In temperate climates men's appetites are good if they are in a fair state of health and they can eat well and relish whatever is put before them. When serving in the tropics, under a depressing and enervating temperature, appetite fails and becomes capricious to a degree, and it is just at such periods that something out of the usual routine is required; and if there was one kind or class of food more than another that helped to supply this desideratum during our recent campaign it was, I think, found in Maconochie's ration, recently introduced, and a small supply of which was served out to our officers and men. There was one complaint made concerning it as far as I could gather, and that was that "there was not nearly sufficient" to satisfy the demands of the men. For my own part, I have never been much impressed with the luxury of preserved meat of any kind, and felt some reluctance in asking for a supply of it from the authorities. But not being able to procure either a modicum of mutton, fowls, or even eggs from the natives in the villages through which we passed—all the sheep, chickens, and even pigs being driven away into the bush on the approach of our troops—I was compelled in dire necessity to requisition something eatable from the Government food stores. Amongst other things generously supplied were two tins of the ration above referred to. Contrary to my expectation the contents of each tin furnished quite a tender, juicy, savoury, nutritious and very sustaining meal, widely different from the stringy, tasteless preparations, without fat or any juice whatever, which had hitherto been tolerated for want of a more acceptable article. This ration appears to be a combination of moderate-sized pieces of beef, very tender, evidently cut from the primest parts, judiciously cooked (not done to rags), together with carrots, onions, and potatoes, conserved in delicious, well-seasoned gravy. There is, moreover, a certain quantity of fat introduced, and the necessary juices so essential for perfect mastication and assimilation are retained throughout the diet. In other preparations of the kind where vegetables have been conjoined the latter have turned out in a mashed-up and pulpy condition. Not so in Maconochie's; by some agency or other the pieces of vegetable are preserved in a solid and unbroken form. Every tin, moreover, contains a suitable quantity of nice brown gravy free from supernatant fat, and, from what I can judge, is equal to about half a pint of good beef-tea. No bone at all is introduced, therefore every twelve ounces of beef are equal to about seventeen ounces of meat supplied with bone. Each tin, I have ascertained, contains at least twelve ounces of good solid meat and weighs, with the vegetables and gravy, about one pound and three-quarters. Although animal and vegetable substances are incorporated in this meal the combination keeps quite fresh without any signs of fermentation being apparent, and seems to have withstood the effects of even a West African climate well enough. The bodily health- and strength-maintaining essentials in the shape of albuminoids, starchy, and fatty matters are one and all represented in the various items of its composition and so nicely blended that many of our invalids out in Africa were not only able to eat but, what is more essential, digest some of the meat minced up with its gravy and some breadcrumbs when in consequence of the capricious state of their appetites they could not touch other kinds of diet as served out to them.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

A Centenarian.

INSTANCES of exceptional longevity do not always stand the test of inquiry when closely applied to the antecedent history of the individual. Lately, however, there died in this locality one Antoine Mountsoy who on Jan. 6th completed his 109th year, the record being an authentic one. This remarkable veteran was born at Bordeaux in 1787, and when a boy was taken prisoner by the English with his father. He remained in England when his father returned to France and served in the navy five years. He worked a quarter-deck gun on board the *Queen Charlotte* at the Battle of Algiers in the year 1816, being badly wounded. He subsequently served on a whaler and after many hardships settled down eventually near Lichfield as a small carrier. He was well known and respected in the district. At his funeral on April 22nd Captain the Hon. A. C. Littleton, chairman of the Lichfield board of guardians and a naval officer, sent a Union Jack to be placed on the coffin of the old man as a tribute of respect to the memory of his former service.

The Pollution of the River Tame.

The recurring alleged pollution of this small river by the Birmingham Tame and Rea district drainage board has been a source of perpetual trouble to the authorities concerned. At the recent annual meeting of the Tamworth rural district council the difficulties of the subject were freely discussed. The district council expressed the opinion that the river was now in a condition so dangerous to health that in case of

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some epidemic disease the mortality arising therefrom would be very serious. Both the district and urban authorities asked that an inspector of the Local Government Board should view the stream. In reply to this the clerk stated that he was informed by the department that the Board had during the last few years sanctioned the borrowing of large sums of money by the Birmingham Tame and Rea district drainage board to enable them to acquire further land to improve the effluent from their sewage farm, and the information in the Board's possession showed that the drainage board were aware of the necessity of carrying out the improvement. In reply it was stated that the amount of land the drainage board had at present for sewage treatment was utterly insufficient. At the inquiry before an inspection held in April, 1895, for leave to purchase 187 acres, the farm manager stated "that the sewage of 718 persons was at the present time dealt with on each acre of land, but the number ought not to exceed 400, and that the board then had 880 acres upon which to apply sewage and he should like the number increased to 1600." This would mean 720 acres more for sewage treatment than they then had. Some further correspondence was read in which the department replied that they were not prepared to direct an inquiry as suggested. It was decided to ask the Local Government Board to receive a deputation from the district council on the matter. Failing this it was intimated that the local Parliamentary representatives would be asked to bring the matter before the House of Commons.

Record Number of Summonses.

On April 14th the largest number of summonses on record was down for hearing at the Victoria courts. They reached the total of 178. Many of these were of minor importance, the mania for playing football in the public streets being responsible for 55. The preservation of order in the midst of a large town is indispensable to comfort and to progress; and the activity of the police towards this object is a laudable effort to promote good local government.

Inquests.

An inquest was lately held at the gaol on the body of a prisoner aged fifty-five whose death occurred under singular circumstances. The deceased persistently ate the peels of potatoes which had been cooked by steam. He was warned of the risk by another prisoner, but continued to indulge his taste for this exceptional kind of diet. Diarrhœa followed, then peritonitis and death. Previous slight chronic inflammation of the intestines was stated to have been the ground for the additional disease which was aggravated by the indigestible material.—The coroner has also held an inquest upon a child fourteen months old who endeavoured to swallow a piece of beef-steak, but failed in the attempt and died from asphyxia. Evidently information in the matter of feeding is further required among a number of people.

April 28th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Crisis at the Lying-in Hospital.

THE deadlock at this hospital still continues. It will be remembered that the bulk of the medical staff resigned in consequence of the determination of the committee to make the matron-midwife responsible for the treatment of all normal cases, which the latter body assert is in accordance with the rules of the charity, an interpretation controverted by the medical staff. A meeting of the subscribers was called to afford them an opportunity of putting their interpretation on the rules in dispute, at which the following resolution was carried by 22 votes to 2:—"That, whilst recognising the responsibility of the Medical Board through the honorary hospital medical officer on duty for the general supervision of all medical matters in connexion with the hospital, the subscribers regard the executive responsibility for the attendance upon normal cases as resting with the matron-midwife." Mr. J. K. Smith, in moving this resolution, remarked that "for a medical man not to be allowed to enter the wards with the object of supervising the antiseptic treatment was all nonsense"; while Mrs. H. Tate, a lady evidently endowed with much common sense, expressed her opinion that "no honorary medical officer could accept the position of being responsible for life and death in an institution to the wards of which he was denied access." Other speeches followed, after which the meeting dispersed leaving matters in a hopeless muddle. The absurdity of the situation was evidently felt by the committee in the fact of their meeting together immediately afterwards to put an interpretation on their own resolution, which reads as follows:—"That in the opinion of the committee the resolution (meaning that carried at the subscribers' meeting) is sufficient to confer upon the medical officer in charge the right of access to all wards for the purpose of carrying out the general supervision referred to." If this reading does not imply that the medical staff are to control the treatment of all cases, normal and otherwise, then the English language conveys no meaning whatever, yet when the medical staff, in reply to an invitation from the committee to allow themselves to be re-elected, say that they are agreeable, now that their responsibility for all hospital patients is established beyond shadow of doubt, will it be believed that the committee reply by saying that they "cannot agree to relieving the matron-midwife of the full responsibility of all normal cases, as they have complete confidence in her ability to tell whether a case is normal or otherwise"? It will not be wondered at that the staff, in reply, say that they cannot accept the position laid down by the committee, and that unless their responsibility for all cases is fully acknowledged (by the fact of the matron-midwife acting under their orders without reserve) they must definitely decline to offer themselves for re-election.

Death of Dr. John McGregor.

Dr. John McGregor, who some years ago enjoyed a lucrative practice in Everton, but latterly had been in failing health, was drowned in the Mersey on Tuesday week. Deceased was educated at Glasgow University, of which he was Doctor of Medicine, also possessing the Fellowship of the Royal College of Surgeons of Edinburgh. He was sixty-two years of age.

The New Northern Hospital.

At last a satisfactory stage has been reached in the progress of arrangements for rebuilding the Northern Hospital by the selection of the competition plans submitted by Messrs. Pennington, Son, and Harvey, architects, of London and Liverpool. The new hospital is designed to contain 200 beds, the existing one possessing only 157 beds. The site measures 11,000 yards. The style of architecture is that of English Renaissance plainly treated, and will be simple and neat rather than possessing external grandeur. The hospital, which will be a model of its kind, will include two large longitudinal pavilions three storeys high. The administrative block will form the centre with the principal entrance to the building which will be approached by a circular drive from the main street. It will contain a handsome entrance-hall and every convenience for the accommodation of the officials. A nurses' home to accommodate sixty nurses connected with the main corridor, giving access to all parts of the building, will be erected at the corner of Great Howard-street and Leeds-street. At the back of the main corridor will be a circular pavilion, also three storeys high, for the provision of operating and lecture theatres and the out-patients' department; there will be a separate entrance and exit to this part of the building. A feature of the new hospital will be the fitting up of three special wards with tanks for typhoid fever patients. At the rear will be placed the laundries, boiler-house, disinfecting-house, &c., with the mortuary and post-mortem room in another block. The building will be fireproof, whilst the heating, ventilating, and sanitary arrangements will be as perfect as possible. It is the intention of the committee to arrange to give the public an opportunity of inspecting the plans.

Glanders and the May Day Procession.

At the recent weekly meeting of the Health Committee the chairman said the May Day procession was postponed until it was quite certain there was no danger to be feared on account of glanders. The medical officer of health stated that the action taken in the matter was precautionary.

April 28th.

THE lectures at the National Hospital for the Paralysed and Epileptic, Queen-square, will be continued on Wednesdays at 3 o'clock, as before, but a larger number of members of the staff will take part in them. Dr. Gowers will begin on the 6th inst.

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WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Bristol University College: an Appeal for £10,000.

THE Council of University College issued last week an urgent appeal for pecuniary assistance to the inhabitants of Bristol and the West of England. It is stated that since the last appeal was made, in 1887, a new medical wing has been built at a cost of £7590, an event followed by the complete incorporation of the medical school with the College, and an engineering wing was added at a cost of £5460. The council earnestly appeal for a capital sum of £10,000 to clear the College from debt and for an addition to the annual sustentation fund of £700, which would restore that fund to the £1200 subscribed in 1882, not less than which is required to meet the annual expenditure and to secure the Government grant. The council also emphasise the need of a permanent endowment, and suggest that wealthy citizens of Bristol and the West should associate their names, as in other colleges, with the endowment of professorships. The donations already promised for the capital fund amount to £5334, and to the sustentation fund about £100. At a recent meeting of the Technical Education Committee of the Bristol Corporation it was decided to recommend the Council to make a grant of £2000 to the funds now being raised on behalf of the College, to be conditional upon the £10,000 being obtained and on the acceptance of two representatives of the Town Council upon the governing body.

The Installation of the Prince of Wales as Chancellor of the University of Wales.

At a meeting of the University College of Wales, held in Cardiff last week, a communication was read from Sir Francis Knollys intimating that the Prince and Princess of Wales proposed to arrive in Aberystwith on June 25th, and, if agreeable, His Royal Highness suggested that his installation as Chancellor of the University should take place on the following day in that town. This date was considered most suitable, and it was decided that the installation should be conducted in a congregation of the authorities of the University. It has also been definitely arranged that the opening of the new residential hall for women in connexion with the University shall take place on the occasion of the forthcoming Royal visit, the Princess of Wales having graciously consented to perform the ceremony.

Lord Edmond Fitzmaurice on Vaccination.

At the meeting of the Bradford-on-Avon (Wiltshire) urban council on April 21st, when there was a strong expression in favour of vaccination, Lord Edmond Fitzmaurice said that he had not the smallest doubt that vaccination was one of the greatest scientific discoveries ever made. He looked upon the present agitation, and felt it his duty to say so, as having gone altogether beyond the question of compulsory vaccination; it was an attack upon vaccination itself, against the boards of guardians, and against the magistrates who enforced the law—in fact, in some places it had become almost a system of intimidation. It was time the working classes should have information on the other side placed before them.

Outbreak of Rabies at Weston, near Bath.

In consequence of an outbreak of rabies at Weston (near Bath) the market committee of Bath at a special meeting made an order for the muzzling of all dogs in the city; this came into force on April 20th last.

The Expenditure of the Bristol Public Health Department.

At the meeting of the Bristol sanitary authority, held on April 16th, it was stated that the expenditure of the Public Health Department for the half-year ended March, 1896, had been as follows: medical officer's department, £2237 14*s.* 2*d.*; hospital expenses, £1167; port sanitary account, £641; and Housing of the Working Classes Act, £908.

Conversazione of the Bristol University College.

The chairman and council of the Bristol University College gave a conversazione at the Victoria Rooms, Clifton, on April 20th. Scientific lectures and experiments were provided, and an opportunity was taken to impress upon the large number of citizens who attended that the College was greatly in need of increased financial help.

The Cheltenham Board of Guardians and Vaccination.

The Cheltenham board of guardians at a full board on April 23rd, after a discussion extending upwards of four hours, decided to rescind the resolution passed in 1894, so in future legal proceedings will be taken against all defaulters under the Vaccination Acts.

The new Infectious Diseases Hospital for Newport is to be opened in June.

Last week the sudden death occurred at his residence, "Sunny Lee," Weymouth, of Surgeon-Lieutenant-Colonel Richard William Hare, who was on the Retired List of the Army Medical Staff.

April 28th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Death of Dr. A. F. Wood.

FRIENDS in the medical profession will hear with regret of the death of Dr. A. F. Wood, medical superintendent of the Edinburgh City Hospital. Dr. Wood died after four days' illness from acute pneumonia at the comparatively early age of forty-eight years. During his student days he showed a preference for the study of infectious diseases, and in 1878 was appointed house physician to the fever wards of the Old Infirmary, while in 1885 he was appointed by the town council to the post of superintendent of the City Hospital, which he held until his death. The funeral took place on the morning of April 24th and was attended by the Lord Provost and other members of the town council, as well as by a large number of the members of the medical faculty in Edinburgh and nurses from the city hospital. Dr. Wood had acquired great experience in the diagnosis and treatment of infectious diseases, and from his kindly, courteous, and obliging manner was much esteemed by the officials with whom he was associated and also by the friends of patients with whom he was brought in contact.

Edinburgh University General Council.

The statutory half-yearly meeting of the general council of Edinburgh University was held last week, the vice-chancellor, Sir William Muir, presiding. The report of the finance committee, presented by Mr. D. D. Beechan, S.S.C., expressed the satisfaction of the committee that the trustees of the late Earl of Moray had allotted to the University Court as a capital endowment fund for the promotion of original research in the University the munificent sum of £20,000. This sum, however, was by itself quite inadequate to equip the University for original research, and as there are no other funds at present at the disposal of the University Court by which to supplement it the committee suggest that a plan of coöperation with the Royal Colleges of Physicians and Surgeons of Edinburgh might be devised, by means of which the laboratories and endowments of the three bodies might be worked together instead of being in competition with one another. The committee stated their regret that the General University Fund showed no increase in capital, the figure being £70,000, practically the same as it was last year. They considered it unsatisfactory that so often money given to the University was appropriated by the donors to special purposes instead of being entrusted to the administration of the University Court. One of the members called attention to the falling off in the number of students at the University. He thought it very unfortunate that the professors were now entirely independent of fees, and thought there was some relation between this fact and the falling-off in numbers. He was glad to see that the committee recommended that there should be a stop put to the practice of allowing grants to the professors for laboratory and class expenses. Dr. Scott Dalgleish attributed the falling off in the number of students rather to the increased requirements in the preliminary examination.

Opening of Filters at Stirling Waterworks.

The four filters which have been constructed at Zouch in connexion with the Stirling waterworks were formally opened last week by Provost Kinross. The filters measure each 76 feet by 52 feet; there are also two clear-water basins 100 feet in diameter, the whole being made of enamelled brick. The works have cost upwards of £13,000.

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Edinburgh Field Naturalists' Society.

At the concluding meeting of this society in Edinburgh last week Dr. Watson submitted a communication on recent observations by Dr. Cunningham, Professor of Physiology, Calcutta, on the nature of snake poison. Dr. Cunningham's investigations went to show that the lethal properties of cobra-venom were due to the presence in it of a single toxine of the nature of a ferment which altered the blood so as to make it unfit for the part it played in respiration, while the lethal properties of daboia venom were due to two toxines, not ferments, the one acting as a nerve irritant and the other by inducing septic alterations in the blood.

Death of Dr. Anderson, C.B.

The death took place on Sunday at Pitlochry of Dr. Anderson, C.B, retired Inspector-General of Her Majesty's Hospitals, at the age of eighty-one. He entered the army in 1838 and served sixteen years in the 82nd Foot, 10th Hussars, and 2nd Battalion of the Rifle Brigade in the Mediterranean, Canada, &c. He was appointed surgeon-general in 1854 and passed through the experiences of the Crimean War, having been present at the battles of Alma, Balaclava, and Inkerman, and at the Siege of Sebastopol. He was engaged in the war with China and subsequently served in India as principal medical officer in Bengal. When he returned home he received the appointment of principal medical officer of Netley Hospital. Dr. Anderson had the honour of being created a Knight of the Legion of Honour and a Companion of the Bath, and possessed the Crimean medal with four clasps, Turkish medal, and China medal and clasp.

St. Andrews University.

The Berry Scholarship in Natural Science has been awarded to Mr. Harry M. Kyle, M.A., B.Sc, Glasgow, and the Woodhall Fisheries Prize to Mr. Wm. Wallace, also of Glasgow.

Glasgow University.

The summer session opened on April 21st, and all the classes are now in full operation. The exact number or entrants cannot yet be stated, but as the results of the preliminary examination were much more favourable than in former years larger first-year classes are to be expected. Professor Simpson's health has so far improved that he is able to conduct the class in Forensic Medicine.—Dr. M. Charteris, Professor of Therapeutics, has been elected a Fellow of the Royal Society of Edinburgh.—The session at Anderson's College also opened on April 21st and at St. Mungo's College on April 24th.—Two new courses are announced at the Western Medical School, one on Regional Anatomy by Dr. Edington and one on Physiology by Dr. Ernest Thomson.—Dr. Pearson Munro, in consequence of ill-health, will not be able to conduct his class on Public Health in Anderson's College during the present session.

Lightburn Hospital, Lanarkshire.

The new hospital which has been erected for the purpose of dealing with cases of infectious diseases from the lower and middle ward districts of Lanarkshire was formally opened on April 23rd by Mr. Henry Taggart, convener of the joint committee. The hospital has been designed upon the most modern and improved principles. It contains accommodation for sixty beds, and the total cost, including the site, is estimated at £29,000. There is a complete installation of the electric light, and the hospital is provided with the Alliott-Paton patent Lyon's steam disinfecting apparatus. The opening ceremony took place in the presence of a number of representatives of the local health authorities and of the profession. At the lunch which followed the toast of "The Local Government Board for Scotland" was responded to by Dr. McLintock. The medical superintendent of the new hospital is Mr. Philp.

The Mild Weather.

As evidence of the mildness of the season Mr. Alex. Somerville, B.Sc., a well-known member of the Glasgow Naturalists' Society, announces that during the first week of April he collected fifty-eight species of wild plants in flower in the island of Arran.

A Medical Dispute.

A curious position has issued from a difference of opinion between two practitioners in a burgh in the west of Scotland. Dr. A. certified a case of enteric fever and sent the patient to the burgh hospital. Admittance, however, was refused, as Dr. B., who had charge of the hospital, diagnosed the case as one of meningitis. Dr. A., in no wise convinced of this view, sent for a consulting physician from Glasgow, who had no doubt the case was really one of enteric fever. Now Dr. A. maintains that the consultant's fee of 10 guineas is an expense to which he has been put by the burgh medical officer, and accordingly he claims that the town council ought to refund him this sum.

Presentation to a Medical Man.

The members of the ambulance class in connexion with the Possilpark district of Glasgow have presented Dr. J. S. Muir with a handsome dressing-case as an indication of their appreciation of his services as lecturer.

April 28th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Mourne Water Scheme for Belfast.

IT was in August, 1893, that the Belfast Water Act, which authorises this new scheme, received the Royal Assent. It is to supplement the present supply of water from Carrickfergus on one side of the city and Stoneyford on the other. At present the resources of the water commissioners give 11,000,000 gallons of water per day, and this, it is thought, will supply the city of Belfast under the usual circumstances until 1900. But the demand for water, owing to the remarkable growth of the city, is increasing every week, and the new Mourne supply will not be ready a day too soon. The Mourne gathering-ground contains over 9000 acres, and is at present drained by the two rivers Kilkeel and Annaling, which empty into the sea at the small towns of the same names in the southern part of county Down. Large reservoirs will be constructed in this area, which, if necessary for the city, can be doubled. At present the Commissioners are proceeding to construct the main aqueduct between the Kilkeel river and the Knockbracken service reservoir, which will be within a few miles of Belfast. This aqueduct will be 35 miles long, and while ultimately capable of taking the full product of the Mourne district—30 million gallons of water per day—the syphons will at first be laid with single pipes, which will carry 10 million gallons per day. Of the whole length of this aqueduct there will be 7 miles of tunnel, 16 miles of cut and cover, and 12 miles of syphon pipes, all 36 in. in diameter. The service reservoir at Knockbracken, about 5 miles from Belfast, the capacity of which will be 90 million gallons, is now in the process of construction (the contract is £35,000). From it the water will be conveyed under pressure by large mains to Belfast. The firm which is building the reservoir is also constructing 11¼ miles of the main aqueduct between the reservoir and a point about two miles from Ballynahinch. Of this aqueduct one-third will be tunnel (it will be the longest work of the kind in Ireland, about 3½ miles), another cut and cover, and a third cast-iron syphon pipes. At present the men are busy at this tunnel and the other parts of this portion of the aqueduct, and it is to cost £153,000. The pipes for the syphons are being made in Glasgow and will cost £21,000. The inlet ends of these pipes will be controlled by automatic valves, and by means of these the water will be immediately cut off in case of a breakage in any part of the syphon, thus reducing the chances of possible damage. Within the last few weeks the other end of the aqueduct—the Newcastle section—which begins at a place well known to tourists, the Bloody Bridge, and which covers about 11¼ miles in all, being made up of 7 miles syphon, 2 miles of cut and cover, and 2¼ miles of tunnel, the last-named passing under the highest of the Mourne range of mountains, Slieve Donard, was contracted for by a Belfast firm, the amount being £95,000. Work at this part will shortly begin, and in a few weeks about two-thirds of the whole length of the aqueduct, as well as the service reservoir, will be under construction. It will not be long before Belfast has a water-supply equal to its extraordinary size and rapidly increasing growth.

Queen's College, Belfast.

For some time it has been felt that the usual time of commencing the winter session at Queen's College, Belfast, has been too late; it has therefore been decided that next year, 1896-97, the medical classes will begin on Oct. 20th

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and terminate on March 31st. The present summer session begins on May 1st. Two additional lecturers will shortly be appointed by the College council on Ophthalmology and Hygiene, as it is necessary that a course of lectures should be given next year in these subjects in order to qualify students for the examinations of the Royal University of Ireland.

Triennial Visitation at the Queen's College, Cork.

The triennial visitation was held on Tuesday last at the Queen's College, Cork, and, as had been expected, the Visitors present were Mr. Justice O'Brien (chairman), Dr. Grimshaw (President of the Royal College of Physicians of Ireland), and Sir W. Thornley Stoker (President of the Royal College of Surgeons in Ireland). The only appeals made to the Visitors were those of the Medical Students' Association, and had reference mainly to the anatomical department. The requests coming under that head were the following: that the dissecting-room should be open from nine o'clock to six o'clock instead of being closed at four o'clock as is the case at present; that the dissecting-room ought to be kept open during the summer session; that the number of demonstrators should be increased; that students who had already attended the requisite number of courses of anatomy should be allowed to dissect on paying a reduced fee; and that students similarly circumstanced should have the privilege of visiting the dissecting-room without being obliged to pay any fee. The Visitors considered that the dissecting-room ought to be kept open until six o'clock, and they referred back to the Council the question of having dissections included in a summer session. Sir W. Thornley Stoker was very strongly of opinion that it would be better to have one demonstrator who would devote his entire time to his duties rather than that the responsiblity should be divided between three or four, whose attention would probably be more or less absorbed by private practice in the city, and the Visitors decided accordingly. With regard to the payment of a reduced fee for dissections the Council had ruled that they were not in a position to interfere, but Mr. Justice O'Brien interpreted the statute of the College bearing on the subject differently, and the Visitors decided that whilst they considered a fee of £3 a moderate one for an ordinary course of dissections a student not requiring a certificate should be allowed to dissect on paying £2, plus the ordinary dissecting-room expenses. With reference to the admission to the dissecting-room of students who did not propose to take out a further course of dissections Sir W. Thornley Stoker stated that all teachers of anatomy are opposed to such a procedure as one calculated to interfere with the discipline of the dissecting-room, and he incidentally mentioned that such students are in Dublin called "navigators." The learned judge, when giving the decision of the Visitors, humourously said that they could give no assent to that kind of navigation. After some other questions had been considered Mr. Justice O'Brien stated that although the natural zeal for change and improvement of the students had brought under their notice matters not unworthy their consideration, still they were constrained to say as their opinion that they had revealed very few defects of any kind existing in the institution, and such as were revealed were capable of correction by them. Referring especially to the medical school of the College he said: "There can be no doubt that this College of the city of Cork retains its distinction as a great medical school. It has already furnished a very large number of professional men to different parts of the world, and I am very happy to say that in the opinion of my colleagues, who have, by zeal and acquirements, obtained such high distinction in both branches of the medical profession, this school of medicine and surgery in the city of Cork furnishes the means and opportunity of instruction which cannot be exceeded in any similar institution in any part of the United Kingdom."

April 28th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

"Homicidal Explosion" in the Army.

WITHIN the last two years five cases of what Italian alienists classify as "homicidal explosion" have occurred in garrison life throughout the kingdom and a sixth was added to the number yesterday. This was at Palermo, where a private soldier named Fagioli of the 39th Battalion of Africa, in convalescence with several comrades in the regimental infirmary, suddenly seized a loaded rifle and discharged it at his corporal, who had just entered. Fortunately the intended victim's cap received the shot, no further injury being done; but before this was ascertained Fagioli's comrades fled in panic, followed by the corporal, while Fagioli barricaded himself in the room. There he remained, meeting all requests to open the door with the threat that he would shoot dead the first man who entered. Another door admitting to the room was then forced and Fagioli fired no fewer than twelve shots at the soldiers as they appeared at the doorway, but without inflicting any wound. He was then fired upon in turn, four bullets lodging in his head and spine, and thereafter conveyed to the hospital in a dying state. His motives can only be guessed at. All that is positively known of him is that he was a neurotic subject, of "cattivi precedenti" (bad record), and had undergone several terms of punishment for previous convictions. The Italian War Office has for some time been in conflict with medical authority as to how to view these cases and how to prevent their recurrence. Before the military court where they have been tried expert evidence by some of the first alienists of the kingdom has been given, clearly showing by every test, anthropometric and other, that the delinquents were, each and all, "moral imbeciles" whom a properly qualified inspecting authority would have, *ab initio*, excluded from the service. But no; the medical witnesses were respectfully listened to and their findings quietly ignored; the delinquents were found guilty of breach of discipline of the most aggravated kind and shot through the back in presence of their comrades. The sentence, followed by summary execution, has proved absolutely without deterrent effect, and for reasons amply set forth by the medical witnesses. The delinquents were in their view morally irresponsible from defective organisation physically and perverted development mentally—conditions easily ascertainable by inspection on their entering the ranks. But such inspection is a long way from being recognised as feasible or tolerated as admissible by the War Office. The conscription has undoubtedly many drawbacks as compared with the voluntary system of the British Isles, and one of them is the danger of accepting moral defect or criminal propensity as a bar to service. For, say the military men, as the eligible recruit, to avoid the conscription, will injure hand or foot to disqualify himself, still more easily would he commit a crime or pose as a "moral imbecile" for the same end. To recognise such "antecedents" as a bar to military service would put a premium on crime in Italy, already far too prone without such temptation to indulge in it. There is force in this argument, but not enough to meet the contention of the anthropological school. Why not begin ten or twelve years earlier in the young conscript's life? Why not take him at, or just before, entering school and subject him then and there to the tests, anthropometric and other, which science has reduced to such perfection? I need not recapitulate the proposals submitted by the Sub-Alpine and Lombard medical authorities particularly to the Education Office as worthy of being put in practice in the elementary schools throughout the kingdom. These have from time to time been published in THE LANCET and vindicated from the charge of "Utopianism" inconsiderately brought against them by the lay public. *Principiis obsta* holds good in the moral development as well as in the physical, and the whole future of Italian life, whether of the civilian or the soldier, is bound up in its due and vigilant observance. With "a murder every two hours" in civil life, and such wholesale outbursts of homicidal impulse as those of Misdea and other "moral imbeciles" admitted to service and to the use of lethal weapons, the wonder is that Italian population maintains the yearly average statistically noted, and that the annual loss of life in barracks and on a peace footing is not proportionally greater than that caused in a hostile country and on the stricken field.

April 26th.

THE seventh ordinary general meeting of the Sanitary Inspectors' Association (session 1895–96) will be held on Saturday, May 2nd, 1896, at 6 P.M., at Carpenters' Hall, Throgmorton-avenue, E.C.

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NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

"Filled Cheese."

CONGRESS is engaged in the discussion of a Bill for the regulation of the manufacture of what is known as "filled cheese." This article, of which upwards of 12,000,000 lb. were manufactured last year, is an imitation of cream cheese and has been sold in the market as such. It is the result of the new method of separating the fatty substance from the new milk by centrifugal force and substituting other fats in the milk thus relieved of its natural fat. After taking leaf lard and subjecting it to a certain heat so that it becomes oil, and mixing a certain number of pounds of that with a hundred pounds of this milk, the subsequent process of manufacture is the same as that of other cheese. At different stages of the development of this industry various other fats and oils have been used, including oleo oil, margarine, cotton oil, and unmerchantable butter, as well as others still cheaper and of doubtful origin. In the process of manufacture the bulk of the milk is raised to the same temperature as in making ordinary cheese, while part of the milk and all of the lard are raised to a temperature of at least 200° F. The liability to use raw materials containing the germs of disease is about the same in making genuine cheese as in making filled cheese. The filled cheese is made and placed on the market without any brand or marking indicating its real nature. The sole object to be obtained by legislation is to prevent fraud by compelling the manufacturer to place on the package of filled cheese the name of the article.

The Vomito in Cuba.

According to recently published statements it appears that the greatest losses suffered by the Spanish army in Cuba are caused by the vomito, a disease which is a kind of yellow fever and which is deadly to the people and soldiers newly arrived on the island. From March 1st, 1895, to the present date the number of deaths in the military forces sent by Spain to suppress the Cuban revolution amounts to 3877. No less than 3190 of these deaths were caused by the terrible vomito. The rest were caused as follows: 886 men were killed on the battlefield, 119 died from wounds received while fighting, and 282 died from ordinary diseases. If this statement is correct the mortality did not exceed 4 per cent., which is much below that of the late war in this country and that of the French troops in Tonquin and Madagascar.

The Medical Corps of the Navy.

The Surgeon-General of the United States Navy has made some interesting statements in his annual report for 1895. When the corps is full it numbers 170 men, but it is very difficult to maintain a full corps. An examining board is constantly in session, but it fails to supply the needed members for two reasons—viz., first, because of the scarcity of applicants; and, secondly, because of the incompetency of those who do apply. Of the nineteen who applied last year but four passed a satisfactory examination, though the examination was not severe. These facts seem to prove that the naval service is more unpopular than other branches of the public service which have a medical corps. It is alleged by those who are familiar with the naval service that the position of the medical corps is humiliating as compared with that of other departments. The naval surgeon enters the service on a lower plane than does the army surgeon. For three years he is confined to the steerage and cannot mess with his profession. He can retire on a pension only after forty years of service, while the army surgeon may retire after thirty years of service. Finally, his rank is inferior to that of other officers and his promotion is correspondingly slow. A Bill is before Congress to improve the efficiency of the naval service, but the provisions in regard to the medical corps do not materially change its status.

Diphtheritic Palsies after the Use of Antitoxin.

The physician to the Hospital for Diphtheria in New York states that from time to time cases of general paralysis have followed diphtheria treated with antitoxin. In the last three months there have been two cases. One, an adult, had general weakness due to partial paralysis in all voluntary muscles so that she could not walk for three months; the other, a child, developed paralysis in some of the muscles of the lower limbs. In a third case paralysis of the muscles of the eye occurred. In a few paralysis of the palate or pharynx develops after the separation of the membrane. He states that more cases of paralysis occur now than formerly, but thinks this is due to the fact that a class of patients recover now who formerly died. He adds that patients who would recover without antitoxin will show less paralysis with antitoxin than without it.

Alien Paupers.

The State of New York has an agency devoted to the arrest of all persons who are paupers and their commitment temporarily in order to determine their proper settlement. When their homes are made out they are immediately sent there, whether in this country or abroad. Since the law went into effect 2632 permanently disabled paupers have been removed to European homes. It is estimated that if these people had been allowed to remain in this country, a charge upon the public, buildings would have to be erected for their shelter equal to the requirements of the poor of a population of 600,000, involving an outlay therefore of at least $500,000, and an ultimate expenditure for their maintenance and care of about $3,948,000. These removals have been openly conducted, and no well-founded complaints have been made by the relatives, guardians, friends, or European communities to which they were sent, and but three of those thus removed have reappeared in this State.

April 18th.

THE CONGRESS OF MEDICINE IN WIESBADEN.

THIS Congress was opened on April 8th, Professor BAÜMLER of Freiburg being in the chair. The members were welcomed by the President of the district on behalf of the Government and by the Mayor of Wiesbaden as the representative of the town.

In his presidential address Professor BAÜMLER said that the Congress held at Munich in April of last year must be regarded as a landmark in the history of these gatherings, inasmuch as the use of diphtheria antitoxin—the most remarkable therapeutical discovery of the age—was there discussed for the first time in detail by the most competent physicians of Germany. It must not be forgotten, however, that efforts to render the human body immune against the influence of morbific agents and to cut short pathological processes were of much earlier date, and, in fact, had their first successful application in the great discovery of Jenner. The present year being the centenary of Jenner's first successful vaccination the Congress was now about to honour the memory of this event so important in the history of medical progress.

The Prophylactic Influence of Vaccination.

Professor VON LEYDEN of Berlin then delivered an address on Vaccination, in which he said that the immense mortality from small-pox was never reduced by any of the measures that were adopted before the time of Jenner, even the most thorough isolation of the sufferers being powerless to prevent the spread of the infection. In the eighteenth century one-tenth of the entire mortality in England was due to small-pox, and in France it caused 300,000 deaths every year, while those who recovered from it were greatly disfigured and often rendered totally blind. Several palliatives were in use, the most noteworthy being the so-called variolation or inoculation of healthy persons with the contents of small-pox pustules. This practice was undoubtedly a step in the right direction, and up to the year 1758 more than 200,000 people were treated in this way, but it was ultimately abandoned altogether, as it was sometimes attended by serious results and inevitably tended to maintain and propagate the disease. Jenner, then, was the first, not only to prove that cow-pox acts as an antitoxin against small-pox, but also that the small-pox virus becomes weakened or strengthened by inoculation on and from different species of animals—a fact which has in our own day been confirmed by Pasteur. Jenner's opinion that a single vaccination would confer life-long protection was not borne out by experience, and it was now known that the operation must be repeated after the lapse of ten years. Modern improvements in the methods of vaccinating and revaccinating, and the exclusive use of animal lymph, which is the rule in Germany, ought to disarm the hostility of the

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anti-vaccinationists. Jenner had to struggle against prejudice and opposition, and even now there are people who declare that vaccination is useless and injurious; but we all know that Jenner's work was a blessing to humanity and has been the starting-point of all the modern discoverers, of Pasteur, Koch, and Behring.

Antipyretic Drugs.

Professor KAST (Breslau) said that recent researches had shown that in infectious diseases the danger to the patient was due not so much to the elevation of temperature as to the direct effects of the specific virus. There are even reasons for believing that pyrexia may possibly be a natural remedy provided by nature against the toxines. We now try to destroy the toxines by applying their specific antidote or antitoxin. No antipyretic drugs have any specific action against the toxines except quinine, which is in reality a specific antidote against malaria. Antipyretic drugs, however, have their proper place in therapeutics and cannot be dispensed with on account of their power of mitigating several grave symptoms, especially those which involve the nervous system, such, for instance, as insomnia. In these circumstances Professor Kast considers antipyrin to be the best remedy.

Professor BINZ, speaking as a pharmacologist, discussed some of the most commonly employed antipyretic drugs, such as quinine, antipyrin, salicylic acid, and thallin.

Professor JAKSCH (Prague) agreed with Professor Kast that the principal value of these drugs consisted in their tranquillising influence.

Dr. DETTWEILER (Königstein) recommended their use in phthisis when want of appetite caused by the fever makes the nutrition of the patient difficult.

Rheumatoid Diseases.

Professor GERHARDT (Berlin) directed the attention of the meeting to a group of diseases which are clearly distinct from acute rheumatic fever, but are nevertheless characterised or attended by morbid alterations in the joints, and include scarlet fever, diphtheria, typhoid fever, influenza, syphilis, gonorrhœa, &c. He specially mentioned acute tonsillitis (angina lacunaris), in which there often is an affection of the joints very like acute rheumatic fever. All these complications he proposed to classify as rheumatoid.

APRIL 9TH.

Immunisation against Cholera and Typhoid Fever.

Professor GRUBER (Vienna) described his recent experiments on the production of immunity against cholera and typhoid fever. He has found that the serum of guinea-pigs immunised by the inoculation of living or dead cultures of the bacilli of cholera or typhoid fever is able to immunise other animals. If cultures of bacteria are mixed with this immunised serum these bacteria become altered in a very remarkable way, losing their mobility and collecting in masses. This state is called by Professor Gruber agglutination, and it is produced by cholera or typhoid fever serum not only with the bacteria of these diseases but also with a number of other bacteria. At the normal temperature the serum not only agglutinates the bacteria, but destroys them; if the serum is raised to 60° C. (140° F.) it loses its bactericidal quality and only retains the agglutinating one, but when a drop of fresh serum is added the bactericidal quality at once reappears. According to Professor Gruber immunisation assists the action of the natural bactericidal substances which are contained in the serum (the alexines of Dr. Buchner). He considers that this action is efficient against any kind of bacteria, and he opposes the views of Professor Koch and his school, who maintain that the serum of an immunised animal acts only against one specific kind of bacteria, so that, for instance, cholera serum is effective only against the bacillus of cholera.

In the ensuing discussion Professor PFEIFFER (Berlin), chief of Professor Koch's laboratory, stoutly upheld his opinion that a specific bacterium can only be destroyed by a specific antitoxin. The agglutination described by Professor Gruber is merely a consequence of the degenerating influence of a specific antitoxin on specific bacteria.

Dr. BLACHSTEIN argued that the so-called active and latent virulence of bacteria must be better distinguished. The latter varies according to the nature of the nutrient medium in which the bacteria are growing.

The Heart and the Vaso-motor Apparatus in Infectious Diseases.

Dr. PAESSLER (Leipzig) read a paper on the Action of the Heart and the Vaso-motor Apparatus in Infectious Diseases. He has found, together with Professor Romberg, that the lowering of the blood-pressure in grave cases is due to a paralysis of the vaso-motor nerves consequent on a paralysis of the centre in the medulla oblongata, whilst the cardiac power is not obviously damaged.

Paracentesis of the Spinal Canal.

Professor LENHARTZ (Leipzig) in a communication on Surgical Puncture of the Spinal Canal said that he considered it to be an operation of great diagnostic and therapeutic value. As a means of diagnosis it enables us to make a bacteriological and microscopical examination of the fluid contained in the theca and to ascertain its specific gravity. The operation has never had any unfavourable influence on the patient's health, and has been successfully performed in acute serous meningitis, in chronic tuberculous meningitis, in the so-called epidemic cerebro-spinal meningitis, and in hydrocephalus.

Dr. KRÖNIG, Dr. EWALD, Dr. GOLDSCHEIDER (Berlin), and Professor QUINCKE (Kiel) agreed with Professor Lenhartz that the operation might be of practical utility if cautiously employed. It was described in THE LANCET about a year ago.[1]

Absorption of Ferruginous Compounds.

Professor QUINCKE (Kiel) described his recent experiments on the absorption and excretion of ferruginous compounds by the organism, a question already discussed in detail at last year's meeting of the Congress in Munich.[2] He has been able to prove that in guinea-pigs and rats iron is taken up by the duodenum, jejunum, ileum, and cæcum through the epithelial cells. The absorption of iron is thus very like that of fat.

Dr. SIEGFRIED (Rippoldsau) pointed out that these experiments were a definite proof that iron is an assimilable remedy, a clinical fact long known to all practitioners. He hoped that the contrary views expressed at the last Congress were now finally disposed of. He then referred to the successful treatment of chlorosis by means of ferruginous preparations combined with residence in mountainous localities.

(To be continued.)

Medical News.

CAMBRIDGE UNIVERSITY.—The following candidates have satisfied the examiners in both parts of the examination of Sanitary Science:—

Henry William Beach, Joseph John Guthrie Blandford, George Fletcher Collins, Jonathan Nield Cook, Frederick James Crawford, James Entrican, Alfred Ernest Evans, Charles Arthur Kent, Arthur Martin Mitchell, Frederick William Sell, Arthur John Sharp, Henry Thomson, William Booker Vance, and Charles Louis Williams.

UNIVERSITY OF DURHAM: FACULTY OF MEDICINE.—In the first examination for the degree of M.B. the following candidates have passed in the subjects indicated:—

Chemistry with Chemical Physics, and Botany with Medical Botany.—Alfred Thornhill Greenhill, College of Medicine, Newcastle-upon-Tyne.

Chemistry with Chemical Physics.—John Harris, B.A., Sydney University; Herbert Robert Cambridge Newman, Bristol Medical School; George Norman, M.R.C.S., L.R.C.P., Westminster Hospital; Vaughan Pendred, M.R.C.S., L.R.C.P., Guy's Hospital; George Woodyatt Procter and Robert Alfred Wilson, College of Medicine, Newcastle-upon-Tyne; and Maurice Frederick Squire, M.R.C.S., L.R.C.P., St. Mary's Hospital.

Elementary Anatomy and Physiology.—John Henry Martin and Fred Sutton, College of Medicine, Newcastle-upon-Tyne.

In the first examination for the degree of M.B. under the new regulations the following candidates have passed in the subjects indicated:—

Elementary Anatomy and Biology, Chemistry, and Physics.—Honours: First Class—Richard Henry Dix, College of Medicine, Newcastle-upon-Tyne. Second Class—Ernest Frederick Wharton Bywater, Mason College, Birmingham; and Fred Stuart, College of Medicine, Newcastle-upon-Tyne. Pass List: Ernest Bertram Appleby, Harry Armstrong, Solomon Cross, Maurice Jacobs, and Edward Norman Threlfall, College of Medicine, Newcastle-upon-Tyne.

Elementary Anatomy, Chemistry, and Physics.—Frederick Day Welch, London Hospital.

Anatomy and Biology.—Arthur Hugh Bunting, Hubert Wolstenholme, Horan, John Robert Mitchell, John Ernest Sidgwick, and David

[1] THE LANCET, April 20th, 1895, p. 1022.
[2] THE LANCET, April 27th, 1895, p. 1008.

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Henderson Weir, College of Medicine, Newcastle-upon-Tyne; and Margaret Joyce, London School of Medicine for Women.

Chemistry and Physics.—Alan Ayre-Smith and Edward Hovendon Burleigh Barlow, Guy's Hospital; Percy Francis Alderson, Middlesex Hospital; Laurence James Blandford, Clifford Harold Brookes, Sydney John Snow Cooke, Charles Henry Gibson, Arthur Hines, Hugh Robert Kendal, Eliot Swainston, and John Charles Velenski, College of Medicine, Newcastle-upon-Tyne; Arthur Russell Baker and Robert Walker, St. Bartholomew's Hospital; Edleston Harvey Cooke, St. Thomas's Hospital; Selina FitzHerbert Fox and Claudia Anita Prout Rowse, London School of Medicine for Women; Robert James Pearson, Edinburgh School of Medicine; and Thomas Basil Rhodes, Mason College, Birmingham.

Chemistry.—Wm. Henry Isaacs Bathurst, King's College Hospital.

Anatomy.—Harold Robert Dacre Spitta, St. George's Hospital; and Frank Wheler Sime, Guy's Hospital.

In the second examination for the degree of M.B., the following candidates have passed in the subjects indicated:—

Anatomy, Physiology, and Materia Medica.—Honours—Second Class: Maurice Frederick Squire, M.R.C.S., L.R.C.P., St. Mary's Hospital; Herbert Robert Cambridge Newman, Bristol Medical School; Robert Lowis Routledge, College of Medicine, Newcastle-upon-Tyne; Vaughan Pendred, M.R.C.S., L.R.C.P., Guy's Hospital; and James McConnell and Lawrence Fielder Hemmans, College of Medicine, Newcastle-upon-Tyne. Pass List: John Thomson Bell, Thomas Ponsford Cann, Leopold Stanley Davison, Henry Edward Davison, Henry Adamson Fielden, Thomas Harold Gibbs, Douglas Hethcote, Robert Atkinson Morland, Harold Turner Newton, Claud Maxwell Pennefather, Maurice Dale Wood, Allan Mackie Garnock Walker, and Thomas Blandford Watson, College of Medicine, Newcastle-upon-Tyne; Wm. Henry Isaacs Bathurst, and Ernest Castleigh Bailey, King's College Hospital; William James Codrington, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; Francis Gerrard Hamilton Cooke, and Thomas Stokoe Elliot, Cooke's School of Anatomy; Samual Percy Johnson, Mason College, Birmingham; and George Norman, M.R.C.S., L.R.C.P., Westminster Hospital.

Anatomy only.—Charles Augustus Vogwell, College of Medicine, Newcastle-upon-Tyne.

UNIVERSITY OF EDINBURGH.—The following candidates have passed the examinations indicated below:—

Second Professional Examination for the Degrees of M.B. and C.M. (Old Ordinance).—F. T. H. Adamson, H. L. Apthorp, A. B. Blair, E. L. Borthwick, C. W. Breeks, F. W. Broadbent, D. A. Cameron, M. N. Choudhuri, A. W. G. Clark, D. E. Dickson, J. H. S. B. Douglas, D. L. Fisher, R. M. Gibson, W. H. Goldie, T. P. Greenwood, James Grieve, F. S. Harper, A. G. Hayden, Robert Irvine, A. L. de Jager, Leslie Kingsford, J. S. Lyle, B. A. M'Gregor, J. M. Macgregor, R. F. Mudie, B. N. Mullan, Sarat Mullick, W. D. Osler, D. J. Peirson, G. M'D. Pratt, Oswald Raitt, C. R. Scott, D. C. Sethna, T. B. Schoolbread, E. L. Starmer, J. F. Strickland, J. T. Titterton, W. A. C. Ussher, Henry Waters, G. F. Waterston, and M. B. Wright.

Second Professional Examination for the Degrees of M.B. and Ch.B. (New Ordinance).—John Alcindor, A. J. T. Allan, James Allison, A. S. Allum, J. R. Anderson, H. L. S. D. Belasco, William Bell, J. M. Bowie, Stanley Branch (with distinction), C. S. Brebner, R. N. Brebner, H. H. Broome, James Burnet, M.A., John Cameron (with distinction), J. A. Craig, William Craig, Robert Cumming, J. M. Cuthbert, L. J. M. Deas, George Dick, R. J. Dick, W. H. Dickinson, J. B. Dods, F. H. Dommisse, W. S. Eaton, Duncan Forbes, A. D. Fordyce, A. T. Galleton, Robert Gibson, J. D. Gilfillan, Andrew Gilmour, Alexander Goodall, A. M. Green, W. G. Heath, T. E. Hincks, H. T. Holland (with distinction), C. A. B. Horsford, B. S. Hyalop, W. J. Jones, A. H. Keun, G. E. J. King, G. de Lebat, B. W. Lewis, George Lyon (with distinction), J. C. M'Conaghey, Edward M'Culloch, W. C. M'Donald, John M'Gibbon, J. W. M'Intosh, D. V. M'Intyre, M.A., W. E. M'Kechnie, R. W. M'Kenna, J. W. Mackenzie, T. D. M'Laren, J. W. Mathewson, J. A. Murray, B.Sc., J. H. P. Paton, W. M. Paul, M.A., C. M. Pearson, G. B. Pemberton, A. H. Pirie, Robert Pugh, J. A. Raeburn, H. S. Roberts, A. A. Robinson, A. C. Sandstein (with distinction), R. F. M'N. Scott (with distinction), J. A. C. Smith, Ward Smith, G. H. Stewart, Henry Taylor, David Wardrop, W. C. Wilson, and G. J. Young.

Anatomy and Physiology of the Second Professional Examination.—W. M. Barker, Robert Bruce, Robert Crawford, E. F. Cyriax, C. L. Dunn, R. W. T. Ewart, F. B Feast, J. M. Fraser, H. E. Gibbs, A. A. Gunn, W. E. Hutchison, P. L. M'All, A. C. M'Gilchrist, Robina M'Gregor, G. A. Mackay, William M'Kay, M. B. Marshall, T. R. Matthews, W. P. Meldrum, Faith Philpot-Crowther, J. H. Rhodes, Edgar Somerville, W. B. Tellet, R. le Verley, Henry Wade, and D. C. Wallace.

Third Professional Examination for the Degrees of M.B. and Ch.B.—B. R. Aldren, V. G. Alexander, T. R. W. Armour, E. P. Baumann, Thomas Biggam, R. B. Black, H. F. Boland, William Burns, M.A., R. C. Cunningham, David Clow, C. M. Cooper (with distinction), L. W. Davies, James Donaldson, G. L. Findlay, James Forrest, J. S. Fraser, George Gatenby, Andrew Gibson, William Hamilton (with distinction), Rowland Hill, G. B. Hollings, Patrick Kinmont, A. B. MacCarthy, T. J. T. M'Hattie, J. L. M'Innes, John Malcolm, William Martin, J. D. S. Milln, F. W. More, R. G. Riddel, J. D. Slight, M.A., W. M. A. Smith, W. R. Somerset, J. W. Struthers, G. A. Vincent, W. M. Wilson, and A. G. Worrall.

Robert Sproule has passed the first professional examination in addition to the candidates whose names have already been published.

UNIVERSITY OF ABERDEEN.—WINTER SESSION 1895-96.—University Gold Medals have been gained by the following students:—

Fife Jamieson Memorial Gold Medal in Anatomy, John J. R. Macleod; Keith Gold Medal for Systematic and Clinical Surgery, Robert Bruce, M.A.; Shepherd Memorial Gold Medal for Systematic and Practical Surgery, Henry J. M'Grigor; Matthews Duncan Gold Medal in Obstetrics, C. A. Barclay Laing, M.A.; and Dr. James Anderson Gold Medal in Clinical Medicine, William Hunter.

The following candidates have passed the examinations for the degrees indicated below:—

Degree of B.Sc.—William Shepherd Laverock, M.A., Aberdeen (with highest honours).

Degree of M.D.—William Henry Clark, M.B., C.M., Aberdeen; David Macdonald Davidson, M.B., C.M., Surgeon-Captain, Indian Medical Service; Ashley Watson Mackintosh, M.A., M.B., C.M., London (with highest honours); Cyril James Mansfield, M.B., C.M., Surgeon, R.N., H.M.S. *Anson*; Arthur Henry Rideal, M.B., C.M., Brooks's Bar, Manchester; William Ross, M.B., C.M., Leeds; James Wilson, M.A., M.B., C.M., Wilts County Asylum, Devizes (worthy of commendation); and John Thomson Wilson, M.B., C.M., Inverclyde, Bothwell (under the New Ordinances; worthy of commendation).

Degrees of M.B. and C.M.—Clifford Thiselton Bell, Aberdeen; George Brown, Aberdeen; David Buchan, Aberdeen; William John Byres, M.A., Aberdeen; Robert Fraser Campbell, Wark-on-Tyne, Northumberland; George Chalmers, Huntly; Clarence Isidore Ellis, Mannamead, Plymouth; William Archer Irvine Fortescue, Kingcausie, Maryculter, near Aberdeen; Andrew Thomas Gage, M.A., B.Sc., Aberdeen; John Lyall Grant Gillanders, London; James Leslie Gordon, Old Aberdeen; John A. Alex. Gordon, M.A., Gordonville, Dingwall; Patrick Grant, M.A., Grantown-on-Spey; Thomas Harper, Netherton, Insch, Aberdeenshire; Francis Irvine, Aberdeen; John Grant Jones, Glenlossie, Elgin; Charles Alex. Barclay Laing, M.A., Pitsligo, Fraserburgh; James Alexander Mearns, Kinellar, near Aberdeen; James Adam Milne, M.A., Aberdeen; Hugh Osborne, Kirkcudbright; Alexander Presslie, Aberdeen; Archibald Ramsay, Stonehaven; Andrew Richardson, Aberlour-on-Spey; George Brebner Scott, Peterculter, Aberdeenshire; Henry Sinclair, Ashfield, Cults; James Ramsay Smith, M.A., Ellon; George Stephen, Ellon; George Irvine Thompson Stewart, M.A., Banchory, near Aberdeen; Andrew Thomson, Elgin; Andrew George Anderson Thomson, M.A., Keith (with honourable distinction); Frederick Mayfield Tindall, Fraserburgh; Alexander Watt, Stonehaven; Thomas Duncan Webster, Old Aberdeen; Charles Frederick Weinman, Colombo, Ceylon; and James Strachan Wilson, Aberdeen.

John Geddes Pirie, Buckie, has passed the examinations for the degrees of M.B. and C.M., but will not graduate until he has attained the necessary age.

Degrees of M.B. and Ch.B. (under the New Regulations).—Peter Mackessack, B.Sc., Kinloss, Forres.

The Diploma in Public Health has been conferred on William E. G. Duthie, M.A., M.B., C.M., Woodside, Aberdeen; Alex. Robb, M.A., M.B., C.M., Peterhead (with credit); and Charles L. Swaine, M.D., Indian Medical Service, Madras.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Drs. Köppen, Thierfelder, and Nasse have been promoted to Extraordinary Professorships of Psychiatrics, Physiological Chemistry, and Surgery respectively.—Dr. Oestreich has been recognised as *privat-docent* in Pathological Anatomy.—*Marburg:* Dr. A. Barth has been promoted to an Extraordinary Professorship of Surgery.—*Rostock:* Dr. Barfurth of Dorpat has been appointed to the Professorship of Anatomy and to the Directorship of the Anatomical Institute in succession to the late Professor von Brunn.—*Strassburg:* Dr. J. Klein has been recognised as *privat-docent* in Midwifery and Gynæcology.—*Toulouse:* Drs. Pénières, Rémond, Saint-Ange and Broemer, have been appointed to the chairs of External Pathology, Clinical Mental Diseases, Therapeutics, and Materia Medica respectively.

LEEDS GENERAL INFIRMARY.—The new operating department of the Leeds General Infirmary will be erected on the site of the structure which it will supersede, the available area being about 52 ft. by 58 ft., and it will consist of nine rooms, with a general entrance lobby which opens on to the landing of the principal staircase. According to the designs of the architect, Mr. W. H. Thorp of Leeds, these rooms include two operating theatres, each about 20 ft. by 23 ft., communicating with one another through the entrance lobby and also through the instrument room, which measures about 14 ft. by 16 ft. and lies between them, having two doors opening one into each theatre. Two anæsthetic rooms, each about 12 ft. by 16 ft., are arranged one for each theatre, and they lead also each into a separate waiting-room which opens on to the landing of the staircase, so that there are three doorways giving access to the stairs. The remainder of the nine rooms are the recovery-room and the surgeon's room. The division walls will be brick, and the woodwork chiefly teak. The floors of the two theatres and the instrument room will be terrazzo, and the walls will be lined from floor to ceiling with opaline, a substance which has been used in France for this purpose, but not hitherto in England; it is said to be composed of an exclusively mineral enamel in a completely vitrified state, and to be unaffected by acids, frost, or damp. The lining of these three rooms is estimated to cost about £360. They will have roof lights in addition to front and side windows, and the remaining portions of the roof will be concrete. The ventilation will be on the plenum or propulsion system, and the lighting will be by electricity. The entire cost will probably be from £4000 to £5000.

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THE treasurer of Guy's Hospital has received a donation of 100 guineas towards the special re-endowment fund from the Liebig's Extract of Meat Company, Limited.

"NATURE" of Thursday next, May 7th, will contain, as an addition to the Science Worthies Series, a Life and an Appreciation of Sir Joseph Lister, P.R.S. The latter will be by Professor Tillmanns of Leipzig. A photogravure portrait of Sir Joseph Lister will accompany the articles as a supplement.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.—The William Tite Scholarship has been awarded to Mr. C. F. Selous; the Peacock Scholarship to Mr. J. Gaff; the Musgrove Scholarship, Second Tenure and First College Prize, to Mr. H. E. Hewitt; the Mead Medal for Practical Medicine to Mr. A. W. Sikes; the Cheselden Medal for Surgery and Surgical Anatomy to Mr. J. P. Scatchard; and the Treasurer's Gold Medal to Mr. J. P. Scatchard.

FOOTBALL CASUALTIES.—On the 25th ult., in a Cup-tie match, Kensal St. Mary's against the Old Antonians, a player fractured the fibula of his left leg.—On the same day, in a game on Holbeck Moor, Leeds, a player sustained a fracture of his leg, and was taken to the General Infirmary. A Cumberland player, aged twenty-four years (a forward), while playing for Cumberland at Workington, in the county championship match against Yorkshire, was injured by a blow on the back of the head behind the right ear. He did not feel any immediate effect and continued playing, but subsequently was admitted to the Cumberland Infirmary, where he underwent two operations. He so far recovered as to be able to leave the infirmary, but had a relapse, and died at home, in Carlisle, on Sunday last.

THE LONDON LOCK HOSPITAL AND RESCUE HOME.—The annual report of the London Lock Hospital and Rescue Home for 1895 is of an encouraging character, although the state of the finances does not yet permit the reopening of two wards belonging to the hospital and containing about 40 beds which have now been unoccupied for some years. On Dec. 31st, 1894, there were 41 inmates in the Home, and 66 were admitted during 1895. The matron has no difficulty in obtaining situations for the girls who have passed through the Home. The quality of the work done in the laundry gave general satisfaction, and the amount thereby earned was £1120. There were 709 admissions into the hospital during the year, some of them being very young girls and others being married women. The indebtedness of the charity was £5119 on Dec. 31st, 1893, but this large deficit has now been reduced to £302.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—The forty-seventh annual meeting of the governors of the Wolverhampton and Staffordshire General Hospital was held at the Bell Medical Library on March 10th. The report stated that the number of in-patients treated during the past year has been 2078 (of these 946 were medical and 1132 were surgical cases), and the number of out-patients has been 14,742. The ordinary income for the past year has amounted to £7544 10*s.* 9*d.*, being an increase of £169 10*s.*, as compared with the previous year. The Hospital Saturday collections have amounted to £3320 17*s.* 5*d.*, being the largest sum collected since the inauguration of the movement twenty-two years ago, but the Hospital Sunday collections have decreased by £63 5*s.* 8*d.* The total expenditure for the year has amounted to £8107 4*s.* 2*d.*, as compared with £8082 5*s.* 11*d.* in the previous year.

THE MEDICAL SOCIETY OF LONDON.—The election of the officers and council for the session commencing October, 1896, will take place on Monday, May 11th. The following are the names of Fellows nominated for office by the council:—President: Reginald Harrison. Vice-Presidents: John C. Thorowgood, M.D., Charles B. Lockwood, Constantine Holman, M.D., and A. Pearce Gould. Treasurer: David H. Goodsall. Librarian: William Henry Allchin, M.D. Honorary Secretaries: George R. Turner and Robert Maguire, M.D. Honorary Secretary for Foreign Correspondence: Alban H. G. Doran. Council: John Anderson, M.D., C.I.E., Howard Barrett, William H. Battle, Frederick L. Benham, M.D., Robert L. Bowles, M.D., J. Mitchell Bruce, M.D., Henry H. Clutton, Sidney Coupland, M.D., Sir James Crichton-Browne, M.D., F.R.S., Sir Dyce Duckworth, M.D., F. de Havilland Hall, M.D., Henry E. Juler, Norman Kerr, M.D., Jonathan F. C. H. Macready, Edward J. Nix, M.D., James W. J. Oswald, M.D., Heinrich Port, M.D., Amand Routh, M.D., Joseph White, and Arthur K. Willis.

MESSRS. DUNCAN, FLOCKHART AND CO. of Edinburgh have opened a branch establishment at 38, Snow-hill, London, E.C.

PRESENTATIONS.—Mr. J. Leslie Callaghan has been presented with a gold watch (suitably inscribed) and an illuminated address as a token of respect and esteem from his patients and friends on his leaving Colyton. He was also presented with a barometer, with a suitable inscription on a silver plate, by the members of the Colyton Social Club in recognition of his services as president.—On April 22nd a handsome black marble timepiece was presented to Dr. H. Rogers-Tillstone by his ambulance and nursing classes, Clevedon, as a mark of their esteem.—Dr. H. J. Mackay of Devizes has been presented by the ladies attending the "First Aid" and "Nursing" classes, which he has recently given in connexion with the St. John Ambulance Association, with a handsome marble clock.—On the 18th ult. Dr. F. W. E. Hutchison, lately assistant to Mr. E. J. Parrott of Hayes, Middlesex, was presented with a gold medal by the inhabitants of that place.—Mr. John S. Forrest, L.R.C.P. Edin., L.F.P.S. Glasg., has been the recipient of a silver hunting flask from the members of the Warkworth Ambulance Classes as a token of appreciation of services rendered to them.

THE DIFFUSION OF SMALL-POX.—The records of the past two weeks serve to indicate that the disease is slowly spreading itself in the provinces. In London it remains quiescent at a low figure, the cases from week to week being now few in number. But attacks are occurring near at hand. At Guildford, after a scare created by the notification of an alleged case of small-pox in a tramp from Gloucester, which turned out to be in reality scarlet fever, a case of the graver disease has been found in the person of a tramp hailing from Westminster. Some stir resulted in the town, nurses were obtained, the case was isolated, and the authorities of Leatherhead were informed, the man having previously passed through that town. The patient died on Saturday last and was buried on the following Monday. Four cases have occurred at High Wycombe, the patients being workers in a paper mill who were brought into contact with rags stated to have come from Gloucester. The town council have been busy in the matter of a temporary hospital near the place, to the great dissatisfaction of the residents around the site of the structure. The guardians have by the casting vote of the chairman determined to enforce the Vaccination Acts, which have been in abeyance for three years, a large number of children having thus escaped vaccination. It is stated that no system of notification is in force in the town. High Wycombe would seem to be far behind the times in the direction of preparation for the stamping out of infectious disease. Much concern is felt lest there should be a widespread epidemic of small-pox there. A case of small-pox was recorded in Malmesbury last week, the victim having the disease mildly, after having been to and fro between Gloucester and Westport several times. The town was shortly after notification of the case placarded with posters urging people to seek vaccination and revaccination. At Gloucester the official returns for the week ended on Thursday, April 23rd, showed that in the week the new cases of small-pox coming to the knowledge of the town council were 168 in number, as against 211 and 201 in the preceding two weeks—a decided fall. These cases brought the grand total during the epidemic to 1470. The cases discharged from hospital in the week in question were 18 in number, the deaths in hospital being also 18, with other 25 deaths registered in the town; and 278 patients were left under treatment in the hospitals. It is satisfactory to have thus to record a decline in the manifestations of the disease, and this especially, seeing that the more insanitary parts of the city are now to some extent being invaded. Still, the disease does not seem to be on this account getting any stronger hold on the place, but rather the reverse. To the end of last week it is computed that 25,000 persons have been vaccinated during the epidemic, and it is stated that a large number of these have been vaccinated by one medical practitioner. During last week the vaccinations and revaccinations carried out at the public charge by the public vaccinators numbered 2231, a falling off from the total of the previous week. The authorities have not slackened their activity, however, in any way, and have had the advantage during last week and part of the present week of conference with Dr. Sweeting, from

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the Medical Department of the Local Government Board, that Board having sent him down at the request of the guardians. Much practical good seems to have resulted from his visit, as the problem of how best to secure the vaccination of the great number of residents still to be operated on seems to have been solved. The town council were not slow to assure the guardians that much more needed to be done than they were doing in this direction, and now the city has been mapped out in some dozen districts for house-to-house visitation purposes and vaccinators to a like number have been appointed for the better securing of domiciliary vaccination. Dr. Sweeting, it would seem, held conferences with committees and with the whole body of the guardians, and vaccination officers as well as medical men have been now for the past few days more busy than ever, the responsible duty of supervision being entrusted to Dr. Bond, the medical officer of the neighbouring combined sanitary district of Gloucestershire. We are glad that the guardians have been so fortunate as to obtain the services of such an experienced medical officer of health to superintend the heavy work still to be done. Dr. Sweeting in his last interview with the guardians pointed to the presence of 3000 unvaccinated helpless children in the city still, and it was for the protection of these innocents that extra help must speedily be forthcoming if they were to be saved from becoming victims to the dread scourge which was working such havock among the unprotected young. There seems a marked disposition on the part of the guardians to enforce the Vaccination Acts. The Ambulance Committee of the Metropolitan Asylums Board have complied with the request of the town council of Gloucester that they should allow Dr. Brooke of the Thames Ambulance Service to proceed to Gloucester to take charge of the hospital arrangements. The cost to Gloucester of the epidemic is estimated at some £12,000, and is to be met by a half-yearly rate of 9*d*. in the pound. Dr. Coupland is still carrying on his investigations on behalf of the Royal Commission on Vaccination. It is stated that no recently revaccinated person has contracted small-pox. Seeing that the Commission has so long delayed its report, it is as well that it should be in a position to add the weighty practical evidence of Gloucester to its records. The only danger is lest the rush for vaccination such as has been going on should have led to operations of an inferior class, thus casting discredit on vaccination by reason of only partial protection against small-pox being conferred. This is always a danger to be feared when public stations and other places are flooded by clamouring applicants for a too long delayed prophylactic measure. At Coventry the stations are now daily crowded with persons seeking vaccination for themselves and their children, calf lymph being exclusively used. Many private vaccinations are also being performed. The guardians of Scarborough also have resolved to enforce the Acts. At Neath a family of eight persons has been attacked by small-pox, and two brothers who strenuously refused to be vaccinated have died from small-pox. At Swansea a man has been summoned for concealing a second case of small-pox in his lodging-house, he having stated to daily inquiries that no further attack had followed the initial case. Last Saturday there were 18 cases in the hospital at Swansea, and three additional cases occurred last week, leaving 21 in the institution on Saturday last. Two cases are reported on the Mumbles lighthouse rock. Up to last Saturday there had been 26 cases of small-pox at Exeter, no less than 20 being traceable to a mild attack in a woman, the disease being for some time unrecognisable as small-pox. Of the 26 cases 6 were of unvaccinated persons, and these furnished the only severe attacks, though not one had then proved fatal. All the 4 cases under seven years of age were in unvaccinated children. The child of a travelling tailor has contracted small-pox at Narberth and has been removed to the workhouse together with the parents.

Parliamentary Intelligence.

CURRENT NOTES.

Irish Pauper Lunatics.

THE Poor Relief Bill for Ireland, which the Government hope shortly to be able to introduce, will deal with workhouse administration and in particular with the detention of the insane poor in workhouses.

Horseless Carriages.

The Government has introduced a Bill to meet the difficulty with regard to horseless carriages, autocars, and vehicles of that description. In the present state of the law these carriages can only be used in the streets under the same conditions as heavy locomotives, which, of course, are out of the question when the speed of ordinary horse traction is required. The Bill provides a heavy penalty for negligent driving and has stringent requirements as to the emission of smoke or visible vapour.

Infant Life Protection.

The Select Committee of the House of Lords, appointed to consider the question of the better protection of infant life and the Bill with that object prepared by the London County Council, began work on Friday, April 24th, when they examined Mr. A. Spencer, chief officer of the Public Control Department of the London County Council, and Mr. Luxmore Drew, coroner for West London. They held another meeting on Monday, April 27th, when they examined Mr. Babey, inspector of the London County Council under the Infant Life Protection Act, and Mr. Braxton Hicks, another of the London coroners.

HOUSE OF COMMONS.

THURSDAY, APRIL 23RD.

Miners' Nystagmus.

Mr. John Wilson (Durham) asked the Secretary of State for the Home Department whether it was part of the duties of an inspector of mines to inquire into the action of the safety lamp as a cause of miners' nystagmus; and whether it would be competent for an inspector to prohibit the use of any class of safety lamps if it were proven that such lamp caused nystagmus.—Sir Matthew White Ridley replied: The answer to both parts of the question is in the negative, but I may add that Mr. Snell of Sheffield, who has written a work on miners' nystagmus, and is still carrying on his investigations into its causes, is afforded such assistance as is in his power by the inspector of the district. The conclusions so far obtained point, I understand, to other causes than the use of safety lamps.

Suicides in the Mercantile Marine.

Mr. Akers Douglas, speaking on behalf of the President of the Board of Trade, stated that the attention of the Board had been drawn to the memorandum by the Registrar-General of Shipping and Seamen with reference to the question of suicides in the engine-room staff of the Mercantile Marine, in which it was said the suicides in the foreign-going vessels are prevalent to a degree calling for serious attention. The President of the Board of Trade had called for further information and would give the matter his careful attention.

FRIDAY, APRIL 24TH.

Cycling Accidents in London.

In reply to another question on this subject, Sir M. W. Ridley said: The return which the police have prepared for me shows that the number of serious accidents caused by cyclists during the first quarter of this year was ten, and the number of slight accidents not requiring treatment, or at any rate detention at a hospital, 174. In no case had the accident a fatal result. No special arrangements have been made by the police, but they use to the full the special powers which they possess under the Metropolitan Police Act, Section 54 of that Act providing that every person who shall ride or drive furiously, or so as to endanger the life or limb of any person, or to the common danger of the passengers in any thoroughfare, shall be liable to a penalty, and may be taken into custody without warrant by any constable who sees the offence committed. So far as serious accidents are concerned the figures I have given may be taken as accurate; it is unlikely that any such accidents have occurred without coming to the notice of the police.

MONDAY, APRIL 27TH.

The Spread of Vermin.

Mr. Hazell asked the President of the Local Government Board whether his attention had been called to the fact that a large and growing number of persons, estimated at from 50,000 to 60,000 in London alone, sleeping in refuges and similar places become infested with vermin, and that the same conditions prevail in some of the larger provincial cities; and whether, since this verminous state hinders even deserving persons in their efforts to get employment and spreads the evil among the general population when they go to the parks and to other places of public resort, he could recommend the sanitary authorities and the Poor-law authorities to permit, as far as they found practicable, all verminous persons who might apply to them, to be cleansed by the aid of the apparatus which these authorities already possess, such cleansing to be without charge and without the applicants being in any way treated as paupers.—Mr. Chaplin replied that as regards the casual wards it was the usual practice to provide for the bathing of the inmates and also the cleansing of their clothes where necessary. With regard to those persons who sleep in refuges, it appeared to him that it would not be unreasonable to expect that those who provide the refuges should also provide the means of freeing the clothes from vermin where required. With regard to the general question as to the sanitary authorities and the Poor-law authorities providing means such as those suggested, for cleansing without charge and in the case of persons who were not paupers, at present it appeared to him that there would be considerable difficulty in carrying out such an arrangement. The subject was, however, receiving his consideration.

Foreign Butter.

Mr. Hanbury, in reply to a question by Mr. Flynn, stated that the Customs officers are still continuing to take samples of foreign butter at some of the ports of entry. In January 118 samples were taken, of which ten were found to be adulterated; in February 179, of which sixteen were found to be adulterated; and in March seventy-seven, of which none were found to be adulterated. So far as the Customs were concerned no steps were being taken to fine or otherwise punish

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consignees found in possession of adulterated butter, nor had they any legal powers in this particular direction.

TUESDAY, APRIL 28TH.

Coolie Labour in Assam.

Mr. Samuel Smith asked the Secretary of State for India whether he could give the House any information regarding the death-rate of coolies employed in the coal mines of Assam; whether he was aware that the Calcutta Press represented that rate to be very high, and also that a very large percentage were always on the sick list; whether the Indian Government had any information to show that this was caused by a forced change of diet to rice; and, whether the Government could make regulations enforcing the supply to immigrants of the same kind of food they had been previously accustomed to, in the same way as was done for Native soldiers in the Indian Army?—Lord George Hamilton replied that the industry to which the question referred was, comparatively speaking, a very small one, employing little more than a thousand coolies. He had no information as to the death-rate prevailing among them, but he had seen a letter on the subject from a visitor to Assam, published in the Calcutta newspapers, in which it was stated that the death- and sick-rates were high, but no figures were given. The suggestion that evil effects were produced by forced change to rice diet seemed improbable, inasmuch as most of these coolies were drawn from rice-consuming districts. As at present advised he saw no occasion for the issue of regulations on this subject, and he might add that the writer of the letter mentioned bore testimony to the excellence of the existing arrangements for feeding and housing the coolies and for providing them with medical care.

The Horse Leech Question.

Mr. Fell Pease asked the President of the Board of Agriculture if he was aware that a large number of old horses were exported to France, where they were subjected to very cruel treatment by being turned out into marshy land, where they were fastened upon by leeches and thus tortured to death; and if he could prevent the export of old and useless horses likely to become victims of this treatment.—Mr. Walter Long replied that he had seen various statements in the newspapers on this subject, but he had not himself received any representations respecting it. He understood, however, that full inquiries had been made on the spot by the Royal Society for the Prevention of Cruelty to Animals, and that the conclusion arrived at was that the original statement was happily a gross exaggeration. In any case, it would not be competent for him to prohibit the export of horses from this country.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ANDERSON, G. B., M.B., C.M. Edin., has been appointed Parochial Medical Officer by the Cannonbie Parish Council.

BEAUMONT, J. C. H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Infirmary and the Gordon-road Workhouse of the parish of Camberwell, vice Chabot, resigned.

BURT, D. J. S., M.B., C.M. Edin., has been appointed House Surgeon to the Brighton, Hove, and Sussex Throat and Ear Hospital, Brighton.

CLARK, R. L., M.B., C.M. Edin., has been appointed Medical Officer for the Maryport Sanitary District of the Cockermouth Union, vice J. Little, resigned.

CRAGO, W. H., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Assistant Surgeon to the Sydney Hospital, New South Wales.

DALE, FREDERIC, M.D. Cantab., F.R.C.S. Eng., has been appointed Honorary Ophthalmic and Aural Surgeon to the Scarborough Hospital and Dispensary.

DAVIS, S. B., M.B., C.M. Edin., has been appointed Resident Medical Officer and Public Vaccinator for the York District, Western Australia.

FLYNN, R. A., F.R.C.P. Irel., L.R.C.S. Irel., has been appointed Gynæcologist to the Drumcondra Hospital.

FLUX, GEORGE B., M.D. Brux., L.R.C.P., M.R.C.S., L.S.A., has been appointed Anæsthetist to the National Dental Hospital.

FORTESCUE, W. A. J., M.B., C.M. Aberd., has been appointed Medical Officer, Royal Infirmary, Aberdeen.

GARSTANG, T. W. H., M.R.C.S., has been appointed Medical Officer of Health by the Middlewich Urban District Council.

GILL, SAMUEL E., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Resident Medical Officer to the Royal Hospital for Diseases of the Chest, City-road.

GORDON, J. L., M.B., C.M. Aberd., has been appointed Medical Officer, Royal Infirmary, Aberdeen.

GRAHAM, JAS., M.B., C.M. Edin., has been appointed Medical Officer for the Orton Sanitary District of the East Ward Union, vice J. S. Aitken, resigned.

HARVEY, H. F., M.R.C.S. Eng., has been appointed, pro tem., Principal Medical Officer in Western Australia.

HEPBURN, W. A., M.D. St. And., F.F.P.S. Glasg., has been reappointed Medical Officer of Health by the Durham Rural District Council.

JENKINS, GEO. J., M.B., C.M. Edin., has been appointed Resident Medical Officer of the Craiglockhart Poorhouse.

JEPSON, E., M.D. Durh., M.R.C.S., has been reappointed Medical Officer of Health by the Durham Rural District Council.

JONES, HENRY T., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Second Sanitary District of the Pembroke Union, vice J. W. Morison, resigned.

JONES, SAM. E., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Shocklack Sanitary District of the Tarvin Union.

LANSDOWN, C. E., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Medical Officer, York Dispensary.

LITTLEWOOD, J. O., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health by the Skegby Rural District Council.

LOVEGROVE, J. F., M.R.C.S. Eng., has been appointed Government Medical Officer and Vaccinator for the district of Picton, New South Wales.

MUNRO, J. D. R., M.D. Edin., has been appointed Medical Officer of Health to the Nantwich Urban District.

O'MEEHAN, J. A., L.R.C.S. Irel., has been appointed Resident Medical Officer and Public Vaccinator for the districts of Kalgoorlie, East Coolgardie, Western Australia.

PEARSON, R. S., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Wigan Rural Sanitary District, vice J. A. Marsden, resigned.

PURSER, CECIL, M.B., Ch.M. Syd., has been appointed Honorary Assistant Physician to the Prince Alfred Hospital, Sydney, New South Wales.

REED, H. A., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Public Vaccinator for the district of Ellesmere, New Zealand.

SANDFORD, E. J., M.D. St. And., M.R.C.S., has been reappointed Medical Officer of Health for the Drayton Rural Sanitary District.

SCATTERTY, WM., M.D., C.M. Aberd., has been appointed Medical Officer of Health for the Keighley Urban Sanitary District.

STEWART, C. A., L.R.C.P., L.R.C.S. Edin., has been appointed Acting Officer of Health for Richmond City, Victoria, Australia.

STEWART, G. J. T., M.B., C.M. Aberd., has been appointed Medical Officer, Royal Infirmary, Aberdeen.

SYMONS, WILLIAM HENRY, D.P.H. Oxon. and Durham, and M.I.C., has been appointed Medical Officer of Health by the Bath Urban Sanitary Authority.

THOMSON, A. G. A., M.B., C.M. Aberd., has been appointed Medical Officer, Royal Infirmary, Aberdeen.

TIPPER, ERNEST H., M.R.C.S. Eng., L.R.C.P. Lond., L.S.A. Lond., has been appointed Court Physician to the Independent Order of Foresters, Denmark-hill.

USHER, C. H., M.B., B.C. Camb., F.R.C.S. Edin., has been reappointed Ophthalmic Surgeon, Royal Infirmary, Aberdeen.

WALSHAM, HUGH, M.A., M.B. Cantab., M.R.C.P. Lond., has been appointed Assistant Physician to the City of London Hospital for Diseases of the Chest, Victoria Park.

WAYLEN, A. R., M.D. St. And., M.R.C.S. Eng., has been appointed Chairman of the Aborigines Protection Board, Western Australia.

WHICHER, A. H., M.R.C.S., has been reappointed Medical Officer of Health by the Midsomer Norton Urban District Council.

WIGHTMAN, J. P., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Rawdon District Council.

WILLIAMSON, W. W., M.B., C.M, Edin., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health for the Lymm Urban Sanitary District, vice Fox, deceased.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BULAWAYO HOSPITAL.—Resident House Surgeon, unmarried. Salary £400 per annum, with free board and lodging. Applications to the Chairman, Hospital Board, Bulawayo, Rhodesia.

BURGH OF LEITH PUBLIC HEALTH HOSPITAL.—Resident Physician for one year. Salary 50 guineas. Applications to the Town Clerk, Town Clerk's Office, Leith.

DENTAL HOSPITAL OF LONDON AND LONDON SCHOOL OF DENTAL SURGERY, Leicester-square, W.C.—Demonstrator. The honorarium is £50 per annum.

GENERAL HOSPITAL, Barbados, West Indies.—Junior Resident Surgeon for three years. Salary £200 per annum, payable monthly, with unfurnished apartments. Applications to the Secretary, Barbados General Hospital.

GLAMORGAN COUNTY ASYLUM, Bridgend.—Junior Assistant Medical Officer. Salary £130, rising £10 a year to £150 if approved, with board (no beer or wine), lodging, and washing.

HOSPITAL FOR WOMEN, Soho-Square, London, W.—House Surgeon for six months. Salary £30 for that period.

KENT COUNTY OPHTHALMIC HOSPITAL, Trinity House, Maidstone.—House Surgeon. Salary, with furnished apartments and attendance in the hospital, but without board, for the first year £125 and £150 after the first year.

METROPOLITAN ASYLUMS BOARD—SOUTH-EASTERN HOSPITAL, Hatfield-street, Old Kent-road, S.E.—Medical Superintendent. Salary at the rate of £400 per annum, rising by annual increments of £25 to £500 per annum, with a partially furnished house, attendance, coals, gas, and washing. Applications to the Clerk to the Board, Norfolk-street, Strand, W.C.

METROPOLITAN HOSPITAL, Kingsland-road, N.E. — Surgeon and Assistant Surgeon.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART AND PARALYSIS, Soho-square, London,—Resident Medical Officer for six months. Board, residence, laundry, and an honorarium of 10 guineas for that period.

PLYMOUTH ROYAL EYE INFIRMARY.—Honorary Surgeon.

RANGOON MUNICIPALITY. — Health Officer. Salary Rs. 600 per mensem, rising to Rs.1000 per mensem by annual increments of Rs. 50 per mensem. Applications to Messrs. Ogilvy, Gillanders, and Co., Sun-court, 67, Cornhill, London, E.C.

ROYAL SOUTH HANTS INFIRMARY, Southampton. — Assistant House Surgeon for six months. Gratuity of £10 will be given if found satisfactory.

SHEFFIELD ROYAL HOSPITAL.—House Physician, unmarried, for one year. Board (exclusive of wine and beer) and lodging provided, and an honorarium of 25 guineas.

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STAMFORD, RUTLAND, AND GENERAL INFIRMARY, Stamford.—House Surgeon, unmarried, for two years. Salary £100 per annum, with board, lodging, and washing.

STOCKPORT INFIRMARY.—Junior Assistant House Surgeon for six months. Board and residence provided, and an honorarium of £10 given after six months' satisfactory service.

STRETTON HOUSE PRIVATE ASYLUM.—Resident Medical Officer, unmarried. Applications to Mr. Campbell Hyslop, Stretton House, Church Stretton, Salop.

UNIVERSITY OF ST. ANDREWS.—Lecturers: (1) on Anatomy, salary £300 per annum; (2) on Materia Medica, salary £200 per annum; and (3) on History, salary £200 per annum. The appointments for a term of three years. Application to the Secretary of the University Court, St. Andrews.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's-road, Chelsea, S.W.—Assistant Physician to the Out-patients for five years. Also House Physician to the In-patients for twelve months. Honorarium £50, and board and lodging in the hospital provided.

Births, Marriages, and Deaths.

BIRTHS.

BERRY.—On April 28th, at Wansford House, Watford, the wife of F. Haycraft Berry, M.D. Lond., of a son.

BONTOR.—On April 23rd, at Great Berkhamsted, Herts, the wife of Sidney A. Bontor, M.D., of a son.

CORNER.—On April 26th, at Earlswood Asylum, Redhill, Surrey, the wife of Harry Corner, M.D. Lond., of a son.

HARRISON-GILPIN.—On April 12th, at Bengeworth, Evesham, the wife of R. Harrison-Gilpin, M.R.C.S., L.R.C.P. Lond., L.S.A., M.O.H., of a son.

LONGTON.—On April 24th, at Eaton-road, Hove, the wife of G. Harold Longton, M.R.C.S., L.R.C.P. Eng., of a son.

MARTIN.—On April 23rd, at Arnheim, Blackburn, the wife of John M. H. Martin, M.D. Victoria, F.R.C.S., J.P., of a son.

SANDILAND.—On April 25th, at 137, Southgate-road, N., the wife of A. H. Sandiland, L.R.C.P. Lond., of a son (stillborn).

SAUNDBY.—On April 26th, at Edmund-street, Birmingham, the wife of Robert Saundby, M.D. Edin., of a son.

SOLLY.—On April 24th, at Strathlea, Harrogate, the wife of Ernest Solly, M.B., F.R.C.S., of a daughter.

MARRIAGES.

BÖDEKER—WARDLAW.—On April 28th, at the Parish Church of St. Mary, Stratford-le-Bow, by the Rev. Marmaduke Hare, Vicar, Henry Albert Bödeker, M.B. & C.M., of Moulmein, British Burmah, to Helen, youngest daughter of Sir Henry Wardlaw, Bart, of Pitrearie, Balmule, Tillicoultry, Scotland. No cards.

DAVID—WILLIAMS.—On April 28th, at Llanwonno Parish Church, by the Rev. Llewellyn Lloyd Davies, M.A., W. Washington David, M.R.C.S. Tonypandy, to Anne Williams, daughter of the late Thomas Williams, Y Glog, Llanwonno.

HAIG—WHITTON.—On April 21st, at St. Cuthbert's, Philbeach-gardens, Surgeon-Lieutenant-Colonel Percy de Haga Haig, I.M.S., 1st Punjab Cavalry, to Eleanor Beatrice (Norah), eldest daughter of Brigade-Surgeon G. E. Whitton, of Kensington-mansions, S.W.

LAPTHORN—LEE.—On April 28th, at Union Chapel, Islington, Charles Albert Lapthorn, F.R.C.S.E., of Bletsoe House, Littlehampton, to Agnes Mary, daughter of Henry Lee, J.P., of Earlham, Highbury-quadrant, N.

OVEREND—PAYNE.—On April 22nd, at All Saints', Edmonton, Wilkinson Overend, M.B., B.A. Oxon., of Sheffield, to Elizabeth Russell, eldest daughter of Wm. Francis Willton Payne, of Bringhurst, Bush-hill-park, Enfield.

QUARRY—WARREN.—On April 22nd, at St. Mary's, Winchfield, Hants, Marcus Henry Quarry, M.B., B.Ch. Irel., Medical Superintendent of Lambeth Infirmary, to Ella Mary, eldest daughter of the late L. L. Warren.

STUART—MARKS.—On April 24th, at St. Mary's, Barnes, Alexander Stuart, M.B., C.M. Edin., of Aberdeen, to Agnes Drysdale, daughter of H. Stacy Marks, R.A.

SUTHERLAND—BARWELL.—On April 30th, at St. John's, Hollington, St. Leonard's, by the Rev. W. H. Green, M.A., Vicar, and the Rev. E. N. Powell, M.A., Henry Sutherland, M.D., of Richmond-terrace, Whitehall, to Meta Prescott, second daughter of Captain William Blunt Barwell, formerly 16th Bengal Lancers, and granddaughter of the late General William Prescott.

DEATHS.

ANDERSON.—On April 26th, at Sunnybrae, Pitlochry, N.B., Arthur Anderson, M.D., C.B., retired Inspector-General of H.M. Hospitals, in his 82nd year.

CLARK.—On April 23rd, at Gatestone-road, Norwood, Willington Clark, F.R.C.S., L.S.A., in his 92nd year.

CRAIG.—On April 15th, at Waverley House, Worthing, John Craig, F.R.C.S., late of the East India Company's Service.

HARE.—On April 18th, at Sunnylea, Weymouth, suddenly, Richard William Hare, Surgeon-Lieutenant-Colonel, M.S., aged 57.

HIGHETT.—On April 20th, Charles Highett, M.R.C.P. Edin., of Field House, Montpellier, Bristol.

LOCKHART.—On April 29th, at Granville-park, Blackheath, William Lockhart, F.R.C.S., for twenty-five years Medical Missionary in China (London Missionary Society), aged 84.

MAHONY.—On April 25th, at East Grinstead, Arthur John Mahony, L.S.A., aged 76.

SQUARR.—On April 18th, at 14, Portland-square, Plymouth, William Squarr, F.R.C.S., of pneumonia, aged 51.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (4th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.).

TUESDAY (5th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (6th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY (7th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Great Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (8th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.) Gt. Northern Central (2.30 P.M.).

SATURDAY (9th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (4th).—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-square, W.C.).—8 P.M. Mr. J. F. Colyer will open a Discussion on The Early Treatment of Crowded Mouths. Mr. G. Brunton: Some Experiments in Colouring Porcelain for Teeth and Gum Body.

SOCIETY OF ARTS.—8 P.M. Mr. J. Swinburne: Applied Electro-Chemistry. (Cantor Lecture.)

TUESDAY (5th).—PATHOLOGICAL SOCIETY OF LONDON.—Papers:—Dr. N. Moore and Dr. Kanthack: Malarial Hæmatozoon in Ashanti Fever.—Mr. J. Smith: Lymph Scrotum with Filaria.—Dr. Arkle and Dr. Hinds (Worthing): Pneumonomycosis.—Mr. Shattock: Healing of Incisions in Vegetable Tissues. Card Specimens: Mr. S. Jones: Bony Tumours of Scalp.—Mr. J. R. Lunn: Aneurysm of Inferior Thyroid Artery.—Dr. H. C. Sharp (Truro): Primary Colloid Carcinoma of Bladder.—Mr. St. C. Thomson: Angeioma of Septum Nasi.—Mr. Targett: (1) Psammoma of Dura Mater; (2) Colloid Duct Cancer and Sarcoma in the same Breast.—Dr. Rolleston: (1) Myeloid Cells in Mammary Sarcoma; (2) Embolism of Coronary Artery; (3) Loose Body Encysted on Convex Surface of Liver.

SOCIETY OF ARTS.—8 P.M. Mr. J. F. Dowling: Australia's Prospects in British Markets.

WEDNESDAY (6th).—OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Dr. Lewers, Mr. Doran, Dr. Handfield-Jones and others. Adjourned Discussion on Mr. Morison's, Dr. Spencer's and Dr. Eden's papers on Deciduoma Malignum. Papers:—Mr. A. Doran: Cases of Fibroma of the Ovary and Ovarian Ligament Removed by Operation; with a series of After-Histories of Cases reported in the Transactions since 1879.—Dr. J. Phillips: Anterior Colpotomy.

SOCIETY OF ARTS.—8 P.M. Mr. H. Maxim: High Explosives and Smokeless Powders.

THURSDAY (7th).—OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-st., Cavendish-sq., W.)—8 P.M. Clinical Evening. Mr. A. Critchett: (1) Restoration to Normal Vision after Sympathetic Ophthalmitis; (2) Extraction of a Dislocated Lens with good result.—Dr. R. D. Batten: Optic Nerve Disease in a Mother and Three Children.—Mr. H. Spicer: Case of Spurious Optic Neuritis.—Mr. H. Power: Case of Lightning Stroke of Face without Permanent Lesion of the Eyes.—Dr. D. Mowat: Lymphangiectasis of Eyelids.—Mr. Maclehose: One-sided Sixth Nerve Paralysis, Retraction of Globe and Contraction of Orbicularis on Rotation Inwards.—Mr. B. Taylor: Transplantation of Skin to the Surface of the Eyeball for the Cure of Symblepharon.—Mr. Cartwright: Posterior Lental Opacity, remains of Hyaloid Artery and Coloboma Lentis.—Mr. F. Eve: Case of Detachment of Retina treated by Drainage.

HARVEIAN SOCIETY (Stafford Rooms, Titchborne-street, Edgware-road, W.).—8 30 P.M. Dr. A. T. Schofield: Mental Therapeutics.

FRIDAY (8th).—CLINICAL SOCIETY OF LONDON.—8.30 P.M. Mr. L. Hudson: A Case of Malingering in a Boy aged Eleven.—Mr. E. Ward: Three Cases of Laryngectomy.—Mr. W. A. Lane: A Case Illustrating a condition of Partial Congenital Dislocation of both Hip Joints Forward and Upwards.—Mr. Raymond Johnson; Fracture of the Neck of the Femur in a Young Subject resulting from Dry Caries of the Bone.—Mr. Makins: A Case of Division and Immediate Suture of the Left Vagus.

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LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (4th).—ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.

TUESDAY (5th).—ROYAL INSTITUTION.—3 P.M. Mr. C. V. Boys: Ripples in Air and on Water.

WEDNESDAY (6th).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Gowers.

HOSPITAL FOR CONSUMPTION, &c. (Brompton).—4 P.M. Dr. C. T. Williams: The Arrest of Pulmonary Tuberculosis.

THURSDAY (7th).—ROYAL INSTITUTION.—3 P.M. Mr. W. Gowland: The Art of Working Metals in Japan.

FRIDAY (8th).—CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL.—4 P.M. Mr. W. Wingrave: Of Malignant Disease of the Throat and Larynx.

ROYAL INSTITUTION.—9 P.M. Prof. S. P. Thompson: Electric Shadows and Luminescence.

SATURDAY (9th).—ROYAL INSTITUTION.—3 P.M. Mr. F. Corder: Three Emotional Composers—Berlioz.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

AN INSURANCE COMPANY AND A MEDICAL REFEREE.

WE have received from Dr. Sidney A. Bontor of Great Berkhamsted the copy of an interesting correspondence which has taken place between himself and a sickness and accident insurance company. Dr. Bontor was requested by the company to examine a case and the offer was made of a fee of 5*s*. As the examination was a full one he properly pointed out that the fee was insufficient. He then received an offer of 7*s*. 6*d*., and the person insuring having called upon him by appointment was examined to avoid the inconvenience of sending him away. But Dr. Bontor, in forwarding the report, pointed out that the fee was inadequate, and that as he happened to hold a policy with the company he felt compelled to withdraw from it if such fees were tendered to medical examiners. The manager then sent him a fee of 10*s*. 6*d*. and said that he could not see why Dr. Bontor proposed to withdraw his policy, as the fees offered were all the company could afford. Dr. Bontor replied that he was withdrawing because he did not care to support an office which "sweated" his own profession, and pointed out that the medical examiners should be paid for the work they did irrespectively of the amount of the premium. To this the office replied that the company could not afford to pay more and that the fees had to be adjusted to what they could pay and not what they ought to pay. Dr. Bontor now asks us our opinion on the transaction. We think there can be but one opinion on the matter: if the office cannot afford to pay they must "shut up shop." The contention that the office should pay what they can and not what they ought to pay is monstrous.

F. E. S.—We appreciate our correspondent's reasons, but he must not attempt to practise save as an assistant and under the immediate supervision of a qualified man.

Mr. Lawrence Hamilton is thanked for his communication. We have not seen the book in question.

"A FEMALE MEMBER OF THE ARMY MEDICAL STAFF."

To the Editors of THE LANCET.

SIRS,—Referring to the correspondence on this subject which was carried on in THE LANCET for so many weeks in October and November last, may I be allowed to supplement it by further disclosures? Before entering on the general question I beg to state that I have recently discovered Dr. Barry's grave in Kensal Green, and found it in a shamefully dilapidated condition considering the eminence and remarkable history of the deceased. In fact, I feel bound to appeal to the Army Medical Department in particular, and to the medical profession in general, to rescue from oblivion this last memorial of so estimable, however eccentric, a member of its guild—a class of men second to none in nobility of purpose, practical sympathy, and largeness of ideas. The courteous custodian of the cemetery had never even heard of Dr. Barry, much less her antecedents, and only knew the exact locality of her resting place by reference to the annual register of 1865, kept at the gate house, wherein are recorded the following particulars: "Dr. James Barry; number of grave 19,301; square 67; row 6." We proceeded to the spot and found the rough sandstone slab lying on the grass, smashed at its base when it fell or was blown down years ago, utterly ignored and forgotten! The inscription on the tablet is decipherable with some difficulty, as follows:—

DR. JAMES BARRY,
INSPECTOR-GENERAL OF ARMY HOSPITALS.
DIED 15 JULY, 1865. AGED 71 YEARS.

Truly has this distinguished medical officer of the female sex been allowed to die and sleep in "this neglected spot," forgotten by relations, overlooked by friends, undistinguished by the community. It is hard, nay, disgraceful! But it is not too late to mend matters by the erection of a suitable Scotch granite monument, subscribed for by the medical men of the empire, whereon should be recorded in brief the history of Dr. James Barry's unique career and her services to humanity.

To-day I had an interview with the Director-General, A.M.D., and I have seen the official record of Dr. Barry's services, in which she is stated to have been "mentioned in dispatches," "strongly recommended for promotion," "published in General Orders for assiduity and skill during an epidemic in the West Indies," &c. Sir Wm. Macklnnon seemed greatly pleased with the revived interest evinced by the medical profession in Dr. Barry's extraordinary career, and added, "You are aware, I suppose, that Barry was the daughter of a Scotch baronet, Buchan by name, who married one of the Somerset family, and hence the Doctor's great influence at head-quarters through Fitzroy-Somerset, Lord Raglan. She visited his lordship in the Crimea, but was not out there on active service. This may account for her never receiving a distinction. You know she was a strict vegetarian and only drank Cape wine. She served at the Cape during the government of Lord Charles Somerset, and fought a duel with his aide-de-camp. Some years ago I met Sir Josias Cleotè (the aide-de-camp in question) at a public dinner, and he told me the circumstances of the duel in these very words: 'I am the only officer in the British army who has ever fought a duel with a woman. When I was aide-de-camp to Lord Charles Somerset at the Cape a buxom lady called to see him on business of a private nature, and of course they were closeted for some time. Dr. Barry made some disparaging remark about this. "Oh, I say, Cleotè," he sneered, "that's a nice Dutch filly the governor has got hold of." "Retract your vile expression, you infernal little cad," said I, advancing and pulling his long ugly nose. Barry immediately challenged me and we fought with pistols, fortunately without effect.'" It will here be remembered what I stated in my first letter to THE LANCET on this subject, that I met Dr. Barry in 1858, and voyaged in the same cabin with her to Barbadoes, whither she was going on a visit to her old enemy and present friend, General Sir Josias Cleotè, commanding troops in that island. Sir Wm. Macklnnon proceeded to tell me that Dr. Barry was brought up in Malta, and always seemed to prefer tropical or semi-tropical stations; she served in the Mediterranean and West Indies most of her time. "She had a lovely grey Arab in Corfu," he went on, "which, I remember, she gave to one of the Somersets. After all there was no mistaking her build as a woman—broad hips, small feet, for instance—and perhaps you are aware that she left strict injunctions for her corpse to be sewn up in a blanket before being placed in a coffin." Sir William had my novel, "A Modern Sphinx," on his table, and no doubt when he reads it some of the letters from THE LANCET quoted in the Introduction may awaken on his part other and still more interesting reminiscences of this famous female.

I am, Sirs, yours truly,

Savage Club, April 28th, 1896. E. ROGERS, Lieutenant-Colonel.

P.S.—You are aware that my novel, "A Modern Sphinx" (Dr. James Barry or Fitzjames), originally published in 1881 at 31*s*. 6*d*., has been republished in one volume, with seven illustrations, at 7*s*. 6*d*. There are only 100 copies now extant and then the book will be out of print, application for which should be addressed to me, either at the depôt, 20, Buckingham-street, Strand, or here.

MEDICAL CURRICULUM IN NEW YORK.

THE *Maryland Medical Journal* says that Governor Morton of New York has signed the new medical Bill which raises the medical student's course from three to four years, and allows students who enter colleges to graduate under the rules in force when they matriculated. This law applies to all medical colleges in the State.

Surgeon has not enclosed his card.

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"GOOD *v.* BAD VACCINATION."

To the Editors of THE LANCET.

SIRS,—"One who Knows" in THE LANCET of April 25th has hurled his anathema at the heads of all who do not holdhis views of certification of vaccination. He insists that four insertions by an operator, which he furthermore requires to be an expert giving up his time to the duty of making a rigid examination of the person vaccinated, is to be the touchstone whereby his fellow practitioners are to be judged. Those who do not come up to his self-constituted standard he prejudges as having a leaning towards anti-vaccination—i.e., as looking askance at vaccination as a prophylactic—and craven-hearted curs who have not the moral courage to oppose the letter of that law the spirit of which he accuses them of breaking.

Fully sensible that criticism when extended to the remarks of "One who Knows" may appear akin to presumption, while opinions diametrically opposed to the conclusions of "One who Knows" must *a fortiori* be prejudged ignorance yet there are arguments, however specious and sophisticated they may appear when coming from the opposite side, which furnish support to and grounds for such opposition. He will allow, for he cannot controvert the same, that the intensity of action of specific febrile diseases, among which we reckon cowpox or vaccination, and the subsequent immunity they confer, does not vary directly as the numerical coefficient which represents the number of seats of primary inoculation. A man is not the less syphilised because he has one primary chancre than he would be if he had had four such. So with the other specific febrile diseases, the number of seats of inoculation bears no tangible proportion to the intensity of the disease. One or two perfect vesicles, I hold, are as much likely to prove a prophylactic against small-pox as four or six such. I anticipate one objection that "One who Knows" may raise as a telling argument in favour of four insertions: it is that statistics drawn from the returns of the small-pox hospitals do not bear me out, as more admissions are made of persons with one or two scars than of individuals showing four such marks; and that the type of disease is milder among four-scarred individuals than those of the two-scar class. But if statistics are worth anything they must be proportionately considered. Now for every one individual in the population of a district who possesses four scars of vaccination there are at least ten who do not possess more than one or two such marks. Make your comparison a proportionate one and you will see that no greater immunity is gained by four seats of inoculation than by two. "One who Knows" considers it a matter of national importance to see all vaccination relegated to properly appointed public vaccinators, who should be debarred from coming into competition with his professional brethren. Is it because he thinks public vaccinators are capable of enticing patients to desert other practitioners and come to them, or is it because the estimate he has formed of the moral capacity of his professional brethren is so low that such work as vaccination is too great to be trusted to them without supervision and inspection by Government officials? Perhaps we may next so far advance our ideas that catheterisation, &c., will come to be considered specialities, and we may read as an advertisement: Public Catheterisers; must give whole time to duty and engage not to practise privately; salary £400. Apply to Town Clerk X.—With apologies for the length of my letter,

I am, Sirs, yours faithfully,

April 27th, 1896. ONE WHO KNOWS NOTHING.

MEDICAL ADVERTISEMENT.

THE following advertisement appears in the *Hobart Town Clipper*:—

[A CARD.]

CHARLES E. BARNARD, M.D.,
Physician and Surgeon,
136, MACQUARIE-STREET, HOBART.

DR. BARNARD having returned from visiting the several hospitals in Sydney and Melbourne, where he has been studying the latest developments of treatment in all branches of Medicine and Surgery, has now resumed general practice.

Specialist in Diseases of the EYE and the EAR.

Dr. Charles Barnard appears on the "Medical Register" as M.D. Aberdeen, L.R.C.P. Lond., M.R.C.S. Eng., and L.S.A. Lond., and his procedure to obtain practice will not commend him to the favourable notice of either his university or the corporations whose diplomas he bears.

CONCENTRATED ANTITOXIN.

THE *Philadelphia Polyclinic* states that Dr. Joseph McFarland of Philadelphia has succeeded in producing a diphtheria antitoxin, of which 10 cc. equal 2000 immunity units. We may add that similarly good results have been obtained in London by Dr. Cartwright Wood, whose methods were described in THE LANCET of April 11th and 18th.

"HEALTH NOTES."

DR. A. C. DUTT sends us a little pamphlet which he has issued for visitors to the seaside, with special reference to Whitby and district. It consists of brief hygienic instructions with the object of enabling the holiday-maker to take his holiday with due regard to physiological laws and without that incessant turmoil whereby the health is injured rather than recuperated. The little pamphlet is clearly written, but Dr. Dutt should remember the obvious objections that may be urged to this kind of literary endeavour.

"SKIN AFFECTION PRODUCED BY WORKING IN TEAK."

To the Editors of THE LANCET.

SIRS,—As the result of personal experience during five years' amateur cabinet making in spare time I can assert—(1) that no sort of skin eruption ever appeared; (2) that any incised wounds if promptly and firmly closed and kept in apposition invariably healed by first intention, i.e., in a few hours; (3) that splinter wounds and deep abrasions incidental to colonial "roughing it" healed as usual without the least suppuration; and (4) at one time I had my nose broken, with severe lacerations of the nasal mucous membrane, from a polo ball, and in consequence of facial ecchymosis and effusion was unable to go out for some days; during the whole of this time I was working in, generally sawing, very dry teak, the fine sawdust found its way into the air passages, &c., but never any discomfort from nasal catarrh or other minor trouble was experienced. For purposes of instruction I very frequently found myself in cabinet makers' workshops; the men would often show me their minor ailments and injuries, even partial losses of digits, &c., and not once did I see any eczema or other skin affection, or ever any suppuration or delay in healing beyond what would be expected in lacerated wounds, and the men never even suggested that when working in teak they were subject to any such disability or annoyance. From results of my own observations, then, I regard the assertions as to the evil effects of teak with absolute incredulity. I may say that the acquired manual dexterity I have since found absolutely invaluable.

I am, Sirs, yours truly,

April 27th, 1896. M.R.C.S., &c.

Sligo.—(1) We refer our correspondent to two excellent lectures by Dr. H. W. G. Mackenzie which appeared in THE LANCET of Sept. 13th and 20th, 1890. Electricity has been useful. The utility of the administration of thyroid extract is not supported by sufficient experience, but benefit is said to have followed it. See Neale's Digest (1837: 5, and the cross references). (2) Our correspondent should send notices to his own patients. Advertisement in a newspaper is decidedly objectionable.

Inquirer should communicate with the Colonial Office. The salaries commence at £200, but as private practice is allowed the best colonies are the best populated.

F.R.C.S. should apply to the Emigration Offices at the Port of Clearance, or to Emigrants' Information Office, 31, Broadway, Westminster.

Dr. James Blair Hartley.—The case is one for not pressing any claim, but graciously accepting accidents and the courteous statement of them.

Mr. W. Downing.—We have no knowledge of the institution in question.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 30th, 1896.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Apr'l 24	30·26	S.W.	44	42	70	59	41	...	Hazy
" 25	30·08	S.W.	51	49	95	62	44	...	Fine
" 26	30·02	S.W.	58	54	100	67	53	...	Fine
" 27	30·10	S.W.	55	52	99	69	50	...	Cloudy
" 28	29·89	W.	56	50	112	65	53	...	Cloudy
" 29	29·70	N.W.	53	46	107	61	46	...	Fine
" 30	29·81	N.	50	45	91	55	42	0·04	Cloudy

During the week marked copies of the following newspapers have been received:—*Hastings News, Kettering Guardian, Birmingham Gazette, Newcastle Chronicle, South Wales Echo, Oban Times, Glasgow Record, Lincolnshire Echo, Express and Star, Derry Standard, Scotsman, Hull Daily Mail, Northern Whig, Western Mail, East Anglian Daily Times, Berkshire Chronicle, Bristol Times, Leicester Post, Times of India, Architect, Sussex Daily News, Western Daily Press, Chester Chronicle, Pioneer Mail, Westminster News, East London Observer, Builder, Glasgow Herald, Oswestry Advertiser, Liverpool Daily Post, Citizen, Sanitary Record, Sun, Bristol Mercury, Mining Journal, Morning, Leamington Advertiser, Le Figaro, Yorkshire Post, Reading Mercury, Leeds Mercury, City Press, Nottingham Daily Guardian, West Middlesex Standard, Weekly Free Press and Aberdeen Herald, Hertfordshire Mercury, Local Government Journal, Surrey Advertiser, Gloucestershire Chronicle, The Baillie, Leeds Daily News, Australasian Medical Gazette, Elgin Courant, Falkirk Herald, Manchester Courier, Kelso Mail, Tasmanian Mail, Guernsey Star, Shrewsbury Chronicle, Public Health, Cromer Post, Norfolk Daily Standard, Folkestone Express, West Briton Advertiser, Wellington News, Harwich Free Press, &c., &c.*

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The Arris and Gale Lectures

ON THE

PHYSIOLOGICAL FACTORS INVOLVED IN THE CAUSATION OF DROPSY.

Delivered before the Royal College of Surgeons of England on Feb. 17th, 19th, and 21st, 1896,

BY ERNEST H. STARLING,
M.D. LOND., M.R.C.P.,
JOINT LECTURER ON PHYSIOLOGY AT GUY'S HOSPITAL.

LECTURE I.

THE PRODUCTION OF LYMPH.

MR. PRESIDENT AND GENTLEMEN,—The term dropsy is used to denote the condition in which there is an abnormal accumulation of lymph in the connective tissue spaces, including the serous cavities of the body. Under normal circumstances these spaces contain lymph, but the amount present never exceeds a certain limit. Under no physiological conditions can we speak of the spaces as distended with fluid. Now, the lymph in these spaces is derived from the blood plasma circulating in the capillaries. From these in all states of activity the lymph is transuded, but as fast as it tends to accumulate in the spaces it is removed by an absorbent apparatus represented chiefly by the lymphatics. As I shall show in my second lecture, the lymphatics are aided in this work of absorption, under probably certain defined conditions, by the blood capillaries themselves. In health, therefore, the two processes of lymph-production and absorption are exactly proportional. Dropsy depends on a loss of balance between these two processes—on an excess of lymph-production over lymph-absorption. A scientific investigation of the causation of dropsy will therefore involve, in the first place, an examination of the factors which determine the extent of these two processes and, so far as is possible, of the manner in which these processes are carried out. In the second place, we must inquire how it is that, under the clinical conditions in which we know dropsy to occur, there is an upset of the balance of these two processes in favour of lymph production. My first lecture, then, will deal with the first of the two processes—i.e., Lymph-Production.

In studying the factors which regulate the production of lymph we must have criteria by which we may judge of the amount of lymph produced. To this end several methods are open to us. The most simple method, and one which was the earliest to be used, is the production of œdema. As a rule, as I shall explain later, we may look upon the production of œdema as due to increased lymph-production. Far more delicate, however, than this method is the observation of the lymph-flow from a cannula placed in a lymphatic trunk, which drains the part under investigation. Most delicate of all, but subject, perhaps, to most fallacies, is the ingenious method devised by Roy and used by Lazarus-Barlow, in which the specific gravity of the tissues is determined. The second of these methods is the one by which most work has been done and which I have used almost exclusively in my own investigations. It is evident that the only constant source of a lymph-flow must be the bloodvessels, and our first object must be to see how the amount and composition of the lymph formed in any given part may be changed by experimental alterations of the pressure and chemical composition of the blood flowing through the capillaries of that part as well as by changes in the walls of the capillaries themselves. In dealing with the functions of any part of the body we can often obtain hints as to the manner of its working from a study of its structure, and I would like, therefore, in the first place to draw your attention to some points in the structure of blood capillaries. These have long been known to consist of tubes whose walls are formed of a simple layer of flattened, nucleated endothelial cells, which are united together by a small amount of cement substance, as it is called, the lines of junction between the cells staining deeply with nitrate of silver. A Russian observer, Kolossow, has added somewhat to this simple account. According to this observer each endothelial cell consists of two parts, a hyaline "ground-plate," which immediately borders the lumen of the capillary, and outside this a protoplasmic granular part in which is embedded the nucleus. The ground-plates of the adjoining cells come in intimate contact with one another, but are in no way continuous, so that there is a linear cleft between the adjacent portions of every two cells. The protoplasmic portions of the cells, on the other hand, are continuous with one another by means of processes. If the capillary be stretched in any way the ground-plates, which are inelastic, are separated from one another, so that the clefts between them are increased in size. Hence we see in nitrate of silver specimens made under these conditions that the lines of reduced silver are much broader than in normal capillaries. Outside the capillary one finds in most instances an ill-developed adventitia which is continuous with the surrounding connective tissues. The picture thus afforded of a capillary must suggest at once that it will not be, so to speak, water-tight, but will permit of filtration between the cells, and if this were the case we would have to look upon the lymph, which is separating from the plasma circulating through the capillaries, as a filtrate. The fact that the lymph from most parts of the body contains less proteid than the blood plasma is no argument against this hypothesis. If we filter serum through porous filter paper the filtrate will have the same composition as the original serum. If, however, we take a more closely-meshed filter, such as a porous clay cell or an animal membrane, we shall find that the filtrate is considerably poorer in proteid than the original serum, the big proteid molecule being apparently unable to go through the smaller pores of such a filter. Now this hypothesis, that the lymph is to be looked upon as a filtrate under pressure from the plasma, has been the guiding idea in the most important works on lymph-formation which have appeared during this century. Though we find it more or less distinctly in the works of the older writers—Hales, Hewson, and others—it is to Ludwig and his pupils that we owe its most systematic examination. According to this hypothesis, the amount of lymph produced in any given part must be proportional to the difference between the pressure in the capillaries and the pressure in the extra-vascular spaces In most of Ludwig's earlier experiments on the subject this condition was found to hold good. On leading defibrinated blood through a limb the lymph-production in the limb was found proportional to the pressure at which the blood was led through it. In the testis ligature of the pampiniform plexus was found to increase largely the lymph production in this organ. In the arm and in the leg extensive ligature of the veins led to an increased flow of lymph. In all these cases, therefore, an increased flow of lymph was obtained by increasing the capillary pressure of the part. Ludwig found it more difficult to prove any constant alteration of lymph production incident on vaso-motor changes, although Rogowicz, working later in Heidenhain's laboratory, found that vaso-dilatation did give a certain definite increase in lymph-production, and also showed clearly that the vaso dilatation of the tongue produced by excitation of the lingual nerve was followed by an increased lymph-production in the tongue, which might at times amount to an actual unilateral œdema of this organ.

In dealing with the laws affecting lymph-production one is hampered by the fact that in the limbs of an animal at rest there is under normal conditions no lymph flow at all, so that when we wish to study the effects of our various procedures on the lymph-production in the limb we have artificially to bring about a lymph-flow by kneading and massaging the limb. Now this fact introduces at once an arbitrary element into the experiment, and Heidenhain suggested, therefore, that the best place to investigate the truth of the filtration hypothesis would be on the lymph-flow from the thoracic duct. This writer, therefore, carried out a long series of researches on the various conditions in which the lymph-flow from the thoracic duct might be increased or diminished, and came to the conclusion that the results of his experiments were irreconcilable with the filtration doctrine, and that we must assume that the cells forming the walls of the capillaries take an active part in lymph-formation—i.e., that lymph must be looked upon as a secretion rather than as a transudation. A renewed examination of Heidenhain's experiments, combined, however, with a more thorough investigation of their conditions, has shown me that, so far from overthrowing the filtration hypothesis, they furnish the strongest arguments which have yet been adduced in its favour.

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In dealing with the lymph-flow from the thoracic duct it is essential to know from what parts of the body this lymph is derived, especially since, as is well known, the lymphatics from all parts of the body, with the exception of the right upper extremity and right side of the neck, converge to pour their contents into this duct. In placing a cannula in the duct in order to collect and measure the lymph the ducts from the left side of the neck and left upper extremity are ligatured. From the hind limbs we know that in an animal at rest on the table there is no lymph-flow at all. Hence the sources of the lymph are confined to the trunk. We can, moreover, exclude the thorax and its contents, since ligature of the thoracic duct just above the diaphragm absolutely stops the lymph flow. Therefore, when dealing with the lymph-flow from the thoracic duct we deal only with the lymph coming from the abdominal viscera. As I shall show presently, the abdominal viscera, so far as their lymph is concerned, may be divided into two groups: (1) the viscera drained by the portal vein, and (2) the liver.

In testing the filtration hypothesis on the lymph-flow we have to investigate whether the flow is always proportional to the difference between the intra- and extra-capillary pressures. We may regard the extra-capillary pressure as not varying to any large extent, so that we have to see what effect is produced on the lymph by variations in the intra-capillary pressure in the intestines and the liver. The simplest experiments on the subject are those in which some large vessel is obstructed. Speaking generally, we may say that obstruction of a large vein raises the pressure in the capillaries immediately behind it, whereas obstruction of an artery will diminish the pressure immediately in front of it. If, for instance, we ligature the portal vein the arterial pressure is very little affected, while the pressure in the vein behind the ligature rises enormously. In consequence of this there is a large rise of pressure in the capillaries of the intestines and spleen, so that the spleen swells and the intestines become black from venous congestion and hæmorrhages are produced into their mucous membrane. The effect of this ligature on the lymph-flow from the thoracic duct is to increase it four or five times. The lymph also becomes bloody and its total solids are diminished. The diminution in solids is due solely to a diminution in proteids, the salts remaining the same as before, so that we have here an increased capillary pressure, causing an increased transudation of lymph containing a diminished percentage of proteid—a result which is also obtained when proteids are filtered with pressure through dead animal membranes. The presence of red blood-corpuscles in the lymph is not a necessary consequence of a rise of pressure in the portal vein. If a less excessive rise of pressure be produced by ligaturing the vein, not at its entry into the liver, but just below the pancreatic duodenal vein, thus leaving a circuitous route for the blood to the liver through the anastomoses of this branch, an increased flow of lymph is produced, containing less proteids than normal lymph, but which may be quite free from blood corpuscles.

A still more striking effect is produced by obstructing the vena cava just above the diaphragm. The lymph is increased from ten to twenty-fold, and it is found that the lymph obtained after the obstruction is free from red blood corpuscles and is more concentrated than normal lymph. What is the cause of this increased lymph-flow and why is it more concentrated? To answer these questions we must find out, firstly, the source of the lymph, and, secondly, the condition of the capillary pressure in the organ or organs from which the lymph is derived. We can determine the source of the lymph by a process of exclusion. Ligation of the kidney vessels and lymphatics has no effect on the usual consequences of obstructing the inferior vena cava. On the other hand, if we ligature the lymphatics in the portal fissure which carry off the liver lymph we find that a subsequent obstruction has no effect on the lymph-flow, or, indeed, may slightly diminish it. We must conclude then that the increased flow of lymph is more concentrated than intestinal lymph. In order to answer the second question as to this increased production of lymph in the liver we must investigate the changes in the circulation produced by the obstruction. On obstructing the inferior vena cava and recording the blood pressure in the chief vessels of the abdomen we notice that the pressure in the aorta drops almost at once to a third of its previous height, whereas there is a very considerable rise of pressure both in the portal vein and inferior cava. It is probable that the effect of the rise of portal pressure on the intestinal capillaries is more than counterbalanced by the severe fall in arterial pressure, so that there is a fall of pressure in the intestinal capillaries. This conclusion is borne out by the fact that if the abdomen be open the obstruction of the inferior vena cava is seen to be at once followed by a blanching of the intestines; on the other hand, the effect of the simultaneous rise of pressures in the portal vein and vena cava must be to raise the pressure in the capillaries of the liver to three or four times the normal amount. We have, then, as the results of this experiment, no rise of pressure in the portal area and no increase of lymph-flow from the portal area, a large rise of pressure in the hepatic capillaries, and a very large increase of lymph-flow from the liver.

The only other experiment of this nature which I need describe is one in which the thoracic aorta is obstructed. The results of this obstruction on the lymph-flow are somewhat variable. In most cases the lymph is diminished to one-half or one-third its previous amount; in a few cases the lymph is unaltered in quantity or even slightly increased. In all experiments the amount of proteids in the lymph is increased. Now if we investigate the state of the circulation under these conditions we find that obstruction of the thoracic aorta causes an enormous fall of pressure in the aorta below the obstruction and a corresponding fall in the portal vein, whereas the pressure in the inferior vena cava is unaltered or in some cases even slightly increased. We must conclude, therefore, that in the intestinal capillaries the pressure has fallen considerably below its normal limits, while in the hepatic capillaries the pressure is very little altered or may even be somewhat increased. Hence the only region of the body below the point of obstruction where the capillary pressure is not much diminished is the liver. Now we find that the liver is also the sole source of the lymph obtained under these circumstances. If the hepatic lymphatics be ligatured and the thoracic aorta be then obstructed, the flow of lymph from the thoracic duct is absolutely stopped. In these three cases, therefore, the lymph production in the organs of the abdomen is found to be absolutely proportional to the changes of the capillary pressures in these organs. In another set of experiments we find that a marked increase in the lymph-flow is produced by a general rise of capillary pressure in all the organs of the abdomen. Such a general rise of capillary pressure may be produced by the injection of large quantities of normal saline fluid into the circulation, giving rise to a condition of hydræmic plethora. Under such circumstances the lymph may be increased from 50 to 100 times in amount, and may in some cases run from the cannula in the duct in a steady stream. Now, in hydræmic plethora there are two changes in the circulation which might possibly be responsible for the increased production of lymph: firstly, the change in the composition of the blood, and, secondly, the increased pressure in the capillaries of the abdominal viscera. We can decide which of these two factors is responsible for the increased lymph-flow by a very simple experiment. Previously to injecting 300 c.c. of normal saline we bleed the dog to 300 c.c., so that after the injection the total amount of circulating fluid is the same as at the beginning of the experiment. In this way we entirely avoid any rise of capillary pressure, while we have diluted the blood to an even greater extent than in the experiments in which hydræmic plethora was produced. The effect of such a simple hydræmia is to increase the lymph-flow from 3 c.c. in 10 minutes to 4 or 6 c.c. in 10 minutes, whereas if hydræmic plethora were produced the lymph would be increased from 3 c.c. to 30, 50, or 100 c.c. in 10 minutes. It is evident, therefore, that in the production of this increased lymph-flow the all important factor is the rise of capillary pressure.

Exactly the same interpretation holds good for the action of a certain class of bodies which were grouped together by Heidenhain in the second class of lymphagogues. These include bodies such as salt, sugar, potassium, iodide, &c. The injection of a strong solution of dextrose (30 grms. in 30 c.c. water) into the veins of an animal causes a considerable increase in the lymph-flow from the thoracic duct. The lymph at the same time becomes more watery than at the commencement of the experiment. Heidenhain ascribes this effect to a specific excitation of the secretory activities of the endothelial cells. The effect, however, can be explained in a much more simple fashion. All these solutions have an osmotic pressure which is considerably higher than that of normal blood plasma. A solution of dextrose that should be isotonic with the blood plasma would contain from 5 to 6 per cent. of this body. When we inject a solution containing

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from 50 to 75 per cent. of dextrose it will attract fluid from the tissues until its percentage is reduced to 5 or 6 per cent., that is to say, 45 c.c. of fluid containing 30 grms. of dextrose will attract water from the tissues until its total volume is increased to 500 c.c. Of course, this estimate is merely a rough approximation at the truth, since before the sugar has had time to attract all this fluid a considerable amount of it will already have left the vessels by diffusion. As a matter of fact, however, we find that injection of a strong solution of dextrose is followed in a few minutes by a considerable dilution of the blood, caused by an increase in its volume. In some experiments of von Brasol the volume of the circulating blood was thus increased to twice or three times its previous amount; and these observations have been fully confirmed in a series of careful experiments made by J. B. Leathes. As we should expect, this increase in the volume of the circulating blood is attended by a large rise of capillary pressures in the abdominal viscera, and we have here again to decide whether it is this rise of capillary pressure or the change in the chemical composition of the blood that determines the increased lymph-flow. This question can be solved by using the same method that we adopted when dealing with the production of the increased lymph-flow in hydræmic plethora. We can entirely obviate the rise of capillary pressure if we bleed first to 300 c.c. and then inject a concentrated solution containing 18 grms. of dextrose. In this case the fluid that is dragged by the sugar from the tissues into the blood-vessels only just suffices to make up for the previous loss of blood. No hydræmic plethora is produced; there is no rise of capillary pressure, and there is no increase in lymph-flow, although an abnormally large amount of dextrose is present in the circulation. We must conclude, therefore, that the increased flow of lymph caused by injection of the second class of lymphagogues is entirely due to the rise of capillary pressure thereby induced, and is in no wise conditioned by a stimulation of the secretory activities of the endothelial cells.

There is one point in the effects of the injection of these bodies which has been looked upon as a strong argument for the secretory hypothesis, and which I must therefore mention shortly here. If we analyse the lymph and the blood at different periods after the injection we find that the amount of sugar in the blood steadily diminishes, while the sugar in the lymph first rises to a maximum and then diminishes parallel with that in the blood plasma. At a given period after the injection it is found that the lymph contains more sugar than does the blood plasma, and this fact was held to point to an undoubted secretory activity of the endothelial cells in the production of lymph. This conclusion, however, is by no means justified. The lymph flowing at any given moment from the thoracic duct does not represent the transudation from the blood at that moment, but is derived from the lymph that has been formed some time previously. If we had a solution of sugar in gradually diminishing strength flowing into a lymphatic trunk of the leg it is evident that this fluid would mix with the lymph in the other lymphatics, through which it flowed on its way to the thoracic duct. Later, the solution of sugar would have displaced practically all the lymph from these channels and would flow through the thoracic duct almost undiluted. It would take, however, some considerable time to flow from the leg to the thoracic duct, so that the outflow from the duct would represent not the fluid which was being injected into the leg at that moment, but the stronger solution which had been flowing in some time previously. If one compared, therefore, the percentage of sugar in the fluid flowing from the duct and in the fluid flowing into the leg lymphatic at different times after the beginning of the injection we should obtain a curve exactly similar to those obtained by Heidenhain after the injection of sugar into the circulation, and looked upon by him as undeniable evidence of secretory activity.

The dependence of lymph-formation on capillary pressure is not, however, the only important relationship brought to light by these experiments. The amount and composition of the transudation through a membrane depend not only on the pressure at which the transudation is effected but also on the nature of the membrane. According to the permeability of the membrane, so the amount and composition in proteids of the transuding fluid will vary. You will doubtless already have noticed that after obstruction of the inferior vena cava the pressure in the intestinal capillaries, although it probably sinks below its normal height, is yet as high as that in the hepatic capillaries. Nevertheless, we get a very small amount of transudation through the intestinal capillaries and a very large amount through the hepatic capillaries. It is evident, then, that the permeability of the liver capillaries must be very much more marked than that of the intestinal capillaries. In the same way we may compare the permeability of the intestinal capillaries with those of the limb capillaries. Normally from the limb there is no flow of lymph at all, whereas a probably equal pressure in the intestinal capillaries suffices to give rise to a steady flow of lymph. If we ligature all the veins of the leg a lymph-flow may be set up, but such a flow is incomparably smaller than that produced on ligature of the portal vein. We can, therefore, arrange the capillaries of the body in a descending order of permeability, the liver capillaries being the most permeable and the limb capillaries the least permeable. I have already mentioned how, on filtering solutions of proteids through various membranes, the percentage of proteids in the filtrate increases with the permeability of the membrane. As we have seen, exactly the same thing holds good for the capillaries in the body. The lymph in the limbs, the filtrate through the impermeable limb capillaries contains only from 2 to 3 per cent. proteids. That from the intestines contains from 4 to 6 per cent. proteids, while that from the permeable capillaries of the liver contains from 6 to 8 per cent. proteids—in fact, almost as much as the blood-plasma itself. It is conceivable that we might alter the amount of lymph produced in any organ by changing, not the intracapillary pressure, but the filtering membrane—i.e., the endothelial wall of the capillaries. Such a change can be brought about in the body by various means. A whole group of bodies has been described by Heidenhain as his first class of lymphagogues. These substances, which are mostly of the nature of albumoses, can be extracted from various of the lower animals and include leech extract, mussel extract, crayfish extract, and commercial peptone. On injecting a small amount of any of these extracts into the bloodvessels of an animal the lymph from the thoracic duct is much increased in quantity and becomes more concentrated. Now all these bodies are poisons; they alter the blood, diminishing its coagulability, and when given in sufficiently large doses cause a great fall of blood pressure in consequence of paralysis of the heart and vessels. I have shown that the changes in the circulation produced by these bodies are insufficient to account for the increased lymph-flow, but that the increased flow is due to an alteration of the capillary walls in the abdominal organs, especially in the liver. The hepatic capillaries become even more permeable than before, so that a pressure within them which is little above normal is sufficient to cause a great increase of transudation through them.

Another substance which seems to act directly on the capillary wall is curare. This body, however, differs from the class of lymphagogues just mentioned in the fact that its chief action is on the vessels of the limbs. The effect of curare in increasing the lymph-production in the limbs was noticed long ago by Paschutin working in Ludwig's laboratory. Its direct action on the endothelial wall of the capillaries can be easily demonstrated in the living frog's web. It may be seen that after the injection of curare the capillary walls become apparently more sticky, so that the capillaries become filled with a number of leucocytes adhering to their walls. A still more potent method of altering the permeability of the limb capillaries is to plunge the limb into water at 56° C. for some minutes. If a cannula has been previously placed in one of the main lymphatics of the leg it will be noticed that, in a very short time after this scalding, lymph begins to drop spontaneously from the cannula. The lymph which is thus produced is much richer in proteids than is lymph from a normal leg. The amount of lymph flowing from the leg can now be varied within wide limits by altering the pressure in the capillaries either by ligature of the vein or artery, injection of salt solution, or production of vaso-motor paralysis. By this scalding, in fact, we may reduce the limb capillaries to the condition of liver capillaries.

In conclusion, from this study of the conditions of lymph-production in the various parts of the body we must conclude that the endothelial cells of the vessels take no active part in the production, their vital activities being confined to the maintenance of their integrity as a filtering membrane with properties differing according to the part of the body in which they happen to be situated. The amount and composition of the lymph transuded in any part are determined solely by two factors: (1) the permeability of the vessel wall

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and (2) the intracapillary blood pressure. The more permeable the capillary the greater is the amount of lymph transuded under any given pressure, the greater is its concentration in proteids, and the more easily is the amount of lymph altered by slight changes of pressure.

The Hunterian Oration:

REFLECTIONS ON JOHN HUNTER AS A PHYSICIAN AND ON HIS RELATION TO THE MEDICAL SOCIETIES OF THE LAST CENTURY.

Delivered before the Hunterian Society on Feb. 13th, 1896,

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[THE first part of the Oration dealt with the life of Hunter and his experience as a physician, which was shown to have been by no means inconsiderable. Dr. Newton Pitt then continued as follows:]

Until the latter quarter of last century, as Mr. Quain pointed out, there was no medical education in London. Surgeons and apothecaries were supposed to be able to pick up a sufficient smattering of their work by attending the hospital for a few months, and physicians were educated elsewhere. Some half-dozen each year took the degree of M.D. at the Universities of Oxford or Cambridge, and these alone could become Fellows of the College of Physicians of London, while a much greater number proceeded to medical degrees either abroad or at Edinburgh. Owing to the genius and energy of the elder Monro and others, the education at Edinburgh was far ahead of anything in London, and we naturally find that medical societies and periodicals flourished there before they became established in the south.

Before knowledge can be classified and accurate conclusions drawn, it is necessary that a large amount of material should be collected from many sources. The formation of medical societies and the publication of transactions and periodicals form a feature in the medical history of the last century, contrasting strongly with that of the seventeenth century. Previously to this the Memoirs of the Royal Academy of Sciences in Paris and the Philosophical Transactions of the Royal Society of London were almost the only publications in which English medical cases were reported. Many English physicians had graduated at Paris, and the Philosophical Transactions contain, up to the end of the century, over 1000 medical papers. A large number of medical men have received the honour of the Fellowship of the Society, and not the least distinguished of these was John Hunter, who contributed numerous papers, for the most part dealing with questions of natural history.

Edinburgh Medical Societies.—The School of Physics was initiated in 1720 on the lines of the University of Leyden, and in 1783 there were 400 students of medicine. The *Medical Society* was founded in 1731, the records reach back as far as 1737 and the members received a charter in 1778. This society collected and published five volumes of medical essays and observations between the years 1733 and 1744. Cullen, Hunter, Oliver Goldsmith, Fothergill and Richard and William Budd were among the members. The Society met every Saturday evening during the winter sessions when papers were read. The publications were largely contributed by the first Monro—i.e., John—whose marvellous energy and ability contributed so essentially to the success of the school. He contributed papers on the nutrition of fœtuses, on the diseases of arteries, on the lacrymal canal, on white swelling, on herniæ, on the obstruction of ureters by stones, on ulcers, on procidentia uteri, on the preparation of bodies for dissection, on the anatomy of the lower jaw and of the duodenum, on chalybeate waters, and on new instruments, a range of original work unequalled at that time in this country. *Medical and Philosophical Commentaries* by a society of physicians in Edinburgh were edited by Dr. Andrew Duncan and 20 volumes were issued between 1773 and 1799. They were continued as the Annals of Medicine till 1804. The publication consisted of reviews of books, original medical observations, and medical news. They form the most valuable contemporary record of medical activity of London quite as much as of Edinburgh. The *Philosophical Society* published three volumes under the title "Essays and Observations, Physical and Literary," between 1754 and 1771. The *Æsculapian Society* was instituted in 1774, and consisted of five physicians and ten surgeons, who met and supped together once a month. The *Edinburgh Harveian Society* was founded in 1752 and the *Abernethian Society* in 1785. The *Royal Physical Society of Edinburgh* was founded in 1771, incorporated in 1788, and merged with the Chirurgico-Medical Society in 1796. The *Royal Society of Edinburgh* dates from 1783; the *Hibernian Medical Society*, Edinburgh, from 1791.

The only medical society in *England* outside London was the Medical Society of Colchester, instituted in 1774.

An examination of the history of the societies which were started in London shows that each society owed its origin to the energy of one or two men, and in many instances the society faded away at their death. Until the latter part of the century there was no education for students in London beyond that given by a few private lecturers. As late even as 1783 we learn from the Medical Register that the following was the complete list of lecturers in London. Anatomy: Mr. W. Cruickshank, at the Hunterian Museum in Great Windmill-street; Dr. R. Maclaurin, at his house in Mark-lane; Mr. Blizard, at the London Hospital; Mr. John Sheldon, at his house in Great Queen-street; and Mr. Henry Cline, at St. Thomas's Hospital, who had also been appointed Professor of Anatomy to the Corporation of Surgeons in 1781. Surgery: Mr. Percival Pott, F.R.S., at St. Bartholomew's Hospital; Mr. John Hunter, F.R.S., in the Haymarket; and Mr. J. O. Justamond, F.R.S., in Macclesfield-street, Soho. Physic: Dr. Fordyce, at his house in Essex-street and at St. Thomas's Hospital; Dr. Saunders, at Guy's Hospital; and Dr. Maddocks, at the London Hospital. Most of the lectures, it will be seen, were not delivered at the hospitals, but at the lecturers' houses, where several of them had large schools; and from Mr. Rivington we learn that the school of the London Hospital first offered a complete course of education in 1785 and commenced to give clinical lectures in 1792. From the minutes of the Corporation of Surgeons we learn that their Professor of Anatomy gave a yearly course of six lectures on the muscles and of six on the viscera, the proposal that he should also give three on the bones having been rescinded.

The following appear to be the chief of those to whom the new medical societies were due:—William and John Hunter, John Sheldon, Dr. Foart Simmons, Dr. Saunders, Dr. Fothergill, and Dr. Lettsom. The societies may be divided into two classes, those started by practitioners for the purpose of publishing cases and those started by teachers as a means of keeping in touch with students and junior practitioners and of teaching them how to report and discuss cases. In most instances the possession of a library, from which the members could borrow books, was considered a very essential and important feature. In the student societies, at any rate, the money was raised by innumerable fines rather than by fixed subscriptions.

The Fellows of the Royal College of Physicians used to meet from time to time to discuss medical questions and they issued six volumes of Medical Transactions between the years 1772 and 1820.

The societies associated with William Hunter were the two medical societies of 1753 and 1764. They were both small; the former consisted of physicians and the latter of licentiates. The first society published at intervals the volumes of medical observations and inquiries, and nothing more was heard of the societies after Dr. Hunter's death.

The Medical Society (1).—The first medical society in London was founded in 1752 by some hospital physicians who met together for their mutual improvement in the practice of their profession once a fortnight on Monday evenings at the Mitre Tavern, Fleet-street. After some time they decided to form themselves into a society for collecting and publishing "Medical Observations and Inquiries," six volumes of which were issued between the years 1757 and 1784, the first paper

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being dated 1753. The preface to the first volume states that "it is much to be regretted that the medical essays and observations of the Medical Society of Edinburgh have been discontinued, and that the present may be in some degree considered as a continuation of that valuable work." The chief contributors were Dr. J. Fothergill (whose museum Dr. W. Hunter bought), Dr. W. Hunter, Dr. G. Macaulay, Dr. S. Pye, Dr. C. Clephane (who died in 1762), Dr. W. Fordyce, and Dr. Gowin Knight. Dr. Hunter was the chief contributor; he was an original member and became the most influential. The society, which then consisted of seven physicians (six of whom were Fellows of the Royal Society), ceased to exist in 1784, after Hunter's death. Among the more interesting contributions I may refer to a case of Hernia of the Abdominal Viscera into the Thorax, reported by Dr. Macaulay; an excellent case of Pharyngeal Pouch, by Mr. Ludlow; a typical case of Osteo-malacia; and to papers by Dr. Fothergill on the Influenza Epidemics of 1758, 1775; on the Objections to Venesections in Apoplexy; and on the Value of Ipecacuanha in Dysentery. Fothergill also gives one of the first accounts of Sick Headache with Visual Disturbances and Fortification Figures, evidently drawn from personal experience; we know from his "Life" that he was constantly incapacitated by its attacks. Dr. Hick, in 1768, reported a case of Strangulation of Intestine under a band, about which he consulted John Hunter, who explained that it had probably arisen from adhesion of the omentum to both the mesentery and the ileum, and was able to show him two similar specimens of bands. In the same volume a case of Cæsarean section is reported, which was performed by Mr. Thompson of the London Hospital, assisted by Mr. Hunter; five years later William Cooper asked Hunter to perform the operation for him and remarks that the whole was conducted with the utmost coolness, humanity, and skill. There is no lack of evidence among contemporary records, of the high value which was set upon Hunter's practical surgical skill by practitioners. In one case he removed a tumour from the side of the neck as large as a head, and by bringing the edges of the skin together the whole nearly healed by primary union, no slight feat in those days.

Dr. Routh, in his Oration in 1859 before the London Medical Society, dealing with its history, states that there is a copy of the laws of this 1753 society in the British Museum which gives John Sheldon as the President for the years 1779 to 1782. On examination I find that this is an error, and that the laws referred to are those of the Great Queen-street Society, to which I shall allude later on. As the 1753 society consisted only of seven somewhat senior physicians it is improbable that there would be anything but the briefest manuscript note of their proceedings.

The Medical Society (2).—Another society of physicians with which Dr. William Hunter was connected, was instituted about 1764, and met once a fortnight on Wednesday evenings at Old Slaughter's Coffee House for the purpose of discoursing on the prevailing diseases. The members were Licentiates of the Royal College of Physicians of London. In 1783 there were twenty-three members, including Garthsore and Robert Bromfield, Hunter's colleagues at the British Lying-in Hospital, George Fordyce of St. Thomas's Hospital, and William Saunders of Guy's Hospital, after which date I have not been able to trace the society. The society was originated by Dr. Alexander Russell, formerly of Aleppo. The members also dined together once a quarter at the Crown and Anchor Tavern in the Strand. The immediate object which those who started the society had in view was to oppose the proposal that Licentiates should be admitted upon an examination in English, which, it was thought, would lower the standard.

The Physical Society.—This society appears to have been instituted at Guy's Hospital in 1771, according to the stamp which is impressed on the books belonging to their library, most probably by Dr. Saunders, who gave the first course of lectures at the hospital in 1770. The book of the laws of the society is dated 1775. The early minute books of the society have for many years been lost sight of, but I have been fortunate enough to discover the volumes from 1783 to 1820, with the exception of those for the years 1786 to 1788 and 1798 to 1804. As was the case with other societies, it would appear that when they were first initiated the members met informally and did not keep minutes of their proceedings. The first existing entry is for Oct. 4th, 1783, with Mr. Cline in the chair, which is headed the first meeting of the second session; while in 1792 we find the secretary making a note that the sessions should have been counted from 1775, and in future this was done. It is probable, therefore, that the meetings became much more businesslike and formal in 1783, but had been taking place for some years. The meetings appear to have been held every Saturday evening from October to May in the theatre of Guy's Hospital, and the society consisted of ordinary, honorary, and corresponding members. The former were required to attend every evening on pain of being fined, and in turn to read a dissertation before the society. After having read two dissertations and attended regularly for two sessions they could be elected honorary members and were freed then from responsibilities. Those physicians, surgeons, and apothecaries who had already distinguished themselves were at once eligible for election as honorary members. The society possessed a library which was supported by a contribution of sixpence from each member at every meeting and of a shilling if he were absent without good excuse. The rules, it is seen, are much more stringent than those that any society enforces at the present time. In the earlier minute-books the most important contributors were Mr. Cline, Mr. Hewson, and Mr. Astley Cooper, who had all been pupils of Hunter; Dr. Babbington, Dr. Saunders, Dr. Lowder, and Dr. Skeete, who were all ultimately on the staff of Guy's Hospital; while Dr. Wells, Dr. Lister, and others of the staff of St. Thomas's Hospital also joined the society. The society also included most of the general practitioners in the neighbourhood and a few from distant parts of the country. Dr. Lettsom, who was a member, was a donor of books to the library.

It is not surprising that there should be frequent reference in the minute books to Hunter's methods of treatment and to his views on many questions, seeing that so many members had been his pupils. Thus, on December 24th, 1785, we read that Dr. Saunders reported an experiment which Mr. J. Hunter had performed for the cure of the popliteal aneurysm. "An incision was begun a little below the middle of the thigh and continued three inches downwards in the course of the artery, and four ligatures were made on the artery above its dilatation with the view to obliterate the aneurysm." This refers to Hunter's first and celebrated operation in this region. Several cases were reported during the next few years successfully treated by the method thus laid down by Hunter. The high estimation in which Hunter was held in this society is shown by the fact that the name of no other surgeon is quoted constantly, while his opinion is several times given as authoritative.

At each meeting the medical cases of interest were first described and then a dissertation was read and discussed. In 1783 the treasurer of Guy's Hospital, Mr. Harrison, was elected a member of the society, and when he was visiting his sister Mrs. Cripps at Cirencester he made the acquaintance of Dr. Jenner, who read one of his earliest papers on Vaccination, at his invitation, before this society. I have not found the entry of this in the minute book, but those for the period 1798 to 1804 are unfortunately missing. Three prize dissertations on the subject have, however, been preserved, one by Dr. John Power of Market Bosworth in the year 1799, but neither the writer nor the date of the others can be traced, but we know that Mr. Allen, the founder of the firm of Allen and Hanburys, attended a meeting in 1802 with Mr. A. Cooper to hear such a paper. Of the numerous cases recorded in the minutes there is but little that is of interest now; on various evenings many different opinions were brought forward as to the value of styptics, such as Ruspini's and agaric, and numbers of cases are reported which had been treated by digitalis and by bark, which latter was largely introduced into this country by Dr. Saunders, Dr. Relph, and Dr. Skeete, members of the society. The number of cases of hydrophobia which were brought forward is noteworthy.

The society appears to have flourished for many years, 168 ordinary members were elected in the years 1783–1785, and judging from the subscriptions collected each evening it would appear that probably the attendance was often over forty, while the amount of fines exacted at each meeting from absent members or from those who had failed in their observance of the rules frequently amounted in the latter years of the century to over £5.

The Pupils' Physical Society in the early part of the century branched off from this one and still continues to flourish; it may, therefore, claim to be a descendant of one

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of the oldest societies in London. The original society gradually waned as the numerous medical societies developed and finally ceased in 1852.

In 1798 a volume appeared entitled "Medical Records and Researches, Selected from the Papers of a Private Medical association." It was printed by Cox of St. Thomas-street in the Borough, and the papers were contributed or collected by Astley Cooper, William Babbington, and John Haighton, who were three out of the six presidents of the Physical Society for that year. Within the next year or so the two former were elected on the staff of Guy's Hospital, and soon became busy with practice, and no further volumes were published. It is not improbable that the Physical Society did publish some of their material, as a printing committee was elected annually, but from a passage in the life of Astley Cooper I conclude they did not publish this volume. In this Cooper published two cases of hernia of the abdominal viscera into the thorax and some observations and experiments on the occlusion of the thoracic duct. Haighton's most important paper described some experiments which he had been induced to make owing to his opinion that the fatal results of Cæsarean section might be due to the admission of air to the abdomen. He performed some laparotomies on animals with the abdomen under water, and then applied an adhesive composition to the cut edges, and outside this a bandage. He obtained complete recoveries. However, not being quite satisfied, he repeated the operations in the air and obtained equally good results, thus convincing himself that the ill results ordinarily obtained were not merely due to exposure to the air.

The Physico-Medical Society.—There is in the British Museum a copy of the laws of the Physico-Medical Society of London, established in the year 1771. We read: "In the year 1772 several medical gentlemen residing in London associated themselves for the purpose of submitting their respective opinions to the examination and correction of each other." At first the name adopted was the Philosophico-Medical Society. The volume gives the laws as revised, arranged, and amended in 1774, when this name was discarded. The council consisted of four presidents, a treasurer, two secretaries, and nine members. The society met on Monday evenings at 7 o'clock for nine months in the year; from 7 to 9 P.M. for a debate on a set subject each night, and the members dined together once a year. The annual subscription was a guinea. They possessed a library and members could borrow books. I have not been able to identify this society with any of the others, nor is it clear where they met.

The Medical Society of London (Bolt-court).—The Medical Society of London was instituted in 1773 and, according to the Medical Register of 1783, met every Tuesday evening at 7 o'clock at Crane-court, Fleet-street. It at first consisted of thirty physicians, thirty surgeons, and thirty apothecaries, and the meetings were held in the house of Dr. Lettsom, who was in every way a most liberal benefactor to the society, giving donations of money, books, and finally the premises in Bolt-court. He was practically the founder of the society. Dr. Fothergill was also a munificent donor of books. In 1784 the society was nearly wrecked by violent party disputes over the candidatureship of two of its members, Dr. Cooke and Dr. Whitehead, who was President at the time, for an appointment at the London Hospital. After 1784 two gold medals were awarded biennially for original essays, but judging by the meagreness of some of the successful essays there must often have been but little or no competition. In 1794 the attendance at the meetings was often very small, and sometimes only four members were present—as a result they tended to drift into gossip rather than business. The society somehow got under the thumb of Dr. James Simms, who succeeded in being re-elected President for over twenty years. They agreed to pay him and his wife an annuity of £30 a year, and in 1800 paid him £500 for a large number of his books. The manner in which Dr. Simms managed the society gave great offence and led to the secession of a number of members, who formed the Medico-Chirurgical Society in 1806. The society in 1850 amalgamated with the Westminster Medical Society and still flourishes at Chandos-street. Six volumes of the "Memoirs of the Medical Society of London" were issued between the years 1792 and 1805. It is clear that at first Dr. Fothergill and Dr. Lettsom were the influential members.

The Medical Society (Great Queen-street).—This medical society was instituted at the Anatomical Theatre, Great Queen-street, Lincoln's Inn Fields, on Dec. 9th, 1779. The members met every Tuesday evening at 7 o'clock from October to May. Medical news and cases were brought forward from 7 until 8 o'clock, when the dissertation for the evening was read out by the author, and afterwards by the president, paragraph by paragraph, for discussion. The president wore his hat while in the chair. Dissertations were written by each member in turn, and any member failing to write one was fined 10*s.* 6*d.* Members absent without having sent an apology were fined 2*s.* 6*d.* There are copies of the laws of this society and the list of members in the libraries of the British Museum and of the Royal Medical and Chirurgical Society, dated 1783 and 1784.

This society was started by John Sheldon in connexion with his Anatomical School at Great Queen-street. Sheldon was also surgeon to the General Medical Asylum in Welbeck-street. The society possessed a library, and awarded a diploma to members who gave proof of sufficient medical ability and had written two dissertations. The greater number of the members were practitioners, only a few being students. In 1783 the society consisted of twelve foreign and seventeen honorary members, with eighty-seven ordinary members who were required to attend the society regularly. Old members kept their names on the book when they moved into the country as corresponding members. Mr. Sheldon was perpetual president, and each year from one to three other members were also elected as presidents. Sheldon and Cruikshank, I learn from Mr. D'Arcy Power, were rival teachers under Dr. William Hunter at the Great Windmill-street School; both were teaching anatomy and both were working at the lymphatic system. Owing to some difference with Hunter, Sheldon left and started an anatomical school for himself at Great Queen-street. About the time of Hunter's death Dr. Johnson wrote to Sir Joshua Reynolds in favour of Cruikshank for the post of Professor of Anatomy, which Hunter had held at the Royal Academy, but Sheldon was elected, and retained the office till his death in 1808, when he was succeeded by Anthony Carlisle. Sheldon was a great patron of æronauts and was the first Englishman who made an experimental ascent. In 1788 he was compelled to resign his surgical appointment at Westminster owing to overwork. This medical society was evidently closely associated with his teaching and was under his control; the majority of the members, however, were practitioners. I have not been able to trace the society later than 1784; apparently it ceased when Sheldon gave up his house, and it would appear that within a few years Wilson, who had been Cruikshank's assistant, was lecturing on surgery in Great Queen-street in probably the same house. This society was a rival and opponent of Hunter's Lyceum Medicum, with which Cruikshank was connected.

The *Society for the Improvement of Medical Knowledge* was established by Dr. Foart Simmons and others in February, 1782, for the purpose of collecting useful essays and observations for publication. Dr. Simmons had studied at Edinburgh, where such societies were flourishing. He had just been appointed physician to St. Luke's Hospital, and became the most distinguished alienist physician of his day. In 1803 he was called in to attend George III. Meetings of the society were held once a fortnight, on Tuesday evenings, at Old Slaughter's Coffee-house in St. Martin's-lane, when papers were read. There were formal meetings once a quarter, when candidates were proposed at one meeting and balloted for at the next. The society consisted of sixteen members, with a president, treasurer, two secretaries, and a committee for revising and selecting papers for publication. They published two volumes of *Medical Communications* in 1784 and 1790 respectively, containing thirty-one papers. The following are among the more interesting. A Careful Post-mortem of what is obviously a case of Cancer of the Œsophagus, by John Hunter, who looked upon the condition as one of ulcer. Nothing is more striking in reading the records of this time than the lack of system in the post-mortem examinations: one or two organs which were suspected were examined, but too often no note is made as to the condition of those which had probably been the real source of the illness. Hunter often gave full and accurate reports, but rarely examined all the organs. A most remarkable case of a sword wound of the stomach which recovered is reported by Dr. Carmichael Smyth, physician to the Middlesex Hospital. The patient was fed for weeks per rectum with from four to five pints of broth daily, which was retained. Mr. Henry Watson, senior surgeon to the Westminster Hospital, proposed enterectomy for cases of

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hernia in which the bowel was found to be gangrenous. He showed, by a successful operation on a dog, that by making a solid cylinder of isinglass jelly, which he inserted into the two cut ends of the intestine, they could be brought together and united by a continuous suture with a Glover's needle and thread. Dr. Willan records a case of fasting which lasted for sixty days, the man only taking water and two oranges each week.

In the library of the Royal Medical and Chirurgical Society there is a manuscript which belonged to Dr. Lettsom entitled "A Scheme for Instituting a Society under the title of the Society of Physicians of London, instituted for the Improvement of Medical Knowledge and also for building a New College of Physicians, 1782." It is somewhat uncertain whether the date is not a recent addition in another handwriting. If this refers to the same society the manuscript, I should conclude, was written by Dr. Foart Simmons; but as the writing appears to be that of an old man, and Simmons would be about thirty, it is almost certainly quite distinct. The object for the foundation of the society was to organise the Licentiates of the College together and to raise funds to build a new College of Physicians. The Licentiates included many men of the greatest ability and with the largest practices; but unless they were graduates in medicine in the universities of Oxford or Cambridge, and had, therefore, conformed to the Test Act, they could not become Fellows. They had shortly before lost an action which they had brought against the College before the Court of King's Bench, and hence the bitter feeling which is expressed. The scheme commences by stating that every member is to subscribe £50, and those whose fortunes enable them are expected to be more liberal. Public-spirited persons, particularly dissenters of different denominations, are to be applied to for assistance; the regulations included the formation of a magnificent library, but nothing seems to have come of this great scheme.

Society for the Improvement of Medical and Chirurgical Knowledge.—This society issued three volumes of Transactions between 1793 and 1812. The society was founded by John Hunter and George Fordyce, senior physician to St. Thomas's Hospital, in 1783, which is the date of delivery of the first paper, but none were published till ten years later. The society originally consisted of nine members, with power to increase up to twelve, but not beyond, and only eighteen, whose names are given in the minute book, joined during the thirty years of its existence. They met once a month at Slaughter's Coffee-house, and after dinner read and discussed the papers. Members to be eligible were required to be living in the neighbourhood so as to attend regularly, and they were required to be physicians or surgeons of five years' standing, or to be on the staff of St. Bartholomew's, St. George's, Guy's, or St. Thomas's Hospitals. It is interesting to note that the first volume of Transactions was published in 1793, the year of Hunter's death, and after 1812, when the last volume was issued, the society continued merely as a club of ten, who dined together once a month. They had been, according to their last secretary (Mr. Benjamin Brodie), a very exclusive society and finally dissolved in 1818. The minute book is now in the Library of the Royal Medical and Chirurgical Society. The chief contributors to the Transactions were John Hunter, Dr. John Hunter, physician to the army, Dr. G. Fordyce, Dr. Jenner (paper on the preparation of tartar emetic), Matthew Baillie, Everard Home, Anthony Carlisle, and John Clarke, most of whom it will be seen were Hunter's pupils. Dr. Wells was the most remarkable and influential man in the society after Hunter's death.

Hunter's communication on inflammation of the internal coat of veins is one of great importance. He pointed out that it occurred wherever there was severe inflammation in the neighbourhood of large veins, whether as the result of a compound fracture, an accident, or a surgical operation, but that it may also occur after venesection, and insists upon the importance of obtaining primary union. He points out that a thick, dry compress of linen or lint is the proper dressing for venesection or for compound fractures so as to allow dry scabbing, but that if the parts are kept moist or prevented by plasters from evaporating they always suppurate and the vein is then liable to inflame, and if so it will become occluded. If the surgeon suspects suppuration to have taken place he must keep a compress on the vein higher up. Hunter also reports one of the first cases of artificial feeding (a case of melancholia) by an œsophageal tube, which was suggested to him by a tube he was using for injecting liquids into the stomachs of animals. The difficulties might have appeared to any one but Hunter insurmountable. A probang was inserted in a fresh eelskin and tied in above and below the sponge. A slit was then made in the skin just above the sponge. The probang was passed into the stomach and a wooden pipe with a bladder attached was pushed over the probang. The food and medicine were put in the bladder and squeezed down the tube. In this way the patient was fed until he recovered. We also read in Hunter's own case-book of a patient whose pulse failed suddenly when the spermatic cord was tied during the removal of the testicle for the treatment of a large hydrocele. Hunter at once injected into the stomach with a crooked tube and syringe (such as he was in the habit of using for injecting fluids into the stomachs of animals for the purposes of experiment) volatile cordials and then laid the body before the fire, but without avail.[1]

Lyceum Medicum Londinense.—This society was established under the patronage of John Hunter and Dr. George Fordyce in January, 1785. The meetings were held every Friday evening from 8.30 P.M. to 11 P.M. between October and May. in Hunter's lecture room, which was situated between Castle-street and the east side of Leicester-square. According to Chevalier, Hunter gave them the gratuitous use of his lecture room and generally displayed for their benefit the more interesting and instructive of the additions to the museum. Among the receipts of Hunter's executors, an abstract of which was published by Dr. Finlayson.[2] I notice a sum of twenty-four guineas was received in September, 1793, from this society, but no further payment was made within the next year or so; it is not clear, therefore, for what this was paid, possibly for carpenters' or printers' work, and not for rent. The Royal College of Surgeons of England possess a copy of the rules of the society and a list of members from the foundation to the date of publication, 1792, from which we learn the following particulars. The society consisted of honorary, corresponding, and ordinary members, the latter being divided up into three classes.

The six honorary members were the following teachers: John Hunter, lecturer on Surgery in the Haymarket; George Fordyce, lecturer on Physic at Essex-street; William Saunders, lecturer on Physic at Guy's Hospital; William Osborn and Thomas Denman, lecturers on Midwifery at Leicester-square; and William Cruikshank, lecturer on Anatomy at the Hunterian Museum, Great Windmill-street; the corresponding members (21) being teachers or members of hospital staffs in the country. The ordinary members consisted of: Class 1. Those who had taken a qualification or were in practice; of these there were 78, and among the names may be noted the following: Baillie, Home, Adair, J. Clarke, Pearson, Ford, Cleghorn, Babington, James Curry, Abernethy, Astley Cooper, and Thomas Young. Class 2, which numbered 314, consisted of those who had attended a hospital and one course of lectures on Anatomy and the practice of Physic. Class 3, numbering only 7, consisted only of those who were commencing their studies. The two former were required, in turn, to read a dissertation which, on the following Friday, was read out by the President and discussed. The first hour of each meeting was devoted to the narration of medical cases, which were entered in a book, and the more important were sent to Dr. Foart Simmons to be published in his Medical Facts and Observations. The society possessed a library and presented a five-guinea gold medal annually for the best dissertation on a set subject.

Such a society was a very great educational centre, as each member was required to observe and inquire for himself; fines were inflicted on a member who left a meeting without publicly standing up and asking permission; and for each time he failed to attend the meetings until he had read a dissertation, after which he attended at his convenience. No member was allowed to leave London without writing for permission. There was an entrance fee of a guinea. Jenner, we learn, attended a meeting of this society on April 22nd, 1801, when he was admitted a Fellow.[3] But little is now known about the society; the Index Catalogue of the Surgical General Library, U.S. Army, possesses the Laws for 1798. The society had ceased by 1805 to hold any meetings. In that year Sir C. Mansfield Clarke, Sir B.

[1] Vol. iii., p. 104.

[2] Brit. Med. Jour., 1890, vol. i., p. 738, and Library of the Royal College of Surgeons of England.

[3] Life of Jenner, vol. i., p. 449.

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Brodie, Dr. Baillie Clarke, and a few other members of the society established the Westminster Medical Society for the purpose of promoting intercourse between students and teachers, and the members of the old society were elected honorary members. After a somewhat chequered career this society amalgamated with the Westminster Society, and later both with the Medical Society, which now flourishes.

Hunter's influence was paramount in the three following societies: (1) The Society for the Promotion of Medical and Chirurgical Knowledge, which was a small society of physicians and surgeons founded in 1783, consisting of nine or ten members, who dined together and discussed their papers, of which they published three volumes after the death of Hunter; (2) The Lyceum Medicum Londinense, a large society which met at Hunter's Museum and numbered 350 members, including, probably, all those who attended Hunter's lectures on Surgery, Cruikshank's on Anatomy, Saunders' on Physic, and Denman's on Midwifery—i.e., probably a majority of the students in London; and (3) The Physical Society, which met at Guy's Hospital and was attended by the students of the United Hospitals—Guy's and St. Thomas's—and by the practitioners in the neighbourhood. It numbered more than 200 members. It is not possible now to determine with certainty who were the founders of the latter society, but in 1783, in the earliest remaining record, we find the most influential members were pupils or friends of Hunter, who all looked up to him as the greatest living authority on all questions. Thus at this period Hunter influenced more or less directly some 500 students and practitioners, and his museum was more especially at the service of the Lyceum; the only other society was Sheldon's, which contained, however, very few students. The Lyceum, the Physical, and Sheldon's Medical Societies were not included in the Medical Register for 1783, probably because they were not limited to practitioners and were looked upon as merely part of the educational machinery of the metropolis. It is not to be wondered at, that twenty years later, Hunter's were the views accepted by the leaders of surgery in London and that he had revolutionised the studies of surgeons; and there can be no question that the change had largely been brought about by means of these societies. When, after years of isolation, the schools of London and Paris compared notes at the end of the war it was found that the English surgeons were far ahead of their *confrères*, thanks to Hunter, but that the converse was the case with regard to medicine.

The Society of Physicians.—Dr. S. Foart Simmons, who compiled the Medical Register of the last century, which was issued in the years 1779, 1780, and 1783, giving a list of all the medical men and of the societies of Europe, also edited the *London Medical Journal* for a society of physicians. Eleven volumes were issued between 1781 to 1790, and the publication was continued as *Medical Facts and Observations* from the year 1791 for six volumes.[4] The *Journal* was published monthly and consisted of reviews of all the new European medical books, of original papers and of medical news, being on the same lines as the medical and philosophical commentaries of Edinburgh, and together they give us the best epitome of the current medical opinions of the time. I have not been able to learn more about this society beyond what is stated in the first volume. It appears that the society had occasionally met together to converse on medical subjects, and at the instigation of Dr. Simmons, who undertook to act as editor, they agreed to set on foot this monthly publication.

Not much can be learnt of the Middlesex Hospital students' medical society, which dates back to 1774, but of which records have not been preserved. The students appear to have met twice a week in the physicians' room. The Abernethian Society of St. Bartholomew's Hospital commenced at the end of the century.

In bringing before you this evening these remarks about Hunter and the history of the medical societies of London, I trust we all realise how great a debt we owe to the Hunters (William and John) and to John Sheldon for instituting debating societies for the purposes of medical education. We can afford now to read with amusement a pamphlet which is entitled, "Reflexions on a Letter addressed to the Governors of St. George's Hospital by John Hunter in 1792." After abusing Hunter for his lack of education, &c., the writer says: "Your disputing societies, several varieties of lectures in a day, and a squint at an operation are the fashionable attendances of the modern student. Since the Medical Tea-sipping Society was commenced mankind has been classed to view the wonders of your museum and the world indulged with a volume of your notions at the common price. It is ridiculous to observe how this tea-kettle invitation has spread. An apothecary may now take his tea gratis and have a game of whist for only the price of the cards every evening in the week, if he keeps a regular list of the bread-and-butter manufactories."

[4] There are seven volumes in three in Guy's Hospital Library.

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GLEANINGS FROM SURGICAL PRACTICE.

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VI.[1]—ON OBSTRUCTED ARTERIES.

EVERY practitioner of medicine or surgery is familiar with the fact that an artery in its continuity may become obstructed, although when this condition is discovered there may be some difficulty in making out its precise cause. Every student of pathology and observant visitor to our college and hospital museums will know that this obstruction, partial or complete, may be brought about by diverse causes, and bedside experience will soon teach him that the results of arterial obstruction are very variable. As time passes and experience increases he will have learnt that an artery may become the seat of inflammation, ulceration, or sloughing, either as a result of local injury or from the extension of inflammation from some neighbouring tissues, and be led to appreciate the fact that any action, whether called inflammatory or otherwise, which alters the nutrition of the inner coats of an artery may help to encourage the coagulation of the blood in that artery, and as a consequence bring about thrombosis in the vessels at the part affected with all its attendant dangers. He will, moreover, have been led to recognise that chronic changes may so insidiously go on in an artery as to bring about a narrowing of its lumen even to its closure, which one pathologist will describe as being due to a congenital condition and another to a form of local arteritis called obliterative.

[1] Nos. I., II., III., IV., and V. were published in THE LANCET of Nov. 2nd and 9th, Dec. 7th, 1895, Jan. 11th, and Feb. 8th, 1896, respectively.

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The following two cases are striking examples of this condition and in both an aortic aneurysm existed. In one, a young patient, the aneurysm was situated below the contracted orifice of the subclavian artery; in the other, an old patient, the arch of the aorta with the innominate artery was its seat. In neither of the cases was the obstruction recognised during life; its true cause was made out only after death.

CASE 1. *Aneurysm of the aorta giving rise to laryngeal symptoms; apnœa and sudden death; almost complete closure of the orifice of the left subclavian artery.*—A healthy-looking, sensible, married, childless woman aged twenty-two years came under my care at Guy's Hospital on July 5th, 1869, suffering from dyspnœa which came on at uncertain intervals and had existed for two years. Her trouble was supposed to be laryngeal. When admitted she was tranquil and apparently well, but she dreaded an attack, for she felt sure she would die in one. On a careful general examination, as nothing wrong could be made out except an absence of pulsation in the arteries of the left arm, which was otherwise normal in size and in temperature, the question of her dismissal from the hospital was raised, but she seemed so truthful and alarmed at her condition that it was arranged to keep her for observation. Within twenty-four hours of her admission and at night an attack of dyspnœa came on which so speedily became intense and threatened death that tracheotomy was performed, but as the tube was being introduced death ensued. At the post-mortem examination, made by Dr. Moxon, an aneurysm the size of a plum was found to be pressing upon the left side of the trachea and left bronchus so as to flatten both. It sprang from the right side of the descending aorta about one inch and a half below the orifice of the left subclavian artery, and it had an oval mouth which measured half an inch by three-fourths of an inch. The arteries generally were healthy, but marked by many semi-cartilaginous patches of thickening, one having an atheromatous centre. The left subclavian artery was almost entirely closed at its mouth by constriction and thickening. The ovaries were shrivelled and the Fallopian tubes were closed at their ends, bent down and adherent to the ovaries. The neck of the uterus was abraded and its body was large and flaccid. The kidneys were natural.

CASE 2. *Aneurysm of the aorta and innominate artery; ligature of the right common carotid; death on the fourteenth day; obliteration of the origin of the left subclavian artery.*—A man aged fifty-eight years came under my care in January, 1877, with a large aortic and innominate aneurysm which was pressing upon the trachea and œsophagus and giving rise to great pain and loss of voice. It had been coming for about a year. It was reported at the time that the radial pulse of the right or affected side was much stronger than that on the left and that the pulses of the left arm were very feeble. I applied a ligature to the right common carotid and no difficulties were experienced; indeed, everything seemed to be going on well and the patient expressed himself as being greatly relieved, but on the twelfth day he sank. At the necropsy, as made by Dr. Moxon, the aneurysm was found as described and the parts connected with the operation were all healthy.[2] The origin of the left subclavian artery was obliterated. The obliterated part was not converted into a cord, but was longitudinally wrinkled as if incompletely filled with something. On opening this part it was found to contain some fibro-cellular-looking material of loose texture adherent in part to the wall of the artery and yet pretty easily separable in parts to show that it was quite a separate material to the arterial wall. It might have been organised clot, but if so it is difficult to explain the condition of the orifice of the subclavian—a mere pouch without a trace of aperture into the artery. The vessels were all normal which arose from it beyond the obliterated spot except one very large trunk half as large as the subclavian itself, which must have been from its position the inferior thyroid. The left internal jugular vein, with the left subclavian and axillary veins, were plugged by recent adherent thrombus. The left innominate vein was free. The viscera were healthy.

The most common pathological changes met with in arteries are those known as the calcareous and atheromatous; through the former the vessels become more or less rigid and inelastic, and through the latter the formation of most aneurysms which are not of traumatic origin is to be ascribed. At the present moment, however, what is of special interest is as to how these changes in the coats of an artery may lead up to its occlusion. To this aspect of the matter I shall devote a few lines. It should be understood that an artery the subject of either of these two affections mentioned may become occluded in at least two ways. In the one case, at the seat of either some calcareous deposit or atheromatous ulcer as it is called a clot may form, the fibrin from the blood as it flows onward being as it were whipped by the rough surface of the diseased artery into a clot, which enlarges so as to form a thrombus big enough to occlude the artery. In the other case the clot is formed in the same way, but instead of enlarging where it was formed it becomes dislodged by the blood force and is carried forward in its stream along the narrowing arterial channels to some more or less distant position past which it is too large to travel, and there as an "embolus" becomes impacted so as to occlude the artery, the favourite position of this embolic plugging being the bifurcation of a vessel. In some cases, again, portions of calcareous or atheromatous tissue doubtless help to form the clot and in small vessels even to form the embolus. Certain examples of senile gangrene are unquestionably due to this cause.

All examples of embolic plugging are not, however, to be thus explained. Some are associated with certain blood conditions found in fevers, such as scarlet fever. I have had three cases of this kind in young women under my care in which the popliteal artery was the vessel plugged. In all gangrene followed as a consequence of the obstruction, and in all amputation was performed, with a good result in two; the third, a girl aged fifteen years, was too feeble to recover. In the majority of cases of embolic arterial obstruction heart disease is its true cause. In some the heart affection is of an acute nature, in others of a chronic. What is known as septic or malignant endocarditis is the most common. The embolus in all these cases is of a fibrinous nature; it forms upon one of the valves and is washed off by the blood current and floated downwards to where some impediment to its progress is met with and thus blocks the vessel.

In another class of cases the obstruction is brought about by traumatism, and to this I particularly wish to draw attention in a subsequent paper, for examples of this kind come directly under the notice of the surgeon, whereas those which are included in the former division only come into his hands in their later stages, when gangrene is either threatened or present.

(To be continued.)

[2] Transactions of the Clinical Society, 1878.

A CONTRIBUTION TO THE SURGERY OF THE URETER.

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THE ureter is practically a muscle traversed by a channel lined with epithelium. At its lower end the muscle-tissue of the ureter is directly continuous with that of the bladder. It has been determined by actual observation that rhythmical waves of peristaltic contraction occur in the ureter, the waves passing invariably from the kidney to the bladder. As these contractions of the ureter arise much in the same way as those in the muscular substance of the heart we may with Foster speak of them as "beats." These spontaneous movements or beats "are subordinated to the flow of urine into the pelvis; the more active the secretion of urine the more frequent and vigorous are the beats of the pelvis and the ureter." It is very fallacious to simply regard the ureter as a passive conduit; urine is conveyed along it on the same principle that fluid is conducted into the stomach by the œsophagus. The rhythm and power of the ureteric beat may be best studied in adult individuals with exstrophy of the bladder. When urine is being abundantly secreted a jet of fluid, sometimes 5 centimetres high, will issue from each ureteric orifice at intervals of a few seconds. Occasionally the jets from the two openings are synchronous, sometimes alternate, but, as a rule, independent in time and variable in force. When the flow is less abundant the jet appears with diminished regularity and with longer intervals.

Great and unusual suffering sometimes results from what may be termed exalted action of a ureter, as the following case demonstrates:—

In August, 1892, I saw a married woman twenty-eight years

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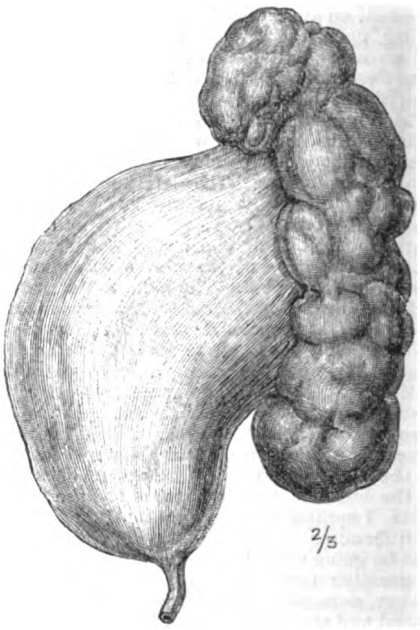
of age for chronic disease of the Fallopian tubes. She was sterile and had been treated for several years by rest and drugs. Her condition had become so serious that it was necessary to attempt the removal of the uterine appendages. At the operation the Fallopian tubes were found enlarged with a diameter of 2 centimetres and firmly adherent to the pelvic floor. The left tube and a part of the ovary were detached and ligatured. When the right appendages were released and drawn into the wound a coil of ileum was found adherent to the tube. The gut was gently detached; it was then discovered that the adherent ileum covered a circular perforation in a flexure of the tube. The ovary and tube were removed, the pedicle being secured with silk. Convalescence was soon complete and the patient spent the winter months in the south of England, returning to town in May, 1893. She now began to suffer from increased frequency of micturition and I began to suspect that the stump on the right side was giving trouble, and on vaginal examination a tender lump could be felt to the right of the cervix. The trouble with the bladder increased and became serious; on two occasions there was a definite rigor followed by a temperature of 102° F., so I determined to puncture the swelling through the vagina with the hope of finding pus. This was done, but no pus was found. Two days later the patient complained of a profuse watery vaginal discharge, which I soon satisfied myself was urine. Records were kept of the amount of urine discharged from the bladder and of that which escaped from the vagina, and it was found that they were equal. It was noteworthy that coincidently with the establishment of the urinary fistula the pain and discomfort at once disappeared. It was ascertained that each time the patient passed urine its amount measured with extraordinary exactitude two ounces. Fourteen days after the fistula was established it was resolved to investigate the bladder under anæsthesia in order to determine the situation of the fistula and Mr. Buckston Browne gave me the benefit of his advice. On examining the vagina a rounded aperture was detected in the fornix to the right of the cervix. Milk injected into the bladder was retained and did not escape by the fistula. At this consultation we ascertained two facts: (1) that the fistula was ureteric; and (2) that the bladder was contracted and would not hold more than two ounces of fluid. We also were hopeful that the fistula would close and decided to wait for this event. Ten days later the fistula showed signs of closing and a few days later closed for ever. Coincident with the closure of the fistula micturition became painful and urgent, the bladder discharging with great exactitude two ounces of urine, as shown by the fact that two ounces of urine were passed at 6.25 A.M., at 8.40 A.M., at 10.30 A.M., at 11.10 A.M., at 12.40 P.M., at 1.45 P.M., and at 2.50 P.M.; one ounce and a half at 3.25 P.M., and two ounces at 4.40 P.M. and at 6.20 P.M. The clinical facts enabled us to make the following deductions: 1. The right ureter was entangled in inflammatory tissue in that part of its course where it runs between the layers of the broad ligament (mesometrium). 2. This implication of the ureter near its vesical termination teased the bladder and induced tonic contraction of its muscle tissue. These deductions were explained to the patient and her husband and it was pointed out that if the symptoms did not abate we should probably deem it necessary to remove the right kidney. The trouble increased, and after a careful consideration of the case with Mr. Buckston Browne nephrectomy was decided upon and the right kidney was removed in June, 1893. The organ was quite healthy. The results of the operation were admirable. The dysury ceased immediately, the excessive vesical contraction began to yield, and the capacity of the bladder increased in a few days to four ounces. Three weeks after the removal of the kidney the wound was healed and the bladder would hold without discomfort ten ounces of urine, and a few weeks later the patient wrote that she had no trouble with the bladder, but that a sinus had formed at the lower end of the scar left after the oöphorectomy. Some months later a silk ligature escaped and the sinus closed, and she has since remained in vigorous health. She menstruates regularly and at times this is accompanied by pain. The persistence of this function is due to the fact that I was unable to remove completely the left ovary. At the present date the patient is in excellent health.

The next case illustrates the suffering which is occasioned by an inadequate ureter. In 1894 Mr. J. J. Clarke of Walthamstow placed under my care a married but sterile woman forty-four years of age on account of abdominal pain. When she first came under observation a painful swelling was easily made out in the left iliac fossa, resembling in some points an ovarian tumour. After resting in the hospital this swelling disappeared, but an ill-defined mass could be made out on each side of the uterus. The patient complained most of a dragging pain in the left loin with frequent attacks of acute pain resembling renal colic. She had suffered from pain of this kind at intervals for twenty-five years, but it had increased in severity during the last year and caused her so much suffering that she was anxious for relief. On physical examination the kidney was not perceptible on either side, although the woman was very thin. Observations were made on the urine daily, but no defects in quantity or quality were detected for many days. One morning after a night characterised by more than usual pain the urine was opalescent and on microscopic examination yielded pus. I decided to explore this kidney. It was examined through an incision in the left linea semilunaris and found to be a flaccid sac; the right kidney was normal in size and texture; the ovaries were cystic and as big as hen's eggs, but free from adhesions. The abdominal incision was closed and the left kidney removed through an incision in the loin. Next day the pain had ceased. Recovery was rapid and complete.

The kidney is interesting; the cortex (see Fig. 1) is represented by a lobulated sac containing a small amount of secreting tissue; the infundibula and the pelvis form a thin-walled bag opening suddenly at what corresponds to the ureteric strait into a very narrow ureter, indeed, the canal of this ureter is narrower than that of a fœtus at term. When fresh the dilated pelvis had a velvet-like appearance, and it seems to me probable that inspissated inflammatory exudation from time to time plugged the orifice of this inadequate ureter and led to distension of the pelvis. The transit of the obstructing plug induced exalted action of the muscle fibre of the ureter and consequent cramp or renal colic. It seems to me probable that we have to deal with an unusual example of congenital hydronephrosis; the patient was certain that she had suffered from "the pains" in her side for twenty-five years. This view receives support from the lobulated condition of the vestige of the renal cortex and the extreme thinness of the ureter.

FIG. 1.



Hydronephrosis associated with an inadequate ureter.

It is an interesting and, from a diagnostic point of view, important fact that hydronephrosis is often accompanied by increased frequency of micturition. The cause of this was never clear to me until my experience recorded in the first case. Thus it would appear that when the "beat" of the ureter becomes exaggerated the muscular contraction is not confined to the ureter but involves that of the bladder, producing what we usually call vesical irritability, but when

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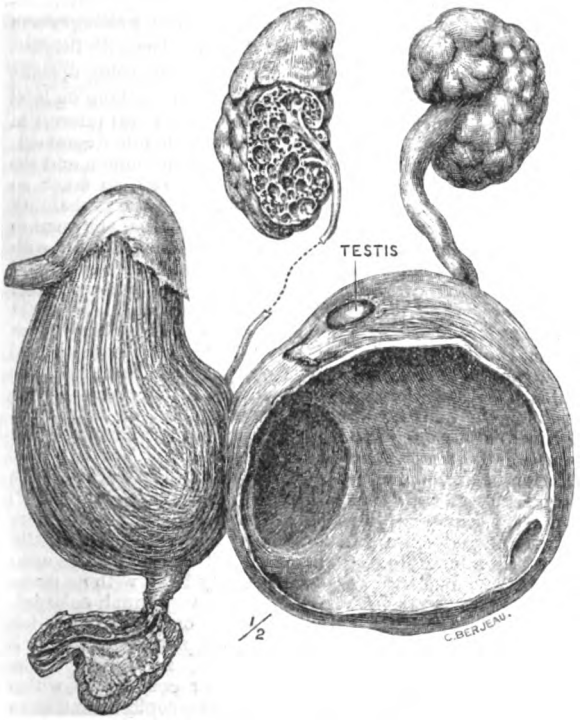
it occurs in a voluntary muscle we speak of it as clonic contraction.

The third case forms a striking contrast to the "inadequate ureter" we have just considered. At the kind request of Dr. Chapman Grigg, Mr. Stabb was good enough to preserve for me a fœtus born at nearly full time with great enlargement of the abdomen due to some abnormal condition of the urinary organs. On dissection it was found that the fœtus had no anus and the rectum ended blindly on the back of the

FIG. 2.



Hypertrophied bladder, dilated ureter, and hydronephrotic and cystic kidneys from a fœtus with imperforate urethra.

bladder. The penis and scrotum were normal, but the urethra ended at the bulb; from that point to the bladder it was impervious. The bladder, as shown in Fig. 2, was distended and its walls greatly hypertrophied, the muscular fasciculi standing out as thick strands. Connected with the left side of the bladder is a large sacculus capable of holding 300 c.c. of fluid; the left ureter opens into this sacculus by a valvular orifice. The ureter itself is dilated throughout as well as the renal pelvis. The sacculus communicates with the vesical cavity by an orifice 3 centimetres in diameter. A careful study of the relations of the sacculus proves that it is an enormous local dilatation of the ureter and as it enlarged it carried on its crest the testis; the spermatic vessels were seen in the fresh condition of the specimen stretched across its wall. The right kidney is a congeries of cysts—an example of the condition known as congenital cystic kidney. The ureter is a thin narrow thread.

Although this specimen is devoid of what is commonly called practical interest it has, nevertheless, importance of another kind. First of all, it indicates that many specimens which have been loosely described as bifid bladders were probably of the same character as this. Some specimens described as bifid bladders are due to dilatation of the urachus (allantoic cysts), and others reported as examples of lateral bifidity of the bladder or congenital diverticulum of the bladder were in all probability, as in my specimen, enlargement of the vesical end of the ureter. It is instructive, also, to find a hydronephrotic kidney on one side and congenital cystic kidney on the other. This form of cystic kidney has long puzzled pathologists, and its association with an imperforate urethra must lead to a reconsideration of some views held in regard to its causation.

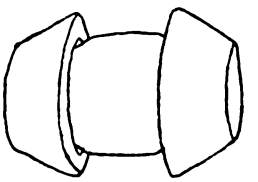
Queen Anne-street, W.

A SUGGESTION FOR INTESTINAL ANASTOMOSIS.

BY J. JACKSON CLARKE, M.B. LOND., F.R.C.S. ENG.,
ASSISTANT-SURGEON TO THE NORTH-WEST LONDON HOSPITAL, PATHOLOGIST TO ST. MARY'S HOSPITAL.

THOUGH careful stitching would appear to be the best method of reuniting divided intestine, it is common knowledge that in many cases the condition of the patient is such that any prolonged operation is out of the question, and in such cases some of the many ingenious mechanical devices invented for the purpose have to be called in requisition. In venturing to suggest an addition to the already formidable array of such instruments I naturally feel some diffidence, but I am encouraged by the reflection that, as far as I am aware, the principle of the apparatus to which I would draw attention has not been previously employed. The most ingenious and expeditious mechanical method of instrumental anastomosis is that devised by Murphy, whose "button" has no doubt saved many lives, and some of the successful cases have been treated at the hospital at which I was trained. I have, however, been called to make necropsies in a few cases in which the issue has been fatal, and in two of them I found that the wall of the gut had sloughed where it lay over the rim of the metal diaphragm which is pressed by a spring against the double layer of bowel. In the instrument which I have devised the pressure is made by indiarubber rings the edges of which are rounded off. In Fig. 1 is shown

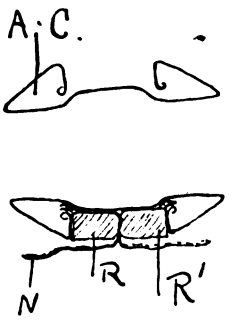
FIG. 1.



Outline sketch of the bobbin (natural size).

the size of the instrument as designed for small intestine; for large intestine an additional quarter of an inch in diameter could be obtained. Fig. 2 represents the bobbin as seen in section. The chamber AC could be used to contain some mild antiseptic. In the lower part of Fig. 2 the rubber rings are shown with the

FIG. 2.



Longitudinal section of the bobbin, the intestine (N), and india-rubber rings (R and R') shown in section below.

bowel *in situ*. Both have the same diameter as the smaller part of the bobbin—i.e., half an inch. They are cut so that when stretched to the diameter of the barrel of the empty bobbin their depth just brings them flush with the lips of the larger ends of the bobbin. The mesial edges, both inner

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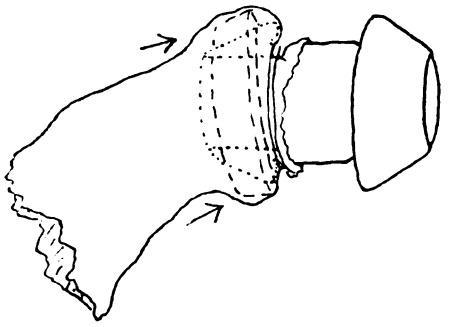
and outer, of the rubber bands are slightly rounded off. One band (B) is half as wide as the barrel, and the other (B′) is cut obliquely, so that at its outer edge it is $\frac{1}{32}$ in. wider than half the length of the barrel. The mode of making the anastomosis is shown in Fig. 3. One of the rubber rings

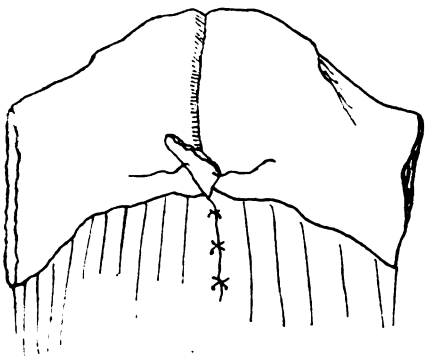
FIG. 3.



Showing the mode of pushing the ring into position after the bowel has been secured to the bobbin by a purse-string ligature. Only one ring is shown, although both are pushed on at the same time.

is lubricated with oil or soap and is inserted into one end of the gut, and then a purse-string stitch is run close to the border of the intestine and securely tied over the narrow neck of the barrel. The other end of the gut is treated in the same way, then the rings are easily pushed (by the fingers of the operator pressing through the gut) over the ends of the bobbin on to the barrel, and thus a secure anastomosis is effected. The redundant part of the mesentery may be drawn into two triangular folds, one on each side of the bowel, and fixed, as shown in Fig. 4.

FIG. 4.



The appearance of the anastomosis when completed.

I have tried the process on both thin atrophic and thick œdematous bowel in the cadaver and found it work well, the anastomosis being effected in six minutes. After the anastomosed bowel had been for some days on the instrument in weak formalin solution the part of the bowel between the rubber tubes was found to be thin and papery, whilst the rest of the bowel was thick and succulent. The slight wedge-shape of the rings would seem to secure sufficient pressure to cause sloughing. I hope soon to acquire the power to test the apparatus on some suitable quadruped. Its advantages would appear to be as follows. It does away with the sharp cutting rim of Murphy's button, it is much lighter (if made of aluminium it would be extremely light), it has a much larger lumen (and thus would cause less obstruction and allow more rest to the bowel), its ends are more tapering, the antiseptic chamber could be used to contain a weak glycerin-gelatin carbolic mixture which by osmosis would keep in check too rapid sloughing at the line of separation, and it is simpler and cheaper. The instrument has been very skilfully made for me by Messrs. Meyer and Meltzer.

Old Cavendish-street.

LEUCOCYTHÆMIA AND ITS TREATMENT.

BY RICHARD J. COWEN, L.R.C.P., L.R.C.S. IREL.

ON July 1st, 1895, a married woman aged twenty-eight years was brought to me for treatment. In appearance she was exceedingly pale, with dark areolas around the eyes; she seemed to suffer from great difficulty of breathing in walking and much lassitude. She described her ailment and its history as follows. Some two months ago she noticed that she was getting weaker, and her friends were constantly telling her how bad she was looking; her appetite was getting worse every day, and even the sight of food filled her with disgust. She noticed that she had increased difficulty in going upstairs because she "panted so much," and even walking on level ground caused her the same trouble. She lost all interest in her daily work and her spirits were very much depressed. She suffered a good deal from pains in the abdomen and she found her waist had increased in size, indeed, so much so that her neighbours congratulated her upon the probability of an accession to her family. About this time she went to see a medical man, and was treated, she believes, with arsenic and iron, but under his treatment she found herself rapidly getting worse. Occasionally she noticed large bruises appearing on her legs and arms and she could not imagine how she got them. Her family history, as far as I could ascertain it, was good, her parents and grandparents being very healthy people. She had two children. She had never suffered from any severe illness and had no extraordinary worries of any kind. The menses were regular in period but not in quantity. Her pulse was 60, flabby and weak when at rest, but the least exertion or excitement made it irregular and fluttering. The temperature in the axilla was 97·5° F. and in the mouth 97·7°. The heart sounds were feeble; the second sound was very sharp. A pulmonic systolic murmur could be distinctly heard and a loud blowing under the left clavicle. The urine was small in quantity, of specific gravity 1012, with no traces of albumin or sugar. The abdomen was very much enlarged, hard, and tense, and a little tenderness on pressure was felt in the left hypogastric space. The spleen could be felt extending quite across the abdomen, its upper border reaching under the ribs and its lower coming to within three inches of the pubic arch. The microscopic examination of the blood showed an enormous preponderance of the white corpuscles and an abnormally small quantity of the red and white taken together. Many of the red appearing in the field seemed to be undergoing degeneration, many were granulated, while others had a broken and irregular contour. The patient lived in rather close and dark rooms. She suffered from headaches and constipation a good deal, seemed to have lost all hope of recovery, and was in a very despondent condition. There could be little doubt that the woman was suffering from leucocythæmia, though the sex and history of her case were somewhat unusual. She presented in a marked degree the dulled and enfeebled intellect so common to all affections of the blood. Indeed, I have noticed in a large number of anæmic cases that depression, lassitude, slowness of thought, and disinclination to mental work are amongst the earliest symptoms noticeable, appearing long before any pallor of the mucous membranes can be detected and even before there is any recognisable change in the appearance of the blood under the microscope. In nine cases out of ten such a train of symptoms will be found to precede disorders of the blood of an anæmic character.

The small quantity of iron in the body in health and the very minute deficiency in what we call anæmia, the rapid but too often short-lived effect of the administration of the metal, would seem to suggest that we have in these cases to treat an affection of which the poverty of the blood is only a symptom and not a cause. It has been proved by Bequerel that where two fluids are separated by an animal septum they form an electrical couplet in which the surfaces of the septum form the positive and negative poles, consequently that the tissue cells act as galvanic batteries, from which, according to the nature of the surrounding fluids, a certain amount of electrical action results. It has been found that the internal and external surfaces of the capillaries act very markedly in this manner, while the peculiar distribution of the axis cylinders of the nerve fibres around the capillary walls would suggest the idea that at

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least one of their functions was to conduct away the current. For many years it was believed that the oxygen-carrying function of the blood was solely for the purpose of providing oxygen to combine with the carbon of the tissues, and so, by enabling a true combustion to be maintained, provide for the production of the necessary bodily heat; but the discovery that the amount of oxygen absorbed by a working muscle was not nearly accounted for by the amount excreted of CO_2, and that the power of such muscle was much greater in an atmosphere of oxygen than in any other, struck a very heavy blow at this theory, and no very satisfactory one has been since advanced. It is just conceivable that one of the most important functions of the blood is to act as a *depolarising* fluid, to furnish a constant available supply of loosely combined oxygen to absorb the hydrogen resulting from the electrical action which would first interfere with and ultimately stop all current. Looking at it from this point of view a more perfect arrangement could not be devised; a circle of fluid containing a substance—hæmoglobin—capable of rapidly and very loosely combining with oxygen afforded at one part of its journey every facility for absorbing oxygen from the atmosphere and throughout brought most intimately into contact with the tissue cells. Were it possible to construct a galvanic cell on this principle perfection would be attained. Presuming, then, that this is one of the functions of the blood it can be easily imagined how grave and far-reaching would be the effect of any impairment of this polarising property; there can be no doubt that a train of symptoms identical with those observed in the anæmic states would be brought about, the most marked naturally being those indicating impairment of nervous energy. From a long course of experiments I have made, I have come to the conclusion that the blood of anæmic patients, that is, those suffering from idiopathic anæmia and more especially leucocythæmia, differs from healthy blood in the fact that the hæmoglobin is in a different chemical state. It does not combine as readily with oxygen or with the same *quantity* as that in normal blood. Whether this is due to the formation of a lower oxide or whether a part of the hæmoglobin does not enter into combination at all is a matter for further experiment. It occurred to me, however, that if oxygen in its allotropic form as ozone was brought into contact with the corpuscles, its very powerful oxidising properties would do much to render the oxidation of the hæmoglobin more complete, thus giving the system time and energy to resume the proper formation of the red corpuscles and their contents, as for many reasons it is extremely probable that the excessive formation of the white corpuscles in these diseases is due to the failure of the red to fulfil their most important function. It is not, perhaps, quite correct to speak of the formation of the white corpuscles as being excessive, for the reason of their presence in such large numbers as compared to the red is more possibly because of their excessive *survival* than formation. In most cases of anæmia where an opportunity occurred for making a post-mortem examination the liver was found to contain large quantities of iron and débris of red corpuscles. Now as the liver acts as a kind of sentinel for the blood, working to destroy and expel unauthorised constituents, the probable reasons for the presence of such in this organ is that the composition of these corpuscles was so abnormal that the liver was unable to recognise them as fit to fulfil their duties and consequently destroyed them with a view to completely expelling them from the organism. As the formation or preservation of the white corpuscles is not interfered with this would abundantly account for the enormous preponderance of these. In this we have also the reason that the administration of iron has in ordinary anæmic cases such a good but short-lived effect, while in many cases the absolutely injurious effect of iron may be accounted for by the extra burden thrown on the liver.

With the object of carrying out treatment on these lines I commenced to administer ozonised air as an inhalant for fifteen minutes daily to the patient. I used a modification of Andreoli's apparatus for the purpose; in this a stream of air is driven over an arrangement of vacuum tubes surrounded by serrated and flattened wire and connected up to the electrodes of a powerful induction coil worked by eight quart bichromate batteries. At least 75 per cent. of the oxygen in the air is ozonised by the enormous number and rapidity of the discharges taking place from the large number of points surrounding the tubes. The air, after being ozonised, passes into a mask covering the mouth and nose of the patient and was inhaled. The patient had considerable difficulty in breathing, at first owing to the large amount of ozone contained, but the oppression and giddiness disappeared after the first two or three sittings completely. After seven days she volunteered the statement that "her appetite had greatly improved" and that she looked forward to "taking the gas," as she could eat such a good meal when she got home. Microscopic examination of her blood at this stage showed a diminished number of white corpuscles and a total absence of the degenerated red ones seen before. Her spirits were much better, she had lost her headache, and the pain in her abdomen was markedly better. I now increased the time of inhalation to twenty minutes daily. After a fortnight's treatment the red corpuscles had risen from 40 to 60 per cent., the white had greatly diminished in number, and the circumference of her waist three inches above the umbilicus had decreased one and a half inches. She was able to walk better and could take her food with relish. Her bowels now acted regularly. From this time she progressed rapidly, and at the end of a month she had a healthy colour both on the skin and the mucous membranes; she could run upstairs quickly without the previous distressing difficulty in breathing. The deep yellow colour of her skin, which was one of the most marked symptoms of the earlier stages of her disease, was now entirely gone; in fact, to all appearances the woman was in good health. Examination of the blood showed normal conditions, no excess of the white, no signs of degeneration in the red, the characteristic rouleau forming as usual. Her spleen had diminished to about one-half its previous size and she was able to wear the same clothes which fitted her before her illness. She now came for the inhalations every third day only, and three months from the time of commencing treatment I discontinued them, considering her to be quite cured. At the present time she presents a thoroughly healthy appearance, and with the exception of a somewhat large spleen shows no symptoms of ill-health. During the treatment she took no medicine of any kind except an occasional seidlitz powder and made no change in either food or habits. The very remarkable success of the ozone treatment in this case led me to try it in other diseases in which an abnormality in the quantity or quality of the blood was a prominent symptom, and I have had some very remarkable and encouraging results.

THE SCOPE AND VALUE OF ELECTRICITY IN MEDICINE.[1]

BY W. S. HEDLEY, M.D. EDIN.,

MEDICAL OFFICER IN CHARGE OF THE ELECTRO-THERAPEUTIC DEPARTMENT OF THE LONDON HOSPITAL.

[HAVING shown shadowgraphs[2] and explained in connexion therewith something of the nature of electrical discharges in vacuum tubes Dr. Hedley remarked that without much knowledge of photography and without any knowledge of electricity it is not difficult to imitate Professor Roentgen's results, and that already the enterprising photographer had begun to work the process commercially. It was, in fact, fast passing out of the experimental stage, and apart from other and perhaps more important bearings the "new radiation" could never lose its interest for the medical man, even on the one ground alone that it had already afforded many a useful glimpse into the interior darkness of that complex mechanism with which it is his province to deal. The subject of the address was then proceeded with.]

The electrical history of the last ten years is, as all the world knows, a history of growing knowledge and of great achievement. Medicine, profiting by the one and by the other, has begun to aim at some exactness in its electrical procedure and to demand that any sound system of electro-therapeutics be based on the principles of electrical as well

[1] Abstract of a paper read before the Medical Society of the London Hospital on March 12th.

[2] One of these showed the hand of a patient of the hospital who had broken a brad-awl in an attempt to force it into its handle. It injured the hand, but the man felt sure that none of the pieces had entered. The whole hand was much swollen, but there was no direct evidence of any foreign body. The shadowgraph, however, clearly showed two (metallic?) bodies lying across the metacarpo-phalangeal articulation of the middle finger.

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as of medical knowledge. During the same period the history of medical electricity itself has not been uneventful. It is notable for the appearance of more than one memorable book. Amongst these the works of Erb and of de Watteville stand out as the first systematic and successful attempts to bring electro-therapeutics into line with exact science. The introduction of the milliampèremeter, the voltmeter, the rheostat, and other instruments of precision marked this new departure. Another era not long entered on is now in progress. It is characterised by an increased attention to electrical physics as the only sure foundation for electro-therapeutics. There are also other signs of the times. A more formal recognition by the chief metropolitan hospitals, the existence of such societies as the American Electro-Therapeutic Association and of the Société Française d'Électrothérapie, the development of a special literature, and an increasing study amongst medical men of the physics of electricity are all evidence that electro-therapeutics is beginning to organise and to assert itself. The medical man, taking advantage of recent progress in other branches of applied electricity and of the public supply currents that pass his door (and this I hope will also shortly be true of the London Hospital), finds himself in possession, not only of an improved instrumentation and a fast increasing knowledge of electrical phenomena, but has at command undreamed-of sources of electrical supply of unlimited usefulness and of novel power. From the lead of a 16-candle lamp he helps himself to an ever-ready supply of electrical energy, either of a continuous or of an alternating kind. The former furnishes a current which will do for him all that the uniform flow of the galvanic cell can accomplish. Passing the same current through a coil he obtains that dissymmetrical alternating current universally familiar as the current of the medical induction apparatus. Still availing himself of the same supply, he heats his cautery, lights an exploring lamp or charges his accumulators, or passing the current through a motor he drives his static machine or actuates his therapeutic alternator. The latter can in its turn be arranged to supply a current having all the smoothness and other qualities of that known as sinusoidal, with its rapidity, its electro-motive force, and even the shape of its electro-motive force curve under absolute control. If the current that comes to his door in the street mains be an alternating one he passes it through a transformer to apply it to the body to electrise his water bath or to heat his cautery. He is thus supplied with an alternating current of a symmetrical, although not of a strictly sinusoidal, character, whose therapeutic usefulness is fully proved. In that form of oscillating current known as the "static-induced" he finds another modern current and the most efficient method of inducing powerful and painless muscular contraction. Still more recently he begins to turn his attention to those currents of great frequency and high potential whose phenomena are a revelation to the scientific mind and whose effects open out new fields of physiological research and point to endless therapeutic possibilities.

Realising the rapidity of progress he recalls the coarse instrumentation and crude procedure of a comparatively recent past, when an unmeasured current was "dabbed" on to the body at the end of a couple of sponges, and it was orthodox practice to administer faradaic torture by means of a couple of metal cylinders grasped by the patient. In those days—and they are not long ago—the one end and aim of electrisation was to induce muscular contraction. This idea still survives in the popular mind, in the electricity of the "trained nurse" and of the "medical electrician." Nor is it quite confined to these. There is still the echo of a voice from high places proclaiming the doctrine that the only object of electrising a paralysed muscle is to keep that muscle exercised pending the return of voluntary power. Such a proposition conveys, in my opinion, no adequate idea of the properties and uses of an electric current. Modern practice covers a far wider field than this. Besides a purely localised action, nutritive, sedative, or stimulant, it is sought by methods of general electrisation not only to influence for good the functional activity of organs, but to exercise a demonstrable, perhaps even a measurable, influence on the whole process of nutrition. It is true that the physician still finds himself without any one great guiding principle of universal application whereon to base his electrical procedure. He has, so to speak, no compass to steer by. But, on the other hand, endless facts have been elicited of present usefulness and future promise. These facts, multiplied, collected, and arranged, must ultimately disclose some wide generalisation; in the meantime they are sufficient to guide him in his practice. If he has no compass to steer by he has at least *landmarks* to keep him in a safe course. Such landmarks are to be looked for in the physical character of electric currents, in their action on living structures as demonstrated by physiological experiment, and in a knowledge of their therapeutic action as derived from experience. A familiarity with one and all of these landmarks is of the first necessity, and the study of electricity in diagnosis and in treatment resolves itself into a study of these guiding landmarks. It is to a consideration of these that we must address ourselves and it is to a bird's-eye view of the first line of these landmarks—viz., the physical character of currents — that I should like chiefly to draw attention. Nothing is more false than to regard electricity as a simple agent, always the same in kind, acting in the same way, applied by the same method, and having identical results. In point of fact, its effect depends upon the kind of electricity used—i.e., the modality in which electricity is employed; in other words, on the physical character of the current. A continuous current has a very different action on the living organism from an alternating one, and alternating ones are radically different in their effects according to the form and period of the electro-motive force curve. Nor is it right to regard the action of electric currents on the living organism as immediately due to electric energy considered as something by itself—an imponderable and immaterial physiological agent. Electricity in all its varied modalities acts through the electrolytic or other material molecular changes which it brings about.

[The physical characters of the "three conventional currents ordinarily used in medicine"—the galvanic, the faradaic, and so-called static—were then briefly considered, but reserved for closer study. It was pointed out that these currents are beginning to be supplemented and to some extent supplanted by electricity in certain new modalities. The lecturer having explained the continuous and alternating dynamo currents, and demonstrated the power of the "static induced" current to bring about powerful and painless muscular contractions, "currents of great frequency and high potential" were considered at a greater length.]

Their alternations are to be counted by hundreds of thousands a second. For medical use they are generally obtained by means of the oscillating Leyden jar discharge traversing a solenoid. Such currents may carry energy enough to light a five-candle power lamp, and if the human body with its thousands of ohms resistance be at the same time placed in circuit there is scarcely a perceptible diminution in the brightness of the glow, and notwithstanding the tremendous amount of energy passing there is scarcely a consciousness of its passage.

[A five-candle power lamp was then incandesced by the current in question. The circuit was then broken and completed through the body, the latter being the only route open to the current; the lamp again glowed with scarcely any sensory or other effect on the part of the person through whose body the current passed. The importance of the fact that the body can stand so large an amount of energy in this form would presently appear.]

The physiological effects of such currents are according to d'Arsonval as follow: (1) an analgesia at the point of entry and exit of the current; (2) a fall of arterial tension; (3) increased action of the skin; (4) increase in the "respiratory combustions"; and (5) the virulence of blue pus is attenuated and after about half an hour's application the bacillus dies. More recently the same experimenter has addressed himself to "the soluble products of the microbes"—the toxines. Taking a U-shaped tube having a partition at its lowest part to prevent admixture of liquids he filled each branch with an active diphtheritic toxine and in each placed an electrode, one connected with the positive and one with the negative pole of this current. Now as the current which traverses the toxine is oscillating at the rate of at least 200,000 alternations a second it is possible to form some idea of the molecular shaking to which the culture is subjected. Having thus electrised an active diphtheritic toxine for fifteen minutes d'Arsonval and Charrin had injected 2·5 c.c. into three guinea-pigs and the same amount non-electrised into three other guinea-pigs. There was no doubt about the result. The "control" animals died within a few hours of each other in about twenty-four hours; the others were alive and well. The importance of the fact that the body can bear such high amounts of energy in this form is from a clinical point of view at once apparent. These currents being without action

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n the sensory and motor apparatus of our bodies, may it not e possible to use such currents strong enough to attenuate he toxine in the living body?

ANALYSIS OF TWO HUNDRED CASES OF SCIATICA.

BY SAMUEL HYDE, M.D. ST. AND.

A LARGE proportion of the cases that present themselves or treatment at thermal stations consists of painful nerve ffections, and a great many of these are made up of lesions f the sciatic nerves and their branches. In consulting the iterature of sciatica I have been forcibly struck with the aucity of clinical information which has been recorded pon the subject. It was this consideration which led me a hort time ago to tabulate a number of cases of sciatica vhich have come under my personal observation at Buxton nd for this purpose I selected 200 cases occurring in ecent years. My analysis revealed to me some striking acts, which were not only at variance with my own precon- eived notions, but with those of many other observers. A rief record of my investigation may be of interest to some f my professional brethren, and I therefore submit the ollowing figures and remarks.

The 200 cases consisted of: Males, 112, or 56 per cent.; emales, 88, or 44 per cent.; right side affected, 72, or 36 er cent.; left side affected, 62, or 31 per cent.; both sides ffected, 66, or 33 per cent.; inflammatory, 109, or 54·5 per ent.; and non-inflammatory, 91, or 45·5 per cent. In 157 ases the patients were suffering from a first attack, in 22 from second, in 13 from a third, in 1 from a fourth, in 3 from a ixth, in 1 from an eleventh, in 2 from a twelfth, and in 1 rom a fourteenth. The attack had lasted under one month n 45 cases, from one to three months in 70, from three to ix months in 29, from six to twelve months in 29, from one o two years in 15, three years in 6, four years in 1, five ears in 2, and six, seven, and ten years respectively in each f 3 other cases. The ages were: Under fourteen years,); between fourteen and twenty, 1; between twenty-one nd thirty, 26; between thirty-one and forty, 36; between orty-one and fifty, 47; between fifty-one and sixty, 53; etween sixty and seventy, 34; and between seventy nd eighty years of age, 3 cases. As exciting or redisposing causes the following were ascertained as robable: Gout, 48, or 24 per cent.; debility, 43, or 1·5 per cent.; rheumatism, 35, or 17·5 per cent.; chill r exposure, 26, or 13 per cent.; influenza, 12, or 6 per cent.; lcohol, 9, or 4·5 per cent.; constipation, 8, or 4 per cent.; næmia, 7, or 3·5 per cent.; malarial, 7, or 3·5 per cent.; nd injury, 5, or 2·5 per cent. The duration of the treat- nent at Buxton lasted from three days to twelve weeks, or n average of two and a half weeks. The results of treat- nent were as follows: Cured, 90 cases, or 45 per cent.; im- roved, 101 cases, or 50·5 per cent.; and no better, 9 cases, r 4·5 per cent.

Remarks.—In his excellent little treatise on Sciatica Dr. Symons Eccles states that of the sixty-five cases observed y him forty-one occurred in females. I confess to some urprise when I read this statement, which is opposed to such uthorities as Dr. Gowers, the late Professor James Ross, and thers, who hold that the disease is more frequent in males han females. An examination of these 200 cases confirms he opinion of these authorities, 56 per cent. consisting of nales, as compared with 44 per cent. of females. An in- eresting point revealed, perhaps for the first time, by he above figures is that unilateral attacks, bilateral ttacks, and double attacks occur in almost equal pro- ortions. This is the more interesting, I think, when onsidered in its relation to the more common causes of ffection, as I shall note later. Furthermore, of these 00 cases those showing inflammatory signs were 9 per cent. n excess of those which appeared to be of a purely neuralgic orm. It would seem that the liability to recurrent attacks s not great. Only 22 of the cases were suffering from a econd attack, 13 from a third, 3 from a sixth, 2 from a welfth, and 1 from a fourteenth. As to the duration of he attacks, the largest number, 70, had lasted from one to hree months, but 27 had been suffering over a year and 1 s long as ten years. None of these cases were under fourteen years of age and only one between the ages of fourteen and twenty. The majority, 137, occurred after forty years of age and most of these—viz., 26 per cent.—were between the ages of fifty and sixty. My experience thus differs from the late Professor James Ross, who found the largest number between forty and fifty years of age.

The most common cause of sciatica has been hitherto generally ascribed to exposure to cold, but it is remarkable that in only a small proportion—13 per cent.—of these cases could I obtain any distinct trace of such an exciting cause. In the majority—comprising 87 per cent.—there was no such history, and the large proportion of 63 per cent. were traceable to some constitutional condition, such as gout, rheumatism, and general debility. Nor does my experience support the theory that constipation is a very fruitful cause of sciatica, only 4 per cent. of these cases being fairly attributable to that as an exciting cause. I am, of course, quite prepared to admit that these figures would be subject to considerable modification in some respects were a like number of cases selected from hospital practice, but I think they may be taken to represent fairly the cases met with in ordinary private practice. I also think that the foregoing facts afford sufficient ground for questioning the assumption, which has until now been accepted by most of those who have written upon the subject, that sciatica is in the majority of instances due to some local cause, such as exposure to cold or to pressure from constipation. Apart from the fact that of my 200 cases in no less than 63 per cent. there was no history of chill or constipation, but distinct signs of gout, rheumatism, or debility, I think the fact that the right, left, and both sides were pretty equally affected is additional evidence in favour of some general, rather than local, condition operating as the most common cause of sciatica. For example, if constipation were such a common cause as hitherto believed, then one would expect to find left sciatica much more frequent than right, on account of the position of the rectum, but this is not the case. Likewise, if exposure to chill were the frequent cause that it has been held to be, then one would expect to see more cases in which the pain or numbness would be confined to the limited area of exposure and not so many cases as one actually does see of diffused and distant symptoms. I have not space in this article to dwell upon the details of the treatment which I used in these 200 cases. Suffice it to say that the main factors in the treatment were change of air, the Buxton thermal waters, internally and externally, including warm douches, dry and wet massage, generous diet, gentle open-air exercise, and drug-tonics. The results of this treatment of sciatica have in my experience been amongst the most gratifying in this particular branch of practice. As already stated, out of the 200 cases selected indiscriminately, 90, or 45 per cent., were cured before they left Buxton; 101, or 50·5 per cent., were improved; and only 9, or 4·5 per cent., left the Spa no better. A large proportion of those who were only improved when they left were reported afterwards to have gradually but completely recovered. The duration of the treatment varied from three days to twelve weeks. These are results which it will, I think, be admitted are very remarkable, and should encourage physicians to make use of the remedial influences presented by the dry, bracing mountain climate and the baths and waters of Buxton and similar spas when other remedies fail to give relief in this painful disease.

Buxton, Derbyshire.

DISPLACEMENT OF THE LIVER.

BY J. SNOWMAN, M.R.C.S. ENG., L.R.C.P. LOND.

OF late increasing attention has been drawn to the various pathological features which collectively constitute the condition now generally recognised as enteroptosis. Till quite recently the only organ known to exhibit this phenomenon was the kidney, the floating or movable kidney having for some time acquired a permanent position in surgical nosology. It has now been ascertained that the conditions which produce this unstable state of the kidney are not confined to that organ, but that they act with similar effects on the liver; indeed, it appears from a recent article by Mr. Treves[1]

[1] Brit. Med. Jour., Jan. 4th, 1896.

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that the stomach, spleen, and transverse colon may be displaced in a similar manner. His paper on the subject contains the first clear account of movable liver published in the United Kingdom. A reference to the condition occurs in the new edition of "Quain's Dictionary of Medicine," where it is stated that "notwithstanding the absence of any post-mortem examination a liver, normal in form and volume, may under certain conditions of very rare occurrence be capable of considerable displacement within the abdominal cavity" (W. Johnson Smith). The condition is probably not so rare as this remark suggests. In the June number of the *Canadian Practitioner* for 1895 there is given a list of eighty cases collected from various sources. In 1878 twenty cases were collected by Wickham Legg, who threw doubt on the accuracy of the diagnosis. In 1885 a monograph appeared by Landau of Berlin on Movable Liver and Pendulous Abdomen in Women. In the recently published work by Osler on Abdominal Tumours a very succinct account of a case is given. The latest investigations on the subject have been made by Faure, who has supplemented his researches by experiments on the cadaver. No doubt when the fact of the existence of this condition becomes more widely known and the proper method of examination is adopted numerous examples will be forthcoming.

A very typical case has come under my notice in the person of a married woman aged sixty-four years whom I first saw on Dec. 16th, 1894. She had been ill for a week with loss of appetite when jaundice set in, with constipation, clayey stools, and bilious urine. The prominent feature on examination was that hepatic dulness extended to just below the level of the umbilicus; the organ easily admitted of palpation through the thin abdominal walls, and its lower edge was extremely well defined. The heart and lungs were normal. This great hepatic enlargement seemed to negative the diagnosis of catarrhal jaundice, and it apparently belonged to that group of cases described by Bristowe as "hypertrophic cirrhosis of the liver." Other causes of hepatic enlargement, as cancer, syphilis, abscess, &c., were easily excluded. Against the diagnosis of hypertrophic cirrhosis were the facts of the somewhat sudden onset and the absence of an alcoholic history. The progress of the case proved that it was ordinary catarrh of the bile-ducts, and though at first refractory to treatment by the middle of January, 1895, the patient was in perfect health. More detailed examination of the liver during the illness revealed the following facts. The liver dulness did not begin till the costal margin (this was originally thought to be due to pulmonary emphysema). The whole mass of the liver could be easily moved through the lax abdominal walls, and when the patient arose to the erect posture the whole organ actually dropped two or three inches and could be felt in the inguinal region. The upper edge could not, however, be felt beneath the ribs. This condition of the liver remained *in statu quo* after the patient's recovery, showing that she had suffered from an attack of catarrhal jaundice in a movable liver. The patient had evidently long been the subject of this condition without it affecting her general health in any particular, and it undoubtedly would never have been detected had not the jaundice directed special attention to her liver. Repeated examination failed to reveal any ptosis in the spleen or kidneys, and the patient being a thin, spare woman with lax abdominal walls examination presented no difficulty.

The comparatively few cases on record render it difficult to generalise on the subject. Many of the cases have been associated with obvious disease sufficient to account for the displacement of the liver, such as spinal curvature, tumours within the thorax, and adhesions contracted as a result of inflammatory disease within the abdomen. These cases should be excluded from the category of movable livers, which depend for their production mainly on a relaxation of the suspensory ligament. Anatomically the liver should be more easily susceptible of displacement than the kidney; the latter is fixed in position by a mass of fatty tissue, while the former is merely slung up against the roof of the abdominal cavity. A displacement of the kidney almost necessarily involves tension on vessels and nerves which may be absent in a similar condition of the liver, and this would account for the existence of symptoms in the case of movable kidney and their comparative absence in that of movable liver. We are, however, confronted occasionally with symptoms of vomiting and epigastric pain in cases of movable liver. These symptoms may be of sudden onset, while a sensation of weight and dragging often forms a constant complaint. The relaxation of the suspensory ligaments of the liver must be referred to that undefined idiosyncrasy of tissue recognised in fibrous structures which consists of a loss of tone, stretching, and elongation. We know nothing scientifically about this peculiar "habit" of tissue, except that it generally exists in thin, spare subjects, mostly women who have borne numerous children. The custom of tight-lacing, as it displaces the liver, may be a factor in rendering it movable. Prolapsus uteri has frequently been noted in association with movable liver. It only remains to add that where this condition gives rise to no symptoms no interference is called for. When it has caused discomfort in the abdomen complete rest in bed has been followed by satisfactory results. Abdominal supports have been invented for some cases where this condition has produced great distress, and in a few severe cases associated with intense neurasthenic symptoms the liver has been stitched to the abdominal parietes.

Brick-lane, Spitalfields, N.E.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

SWELLING OF THE PAROTID GLAND.

BY W. T. COCKING, M.D. LOND.,
PHYSICIAN TO THE SHEFFIELD GENERAL INFIRMARY.

THE following brief notes may be of interest in connexion with Mr. Raymond Johnson's very instructive paper on Some Unusual Cases of Swelling of the Parotid Gland.[1]

In 1894 a man aged forty years, who was under treatment for dyspepsia and constipation and certain functional nervous symptoms, complained that for the last two or three years he had been much troubled with a swelling in the region of the right parotid which came on suddenly whilst eating and lasted for an hour or two. The swelling was somewhat painful and interfered considerably with mastication. He had found that pressure with the hand caused a profuse discharge of fluid into the mouth, after which the swelling gradually lessened and disappeared. The fluid had occasionally a nauseous flavour. The left gland was also affected, but much less frequently than the right. On one occasion only was an opportunity afforded of a personal examination of the swelling, which, however, had then to a great extent subsided. At that time some fulness and slight redness of the skin were detected below the right ear, and on firm pressure a copious jet of clear watery fluid was observed to escape from Stensen's duct. Nothing abnormal was at any time discovered in the mouth. Change of air and improvement in the general health resulted in the complete disappearance of the affection for some months. At the present time the attacks are considerably less frequent and give rise to much less discomfort than formerly.

Sheffield.

ON THE INEFFICACY AGAINST EARLY SYPHILIS OF IODIDE OF POTASSIUM WHEN ADMINISTERED ALONE.

BY WALTER G. SPENCER, F.R.C.S. ENG.,
SURGEON TO THE OUT-PATIENTS AND THROAT DEPARTMENT OF WESTMINSTER HOSPITAL, ETC.

SOON after the introduction of iodide of potassium and as a reaction from the excessive use of mercury it was frequently given alone, but it must be now very rare to find both medical man and patient trusting entirely to this drug. Lest anyone should be tempted to try the experiment I may record the following results, since the account given of himself by the man appears to me to be trustworthy.

The patient, a man aged thirty-one, acquired a hard sore some three years ago, which was followed by enlargement of the inguinal glands, slight pains in the limbs, and five months after the primary sore by an ulcer on the tongue. He-

[1] THE LANCET, April 18th, 1896.

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was ordered by a medical practitioner to take ten grains of iodide of potassium three times a day, and he continued to do so for two years after the ulcer had healed. He took the medicine regularly, he never took anything else, and he never exposed himself to fresh infection. Since the ulcer healed he has not felt anything wrong with himself. Three months after leaving off the iodide, believing from what the medical man said that he was cured, he married. After three months his wife aborted. On her recovery the husband brought his wife to me. She had a characteristically dusky, scaly rash on the arm and legs, with nocturnal pains in the bones. Both husband and wife were treated with mercury, and the wife took it regularly throughout the second pregnancy, which soon began. She has now a baby one month old, whom I have seen and who appears to be perfectly healthy.

Brook-street, Grosvenor-square.

"RUPTURE OF THE TERMINAL EXPANSION OF THE EXTENSOR COMMUNIS DIGITORUM."

BY T. N. THOMAS, L.R.C.P. LOND., M.R.C.S. ENG.

THE clinical notes which have lately appeared in THE LANCET under the above heading[1] induce me to report the following case which is now under my observation. It differs from the others in the fact that the dislocation was compound, and the way in which it was produced is certainly peculiar and worthy of record.

A man aged twenty-five years was indulging in a game of Rugby football on Feb. 15th last, and while playing as forward was following up a long kick when one of the opposing three-quarter backs took the ball and was attempting to run round him on his left-hand side when the forward made a grab at his opponent's jersey—a thick worsted one—with his left hand, but only succeeded in engaging the end of his middle finger in the collar, and as soon as his weight told on the finger it seemed to slip and when he looked at it a moment later it was bent at a right angle and the head of the bone was protruding through the skin at the back of the last joint. He straightened the finger and left the field. When I saw him an hour later I found the skin over the back of the last joint of the left middle finger and the posterior ligament, or, rather, what represents the ligament in that situation—namely, the terminal expansion of the extensor communis digitorum tendon—completely torn across, and when he flexed the joint the head of the second phalanx protruded through the wound. After washing thoroughly and dressing antiseptically the finger was placed on a straight splint, upon which it was kept for five weeks. At the end of that time the wound was quite healed under a scab, which came off a week later. Upon removing the splint the patient was unable to straighten the terminal phalanx voluntarily beyond an angle of about 135°, and though in the joint itself the movements of flexion and extension are quite free he has not yet—ten weeks after the accident—regained the power of extending it beyond that angle. The patient, whose work consists for the most part in corresponding, was not incapacitated by the accident from following his occupation for a single day. I am much encouraged by the report of Dr. Kidd's case, in which complete recovery took place after an interval of eight months, and have given my patient instructions to persevere, and I believe he very patiently and intelligently carries out my wishes.

Leicester.

"CEREBRAL MENINGITIS FOLLOWING INFLUENZA."

BY WILFRED R. KINGDON, M.B. DURH.,
LATE RESIDENT MEDICAL OFFICER AT THE STOKE NEWINGTON DISPENSARY, LONDON.

I RECENTLY attended a case which presents some likeness to one recorded in the pages of THE LANCET[2] some time ago.

I first saw the patient, a boy fourteen and a half years of age, on a Sunday, when he presented the following symptoms: severe frontal headache, excessive lacrymation together with pain on pressing over the eyeballs, aching pains in the lumbar region and legs, furred tongue, anorexia, somewhat scanty and high-coloured urine, constipation, a temperature of 104·2° F., and a pulse of 117. From what the boy's mother told me I came to the conclusion that the illness had commenced with a rigor and some sickness, but apparently no actual vomiting. There seemed to be no doubt whatever but that the boy was suffering from influenza, and I ordered him seven grains of phenacetin powder to be taken at once and a mixture containing quiniæ sulphas and liquor ammoniæ acetatis. The next day I found the patient in a much more comfortable condition; the temperature was 100·8° and the pulse 100. The pains were better, the tongue was slightly less furred, and he could be induced to take a little milk pudding. This improved condition continued for a week, but his temperature never fell below 100°. At the end of this period he began to lack interest in things which were going on about him; he had a dull, almost stupid expression; he did not seem to understand what was said to him, and at times he talked incoherently and picked at the bedclothes. The ophthalmoscope revealed optic neuritis; there was intolerance of light, the head was slightly retracted, and the *tache cérébrale* could be demonstrated, but the abdomen was not boat-shaped. The preponderance of evidence certainly pointed to cerebral meningitis. This condition of affairs had been going on for just three days when I was called in great haste to see the boy, "as he was in a fit." On arrival I found the patient seized with tonic contractions of nearly every muscle of the body; there was opisthotonos, and both sides of the body seemed about equally affected. He soon relapsed into a comatose condition and died in about ten and a half hours after the onset of the spasmodic contractions, notwithstanding the fact that he had constant care, frequent liquid nourishment, and stimulants, to say nothing of numerous drugs. Potassii bromidum, quiniæ sulphas, liquor ammoniæ acetatis, phenacetin, sodium salicylate, and other things were alike of no avail. No necropsy could be obtained, but there seemed to be no doubt that it had been a case of cerebral meningitis.

Now, how was this meningitis caused? A careful examination revealed no condition likely to give rise to the disease, and the question seems to be: Is meningitis to be put down as one of the sequelæ of influenza? I cannot give any reason why the one disease should lay the foundation of the other, neither is it my wish to advance any theory. It may be that this was but a coincidence and that lowered vitality was the predisposing cause alike of both; however, I have given only the simple facts, and it is thus open to each and every reader to take his own view of the case.

Queen's-crescent, N.W.

[1] THE LANCET, Feb. 29th and March 28th, 1896.
[2] THE LANCET, Feb. 22nd, 1896.

THE PORTSMOUTH WATERWORKS.—The proposal of the Portmouth Corporation to purchase the enormous undertaking of the water company was advanced a distinct step at a special meeting on April 28th. A special committee had had several interviews with the directors of the company, and the present scheme stands as follows: It is estimated that a total amount of consolidated stock will be required to the extent of £1,040,000. The shareholders will receive £915,000 in stock as representing the full dividend of £27,448; £104,500 will be absorbed in the payment of loan capital; £3550, seven years annuity for the secretary; £5880 for seven years directors' fees; and £4113 for unpaid back dividends. The estimated legal costs of the necessary Bill in Parliament are £6000, or a total, as above stated of nearly £1,040,000. Two and a half years ago, when the purchase negotiations fell through, the nett increase of the company's revenue was put at £600 a year; now it is over £1000, and so the directors ask more money for their concern. The gross revenue of the company is £53,000 a year and grows, of course, with the town, whose rateable value last year increased by £12,000. It is calculated that with ninety years' redemption of the stock the corporation would gain by the transaction in the form of a small actual yearly profit; at eighty or eighty-five years' redemption there might probably be a small deficit to recoup from the rates. There was some hesitation apparent in the speeches at the council meeting, but as the committee's report was carried by thirty-one votes to two it seems likely that the corporation, remembering the mistake of two years ago, will not allow it to recur for the sake even of a thousand or two paid on what they may consider heavy claims.

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A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON HOSPITAL.

THREE CASES OF FOREIGN BODIES IN THE ALIMENTARY CANAL; REMARKS.

(Under the care of Mr. C. MANSELL MOULLIN.)

THESE cases form an interesting contribution to our clinical records of foreign bodies in the alimentary canal. Case 1 is noteworthy from the fact that such a sharp-pointed body as a broken bonnet pin had passed safely so far along the intestine as to reach the neighbourhood of the ileo-cæcal valve. Its removal in the way described after abdominal section was clearly the safest procedure for the patient, for the dangers of perforation of bowel by the sharp end of the pin beyond the point reached were considerable. Case 2 is important inasmuch as it draws attention to the difficulty sometimes experienced in detecting the presence of a flattened object in the œsophagus, a difficulty which we have also seen in hospital practice in a similar case—the impaction of a tooth-plate. It also shows the great danger which the prolonged retention of a foreign body in the œsophagus gives rise to from the liability of the ulceration caused by its presence to extend through the wall and cause injury to the important structures adjacent, whether artery, bronchus, nerve trunks, or pericardium. Case 3 is an example of a method of treatment very useful in cases of round, smooth bodies of a size not very disproportionate to that of the œsophagus.

CASE 1.—A well-grown girl nineteen years of age was admitted to hospital on Dec. 14th, 1895, with the statement that she had swallowed the greater portion of a hat-pin. According to the account that she gave of herself she had felt something tickling at the back of her palate and had taken one of her hat-pins and had passed it into her mouth head first to rub it against the mucous membrane. The shaft of the pin broke and the head end of it dropped into her throat and was immediately swallowed. She brought the broken end, and by comparison with another the portion she had swallowed was nearly four and a half inches in length with a bead on the end about the size of a small Barcelona nut. She went at once to a druggist who gave her an emetic, making her violently sick, but fortunately without doing her any harm. The patient complained of great tenderness and of a sharp stabbing pain in two places, one in the front of the chest an inch and a half from the middle line and a short distance above the nipple, the other behind a little to the left of the third dorsal vertebra. As it was thought that during the vomiting caused by the emetic there was a possibility of the pin, which went down head first, being driven upwards into the wall of the œsophagus, a probang with a metal end was passed down into the stomach, but nothing was felt. The patient was very hysterical, so much so that her sister, who came to see her, refused to believe that she had swallowed anything at all; but as the account that she gave of herself did not vary, and the pain and tenderness continued and were made worse by attempts at swallowing, an exploratory operation was advised and performed on the fourth day after admission. An incision two inches long was made in the middle line above the umbilicus and the stomach drawn into the wound and carefully examined without result. The finger was then passed down into the right iliac fossa and the head of the pin felt at once in a portion of the small intestine immediately above the ileo-cæcal valve. The wound was slightly enlarged in a downward direction to allow the intestine, which was nearly fixed, to be brought to the surface. Two Lembert's sutures were passed, one on each side of the head, an incision made between them, and the pin extracted. The sutures were then tied, a third passed over them, and the intestine dropped back. The abdominal wound was then closed in the usual way. For some days the patient was exceedingly hysterical and suffered from various complaints, but recovery was uninterrupted from the first. The pain in the chest continued off and on until she was well.

CASE 2.—A man thirty-one years of age was admitted to hospital on Jan. 11th, 1894, with a history that the day before he had swallowed a plate with six false teeth attached to it. He had gone to bed without removing it and woke up with a fit of coughing. Suddenly he felt the plate slip and pass down his throat, giving him the sensation that he was choking. There was no hæmoptysis or hæmatemesis, but on coughing or swallowing anything solid he complained of a certain amount of soreness felt behind the middle of the sternum. There was no difficulty in swallowing, nor did the food seem to stick anywhere. A probang was passed on several occasions, and twice, as it was being withdrawn, when the point was eleven inches from the teeth, a faint rub was felt, as if it touched something hard. Nothing could be heard or felt when the probang was being pushed down, and although many attempts were made the foreign body was not felt (if, indeed, it was the foreign body that caused the sensation of rubbing, for of this there was some doubt) more than twice. Nothing was passed per anum. The patient felt perfectly comfortable and could swallow anything, so that at the end of a fortnight he was discharged. A twelvemonth later I heard accidentally that in a row in a public-house he was suddenly seized with such furious hæmoptysis that he died on the spot. The plate had ulcerated through the wall of the œsophagus into the aorta by the side of the left bronchus.

CASE 3.—A baby six months old was admitted to hospital in June, 1893, with the history that about six hours before the patient had swallowed the clamp of a feeding-bottle. The clamp was of metal in the shape of a cylinder half an inch long and three-eighths of an inch in diameter, with a screw projecting from its upper end. It had been felt in the child's mouth and had been driven lower and lower down by successive attempts at removal, until, at the time of admission, it had descended to the level of the top of the sternum. Its shape and the very small amount of space available rendered it impossible to extract it from above. The prospect of success if an attempt was made to remove it through an external incision was very remote, so it was decided that the best thing to do, as it had already travelled so far, was to endeavour to push it on. This was done with a gum elastic catheter, very slowly and gently, until at length it suddenly slipped into the stomach. The child suffered no further inconvenience and the cylinder was passed per anum two days later.

Remarks by Mr. MANSELL MOULLIN.—These three cases of foreign bodies in the alimentary canal are of somewhat unusual character. It is possible that the bonnet pin, which in the course of five days had already reached the ileo-cæcal valve, might have been passed naturally; but it is at least doubtful whether, with its length of over four inches, it would have succeeded in steering successfully round the fixed corner at the valve without catching. The pain and tenderness, which were so definite and so constant as to be considered to justify exploration when taken in conjunction with the history of the emetic, were in all probability subjective, as they continued off and on until the patient's health was restored, or there may have been some slight injury to act as a foundation for them. In the second case it is difficult to understand how a plate of such a size, carrying six teeth, could have succeeded in concealing itself so thoroughly. Probably its convex border fitted into a recess above the left bronchus, where there is sometimes a little dilatation of the œsophagus, and its concave one became coated over with mucus. It was only touched twice by the probang as the instrument was being withdrawn, never while it was descending, and the patient very soon lost all consciousness of anything being there, even when he swallowed solids.

SUSSEX COUNTY HOSPITAL.

A CASE OF SUTURE OF PERFORATED TYPHOID ULCER; NECROPSY.

(Under the care of Dr. HOLLIS.)

THERE have not been many cases of operation for perforation of typhoid ulcer in this country, and we need all the

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ecords of cases submitted to operation, in order that some eneral rules may be agreed upon, and that the necessity for urgical help in such cases may be impressed on those in harge. Dr. Van Hook after a careful consideration of the ques- ion of perforation occurring in the course of typhoid fever ame to the following conclusions amongst others: (1) there s no rational treatment for perforation in the course of yphoid fever except laparotomy; (2) when perforation occurs n typhoid fever the indication for operation is imperative; 3) the only contra-indication is a moribund condition of the atient; (4) collapse is often, at least temporarily, relievable y hot peritoneal flushing; (5) the stage of the fever is not o be considered as an indication or as a contra-indication or laparotomy; (6) the severity of the typhoid fever is alone ot a contra-indication; (7) early laparotomy offers the ost hope; (8) the symptoms of peritonitis should not be waited before operating; and (9) the published statistics f laparotomy for this condition are strongly in favour f operation, &c. It is difficult to give a very favour- ble prognosis in any case of perforation of intestinal lcer, and although the operation for closing it may ave been done quickly and with the utmost skill there s in these cases of typhoidal perforation a greater tendency o recurring collapse and the many dangers of the remaining eriod of the fever have to be encountered and overcome. As the perforations in typhoid fever are nearly always in the ower part of the ileum a prolonged search is not usually ecessary, the opening is generally small, and although the all of the bowel is softened and friable, the insertion of utures may be effected without much difficulty. It is dvisable to close the opening at once and cleanse the eritoneum very carefully rather than make an artificial nus, although it is conceivable that in some instances uch a proceeding might be the better one to adopt. There is a doubt if some of the cases published as such were really of the nature of those under considera- tion. For the notes of the case we are indebted to Dr. A. Stanley.

A man aged thirty-three years was admitted to hospital on March 6th, 1896, under the care of Dr. Hollis, with all the physical signs of typhoid fever—the enlarged spleen, the exanthem, diarrhœa, a continuously high temperature, bronchitis, and some distension of the abdomen. He had had headache and lassitude for eleven days before admission, but did not take to his bed until three days before admission. On the 10th there was hæmorrhage from the bowel. On the 12th perforation was indicated by increase of abdominal distension, absence of liver dulness and of abdominal respiratory movements, by pain, rigidity, and vomiting. He was seen by Dr. Hollis and Mr. Furner in consultation and an immediate abdominal section was resolved upon. The abdomen was opened in the middle line and the peritoneal cavity was found to contain gas, blood, and fæcal matter. The perforation was found eight inches from the ileo-cæcal valve, the ragged edge well inverted and Lembert's sutures were applied. The peritoneal cavity was washed out and the wound closed. The patient was very collapsed after the operation. He did not sleep the same night, and next morn- ing the pulse was extremely feeble and running. There was some tympanites which was relieved by passing the rectal tube. Later he began to vomit altered blood, but after the stomach had been washed out with hot water this ceased. The pulse became still weaker. Three pints of normal saline solution were infused into the median basilic vein. He gradually became exhausted and died thirty-six hours after the operation.

Necropsy.—The peritoneal cavity was found remarkably clean, the coils of gut being covered here and there with thin lymph and the recto-vesical pouch containing a few ounces of blood-stained fluid. There had been no second perforation. The gut in the neighbourhood of the sutured ulcer was deeply congested. The sutures held well and the reparative process appeared to be taking place in a healthy manner, but at the lower end of the row of sutures the typhoid necrosis had just spread through to the peritoneal surface of the ileum; but there was no perforation. The interior of the ileum showed several Peyer's patches in a state of typhoid hyperplasia—thickening, but no tendency to sloughing or separation of sloughs except at the situation of the sutured perforation. Here the necrosed mucous membrane was well turned in so that fairly healthy peritoneal surfaces were apposed by the sutures, except at the lower part where there was some necrosis.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Malarial Hæmatozoon in Ashanti Fever.—Healing of Incisions in Vegetable Tissues.—Pneumonomycosis.—Exhibition of Specimens.

A MEETING of this society was held on May 5th, Mr. BUTLIN, President, being in the chair.

Dr. NORMAN MOORE read a paper on Malarial Hæmatozoon in Ashanti Fever. He pointed out that the hæmatozoon which resembled hæmamœba præcox occupied a red blood corpuscle. It was ovoid with a curved axis and contained in the middle some pigment granules. From its greater curve projected two small processes. In this circumstance it differed from any of Laveran's figures as well as from those of Marchiafava and Bignami. Projections from the surface of the corpuscle were shown in one of Laveran's figures, but they were the pointed ends of the crescent-shaped organism. The projections in this specimen did not appear to be flagellæ, but rather resembled the pseudo-podia of some protozoon. The blood was taken from the finger of the patient after proper clean- ing and the specimen was at once exposed to osmic acid. The hæmatozoa were not numerous. The blood corpuscle generally seemed natural. A specimen examined two days before this showed only a very few spherical bodies with pigment. The patient was an officer who served in the recent expedition. He felt quite well on the way up to Kumasi, but on the way back was conscious of a slight degree of weakness and fever. After embarkation he rapidly became ill and at Las Palmas on the voyage home had a daily temperature of 104° F. and a continued fever. This diminished before his arrival at Plymouth and he was able to do duty on landing in the Thames. A week later he was obliged to go to bed, and from March 8th to 19th suffered from daily fever with an intermission of about four hours, accompanied by well-marked enlargement of the spleen and liver, much vomiting, and inability to take food. His other organs seemed normal. Some years before he had had acute endocarditis and had a febrile attack which did not recur and was probably not malarial at Wady Halfa. His highest temperature each day was about 102·5°, but sometimes reached 104°; the fever ceased on March 20th and he had no relapse. The specimen was taken about three hours before the usual hour of highest temperature, and up to that time he had had no quinine for a fortnight. Dr. Moore thought it was worth while to note the peculiarity of form in the hæmatozoon, even if it were but a circumstance in its phases of development and not a character indicating species.—Dr. MANSON asked if the specimen under the microscope was the only one with the peculiar projections and whether these projections stained with eosin or methylene blue. If the former he opined that the fact afforded evidence of their being part of the container and not the parasite itself. He had examined several specimens of blood from similar cases, and in all the crescentic form of the parasite was present.—Dr. MOORE, in reply, said that under a higher power it would have been easy to see that the projections were not stained by eosin but by the methylene blue. They were consequently part of the parasite and not an altered blood corpuscle. They had seen very few hæmatozoa and none as well marked as the one on view.—Mr. HUSSEY said they had found one other crescent, which he thought showed sufficiently distinct projections from the convex edge to make it seem probable, at any rate, that it was not due to pressure on the film during preparation. He himself had never seen anything like it before. He considered that there was no doubt that the projections stained with the methylene blue and not with eosin.

Mr. S. G. SHATTOCK read a communication on the Healing of Incisions in Vegetable Tissues, giving a detailed account of the different methods as studied experimentally by him- self. The methods were comparable to those of first inten- tion and third intention in the human subject. He com- menced by adverting to the process of "immediate union," which assumed the reunion of the parts of cells actually divided. He had never observed this in plants in spite of every care, and he did not believe that it occurred in animal tissues, even in the case of such a cell as a leucocyte, for Hofer had shown that if an amœba be divided two indi- viduals resulted, of which the one wanting the nucleus after

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a while perished. Under healing of incisions in vegetable tissues by first intention Mr. Shattock stated that in general it consisted in cell division on either side of the face or plane of the injury, the remains of the cells laid open in the course of the incision became compressed, and as growth proceeded the line of these compressed remnants was interrupted or broken into segments by the interpolation of new cells. This was the most perfect process, occurring without any separation of the surfaces. Starch shed into the incision from the opened cells remained unchanged, doubtless because it was no longer within the sphere of living protoplasmic action; and its fate contrasted with that in slowly-dying branches, from which it was removed for consumption elsewhere, as happened in the life of ordinary foliage leaves. Sometimes the faces of the incision were separated by tension; the gap was then filled up by the growth of large callus cells from those bounding it. These callus cells might undergo secondary thickening, but no cork tissue was produced if the wound was sealed from the air, and it was upon this distinction that Mr. Shattock made the division into healing by first and healing by third intention. In the petiolus of Rheum rhaponticum a coagulable latex was shed into and filled the wound, and it hindered union just as blood-clot does in animal textures. Under third intention was considered the case where two surfaces were freely exposed and subsequently coalesced. Each of the surfaces under such circumstances became healed by the formation of a stratified layer of cork; but when they at length met, seeing that no further physiological reason existed for a protective production of cork, the latter was broken through by the subjacent parenchyma, which thus became continuous. This process occurred as the final stage in the well-known method by which denuded wood was covered over by callus in exogenous shrubs and trees, and it was commonly seen in grafting when no union took place between the cut surfaces, but between the callus from the cambium of the stock and scion. The analogy with the human process, however, differed in this, that the two surfaces were first healed by cork, whilst in animal tissues they remained granulating till brought together.

Dr. ARKLE read notes of a case of Pneumonomycosis in a young man twenty-two years of age. He had always lived a very healthy life and had never been ill. He was suddenly seized with gradually increasing dyspnœa and developed signs of very acute emphysema. Severe attacks of dyspnœa recurred from time to time and he became and remained markedly cyanosed. He continued in this condition for about four months, when he died in one of these attacks. Post mortem, on removal of the sternum both lungs bulged up through the opening and the heart was almost covered. Both lungs had large emphysematous bullæ upon them. The pleura was not adherent over the left lung, but on the right side there were loose but firm adhesions. On separating these and passing the hand to the posterior part of the thorax a gush of air escaped and the lung collapsed. Both lungs were enormously enlarged and over the back of the left lung the pleura was thickened and opaque. On section the lung tissue appeared more fleshy and coarser than normal. Under the microscope there were indications of universal emphysema. There was no sign of decomposition or mould in the preserving fluid, and sections of the lung stained with logwood showed the lung to be greatly disorganised in places with microscopical cavities and breaking down of the substance of the organ. The walls of the alveoli were notably thickened, as were also the smaller bronchi. The parenchyma contained a good deal of pigment. Permeating the lung could be seen an extensive mycelial growth, very recognisable, although there was no evidence of fructification. The hyphæ were for the most part delicate network, and were jointed and branched, with well-marked varicosities in places. The mycelial growths lay mostly in small cavities, which they might have made for themselves. They appeared to be the aspergillus.—The PRESIDENT mentioned that a somewhat similar case had been brought before the society many years ago, though not under this name. He asked whether there was much expectoration and whether the sputum had been examined microscopically. He asked, further, whether the emphysema occupied the usual situation or was more marked in other parts of the lung.—Mr. SHATTOCK observed that the principal point to be cleared up was whether the mycelial growth was ante or post mortem. He recalled the fact that fungi had been known to grow in Müller's fluid, so that it was necessary to exclude that possible source of fallacy. He mentioned that Dr. Bristowe had first described the aspergillus growing in a healing cavity in the lung, but long before that Hunter had described it as growing in the crops of birds.—Dr. ROLLESTON recalled that Dr. Delépine had described what he called aspergillus niger taken from an ulcer of the leg in a patient at St. George's Hospital. He had cultivated it and his results had been brought before the society in 1890 or 1891. He added that the growth evidently irritated the bronchi either directly or by some secretion.—Dr. PARKES WEBER asked whether it was supposed that the fungus grew into the tissues during life or that this had taken place during the interval following their removal from the body before the lungs were placed in a preservative fluid.—Dr. ARKLE, in reply, said that there was not much expectoration and unfortunately the sputum was not examined microscopically. The emphysema occupied the lungs throughout, but was most marked in the usual situations—i.e., the anterior borders and the apices. He himself felt convinced that the growth took place during life. He admitted that he had seen fungi growing in Müller's fluid, but only after the lapse of years, never in such fluid as one would be likely to use. Moreover, the specimens gave evidences of vital reaction which he thought showed that the growth was during life. There were plenty of ways in which the patient might have inhaled the spores, and very possibly it had begun as a case of bronchomycosis becoming pneumonomycosis later.—Dr. PARKES WEBER added that if the sputum had been examined no doubt mycelium would have been found therein. It was, however, in all probability in the air-passages and not in their walls that it first grew, and its presence there would determine irritation and consequently reactive phenomena, so that this was not *per se* evidence of ante-mortem growth in the walls or parenchyma.

The following card specimens were exhibited:—

Mr. SYDNEY JONES: Bony Tumour of the Scalp.

Mr. J. R. LUNN: Aneurysm of the Inferior Thyroid Artery.

Dr. H. C. SHARP (Truro): Primary Colloid Carcinoma of the Bladder.

Mr. ST. CLAIR THOMSON: Angeioma of the Septum Nasi.

Mr. TARGETT: (1) Psammoma of the Dura Mater; and (2) Colloid Duct Cancer and a Sarcoma in the Same Breast.

Dr. ROLLESTON: (1) Myeloid Cells in a Mammary Sarcoma; and (2) Loose Body Encysted in the Surface of the Liver.

Dr. OGLE: (1) Aneurysm of the Heart; and (2) Embolism of the Coronary Artery.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.

Articular Gout and its Treatment by Natural Sulphur Waters.

AN ordinary meeting of this society was held on April 15th, the President, Dr. HENRY LEWIS (Folkestone), being in the chair.

Dr. R. FORTESCUE FOX (Strathpeffer) read a paper on Articular Gout and its Treatment by Natural Sulphur Waters, describing first the acquired variety of gout, which is less common than formerly, and is generally seen in men of a stout and plethoric habit. Its history not infrequently includes antecedent rheumatism or rheumatic fever; urate deposits are not a marked feature, excepting in the "occupation gout" of coachmen and some others, and the disease either tends to visceral degeneration or, under favourable circumstances, to gradual extinction of symptoms and a healthy old age. On the other hand, hereditary gout is most often seen in spare, active, energetic men, and, not being a "diet disease," it is not to be cured by dieting. Dr. Fox has found in his experience at Strathpeffer Spa that both forms of gout are favourably influenced by courses of sulphuretted waters, but that a routine treatment is generally disappointing. Baths are often altogether contra-indicated, and in determining the diet and general treatment it is important to ascertain in each case whether the disease is acquired and dietetic or due to a hereditary perversion of tissue change. Gout in women is nearly always hereditary, and the articular symptoms present a wide range, varying from recurrent attacks resembling those met with in men to the gradual chronic enlargement of the terminal phalanges known as Heberden's nodes. Gout in young women is sometimes met with in the articulations, as recurrent attacks of synovitis in the knee

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or shoulder, and may simulate "rheumatoid" arthritis. Arthritis, however, in Dr. Fox's view, is a term that should be reserved for degenerative disease of the joints. In this sense there is a form of gouty arthritis met with in later life in which one or more joints (shoulder, knee, or thumb) become affected with degeneration as a result of slight injury. This form of "local arthritis" must be carefully distinguished from the generalised disease.

A lengthy discussion ensued, in which many speakers took part.

Mr. WALTER BLAKER (Bognor) said that he himself was the subject of gout. He considered diet to be an important factor in keeping symptoms in check, three days of butcher's meat producing gravel. He had suffered much from headaches since residing at Bognor and found that these and other gouty troubles were worse when there was an excess of ozone in the air. He had derived much benefit for the gouty joint from the waters of Llangammarch in Wales and also from those of Buxton.

Dr. OLIVER (Harrogate) said that with respect to diet he was strongly in favour of largely increasing the fluids and the vegetable derived elements and of reducing the proportion of the animal food to a minimum.

Dr. FERGUSSON (Great Malvern) was in favour of reduced diet, increased consumption of fluids, and hot baths.

Mr. CUFFE (Woodhall Spa) had seen very hot baths produce gout at Woodhall though there was no sulphate in the water. He mostly met with the asthenic form of gout and observed that many of his gouty patients ate enormously of meat. He approved of a dietary containing little meat and very little alcohol. He strongly advocated the use of the cold spray and douche.

Dr. FORTESCUE FOX, replying, said that in Scotland much whisky was consumed, but there was not much gout. He did not favour any particular local application to the painful joints.

LIVERPOOL MEDICAL INSTITUTION.

Spina Bifida.—Strangulated Ovarian Tumour.—Pyosalpinx and Blood Cyst.—The Insanity of Conduct and the Tests of Insanity.

A MEETING of this society was held on April 30th, Mr. CHARLES H. SHEARS, Vice-President, being in the chair.

Mr. THELWALL THOMAS read notes of two cases of Spina Bifida. 1. The patient was a woman aged thirty-two years who had a very large lumbo-sacral sac, having a circumference of twenty-four inches, which had burst. In it were two nerve-like structures which were excised and proved to be simple fibrous cords with no nerve elements therein. The neck of the sac was sutured with a Saddler's suture, reef-knotted each time the needles crossed, and a catgut ligature tied around. She made an uninterrupted recovery. 2. This patient was a child aged six years with sacral spina bifida; it was globular, three inches in diameter, and the whole of the posterior wall of the sacral canal was missing. Excision was performed and the redundant dura mater and arachnoid removed. Continuous sutures united the arachnoid and the dura mater, and over the new canal were folded two flaps of fascia from the gluteus maximus as additional protection. Leakage occurred, so the wound was reopened and a small orifice closed by buried silk sutures. The wound then healed slowly notwithstanding an attack of measles. Mr. Thomas has found forty-six cases on record of treatment by excision, with a death-rate of 17·4 per cent. The Clinical Society's Committee's Report in 1885 gives Morton's own statistics: 50 cases, 9 unsuccessful, or 18 per cent. failures. The Clinical Society's 71 cases were treated by Morton's fluid with 27 deaths, or 38 per cent. They condemn excision on a published table of 23 cases with 7 deaths, or 30 per cent., apparently paying no heed to the cases treated before and those after the antiseptic era. If such had been done the result would have read: 16 cases before 1870, 6 deaths = 37 5 per cent.; 7 cases after 1880, 1 death = 14 2 per cent.; then their report might have been less directly adverse to excision.—Mr. R. W. MURRAY drew attention to the fact that hydrocephalus frequently followed upon the cure of spina bifida during infancy.

Dr. E. T. DAVIES read a case of Strangulated Ovarian Tumour. The patient was a woman aged forty-nine years who was known to have an abdominal tumour which was regarded as a myoma. Grave symptoms suddenly arose—diffuse peritonitis and stoppage of the bowels. At the end of a fortnight, the patient being collapsed and apparently moribund, laparotomy was performed. A strangulated ovarian tumour, universally adherent and quite black, was discovered and quickly removed. Recovery was uneventful.

Dr. E. T. DAVIES next related a case of Pyosalpinx and Blood Cyst. The patient was a woman aged twenty-nine years. She had been married eleven years and had three children, the last child five years ago. The menses were regular until two months ago, when she missed two weeks. There was a history of ruptured tubal pregnancy. At the operation pyosalpinx was found on the right side and blood cyst on the left. Sepsis followed with peritonitis, pus escaping from the lower angle of the wound. He thought the infection occurred in one of three ways: through the wound, from the stump of the tube, or from the gut, which was slightly injured near the cæcum.—Dr. IMLACH made remarks on the cases.

Dr. STANLEY GILL read a paper on the Insanity of Conduct and the Tests of Insanity. He pointed out that conduct was evolved from certain primitive movements, from random automatic movements, not psychically initiated, or rather those which seem to be independent of sensory stimulation; also from sensory-motor movements, which are conscious or unconscious, according as to whether they involve the cerebral cortex or no; and, lastly, from instinctive movements. He pointed out that these unacquired movements suffice to bring into play the motor mechanism of volition and thus supply experience. He said it was from experience so gained that we are enabled to direct our thoughts, feelings, and actions into the proper channels, and thus adapt ourselves to the particular environment in which we may happen to be placed. He defined conduct as the adjustment of the organism to its environment. The next part of the paper was devoted to the insanity of conduct, in which he showed the difficulties of defining insanity. He then drew attention to the three legal tests of insanity—namely, testamentary capacity, criminal responsibility, and a commission of inquiry as to the capacity of a person to manage himself and his own affairs. He did not believe in the test for criminal responsibility. Lastly, he quoted several cases to show that insanity meant something more than disorder of mind—namely, disorder of conduct.—Dr. IMLACH said that if conduct was three parts of insanity it was an argument against medical theories which attempted to explain insanity on animal physiology. Conduct was essentially a human act in accordance with reason or consciously opposed to it. The word could only be applied to the acts of an animal by analogy or to maintain a thesis. An animal always makes the best of its environment. Being what it is it could under given circumstances do no better. A man has a choice which the animal has not and which may lead him into a foolish or criminal act. When this freedom of choice has gone his actions are no longer strictly human. They stand apart as lunatic. An expert witness is able to point out facts which a jury might overlook, but the practical decision rests with the jury, for this is not a question of science but of common sense.—Dr. PERMEWAN, Dr. STANSFIELD, and Dr. ROSS took part in the discussion.—Dr. GILL replied.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST.—A dinner in aid of the funds of the City of London Hospital for Diseases of the Chest, Victoria-park, E., was held on Tuesday evening last at the Whitehall Rooms of the Hôtel Métropole. Lord Wolverton, who presided, showed in his speech that the income of the hospital was sadly below the necessary expenditure, and donations to the amount of about £2000, inclusive of 100 guineas from his lordship, were announced.

THE Prince of Wales made a surprise visit on Tuesday afternoon last to Guy's Hospital and spent a considerable time in inspecting the wards, pathological museum, college, and medical and dental schools. His Royal Highness expressed himself as much gratified by the report made to him of the satisfactory progress of the fund at the festival dinner, in support of which he has promised to preside. The impression that the fund is already adequate to the necessities of the charity is authoritatively contradicted at the Prince's request, as being likely to prejudice the success of the appeal.

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Reviews and Notices of Books.

Twentieth Century Practice. Edited by THOMAS L. STEDMAN, M.D. Vol. IV.: Diseases of the Vascular System and Thyroid Gland. London: Sampson Low, Marston, and Co. 1896. Pp. 841.

THIS volume treats of diseases of the vascular system and thyroid gland. Dr. James T. Whittaker of Cincinnati writes the general article upon Diseases of the Heart and Pericardium, which occupies rather more than half the volume. It is no easy matter within moderate compass to treat with adequate fulness so large a subject. In Dr. Whittaker's work no important condition has been omitted, and its means of diagnosis, the elements of prognosis, its causation, and its treatment all receive attention. The important *rôle* assigned by "twentieth century" opinion to the influence of microbes in the production of endocardial inflammation is very properly emphasised, and the reader will find in these pages a sufficient presentment of current views upon the nature and management of diseases and disorders of the heart. After perusal of the article we can say so much in our desire to criticise as justly and as gently as possible—a task the difficulties of which we do not under-estimate. But there are some features in this article to which we take serious exception. As a work of reference it is not useful. In the 454 pages of the essay there is not a single reference. With very few exceptions we cannot gather whether the illustrations are original or copied, and in places secondary sources are mentioned in such a manner that if we knew no better we should regard them as original authorities. Thus, the illustration of pericardial effusion with displacement of the liver might have been executed for this volume did we not know that it was copied from Sibson's monumental article in "Reynolds's System of Medicine." On the other hand, a transverse section of the usual hypertrophied ventricle of aortic disease is carefully noted as copied from Ziegler's original. The dangers of information at second hand, are well illustrated in Dr. Whittaker's narrative of the discovery of coronary atheroma in its relation to angina pectoris. Dr. Whittaker gives Fagge as his authority. We here learn that Jenner suggested coronary occlusion as the cause of angina in a letter addressed to Heberden in 1778, but which he did not send out of consideration for the feelings of John Hunter, who suffered from the disease. We also learn that "Jenner (1775) first saw the calcification of the coronary arteries in an autopsy which was being made by John Hunter" (p. 439). With regard to these statements we cannot discover (1) that Fagge is responsible for this information, (2) that Jenner wrote an unsent letter to Heberden, and (3) that he saw calcified coronary arteries in any dissection made by John Hunter. As a matter of fact, Jenner's communication was made to Parry of Bath, whose essay was published in 1799, and the date of Jenner's letter cannot be fixed unless Dr. Whittaker has seen the original or some fuller excerpt, which, so far as we know, does not exist. With regard, moreover, to the dissection by John Hunter to which he refers, Jenner expressly states that to the best of his belief the coronaries were not examined in that case. "Fagge," again, relates the sudden death of Dr. Chalmers from angina pectoris, and no mention is made of the masterly essay on angina by Gairdner of Glasgow in "Reynolds's System of Medicine," the literary and scientific qualities of which render it a model for medical authors, and which was Fagge's source, as also Fothergill's, for the particulars of John Hunter's illness. Surely Gairdner's essay is as accessible as Fothergill's book! Fothergill, however, in the pages before us might pass for the original authority, notwithstanding his own express statement to the contrary. This is not, we trust, hypercriticism. We desire at all times to adhere to kindliness, checked by what we consider justice, as a sound canon of criticism, but these inaccuracies impair our confidence in a work which, without doubt, contains much valuable and correct information.

The section on Diseases of the Bloodvessels is from the pen of Dr. Arthur Ernest Sansom of London. Much of the material is the result of original investigation. There is a good account of the clinical history and gross and microscopic anatomy of acute and chronic aortitis. We do not, however, think that the evidence he adduces in favour of influenza being causal of the condition in some cases is conclusive (p. 460). His remarks upon the diagnosis of aneurysm of the aorta are excellent. The criteria for forming an opinion in these cases, so frequently obscure, but in which the necessity for coming to a correct conclusion is of great moment to all concerned, are given with a lucidity and practical insight very desirable in treating this subject. His views on the treatment of some of the conditions discussed are very judicious and sufficiently full to be of real service to those consulting this work. We would especially instance his rational indication of the place of digitalis in the treatment of the failing heart of atheroma. We observe (p. 546) that he classes the epileptoid phenomena of bradycardia with *petit mal*. For ourselves we think the weight of argument is with those who regard the cerebral phenomena of this condition as a mere index to the syncopal failure of the heart. The whole essay, however, will repay perusal, both by the expert and tyro, and is calculated to be a trustworthy guide in diagnosis and treatment.

In his article on Diseases of the Lymphatic Vessels Dr. Bertrand Dawson has in forty-two pages given as good an account of the affections of these vessels as any with which we are acquainted. Sufficient references are made to the anatomy and experimental and clinical pathology of the conditions in question to sustain the interest of the reader and instruct him by an indication of the *rationale* of observed cases. Mention is made not only of the results of direct obstruction of the lymphatic vessels, but also of the consequences of back-pressure, due to heart disease, in the various channels into which the thoracic ducts debouch. Cases which have been reported and in which there has been a leakage of chyle into the various cavities of the body are not common. Dr. Dawson has therefore been able to quote interesting particulars from original sources in some instances. To weigh cases, as Morgagni has it, is frequently more important than to count them, and the careful study of a few typical examples is often more instructive than the elaborate conclusions of fallible statistics. Dr. Dawson has weighed his cases well, and has produced a readable and instructive account of the diseases with which he has dealt. A complete list of authorities consulted is appended, with, in most instances, page-references, which is as it ought to be.

Diseases of the Thyroid Gland are very ably treated by Dr. George R. Murray of Newcastle-on-Tyne. His article on Myxœdema is especially valuable and contains much clinical and general information of the first importance, as we should expect from one who has devoted so much attention to a subject with the practical development of which his name is honourably associated. The slighter cases, most difficult of diagnosis, are considered, as well as those more pronounced with which we are now so familiar. Nothing is more remarkable in connexion with this disorder, recently so hopeless and obscure, than the diffusion of knowledge on the subject, so that facts but recently observed are as familiar to the profession as many connected with diseases much longer known and treated. This is probably owing to the close association of real benefit to the patient with learned discussion by the physician, conditions which do not, unfortunately, invariably go hand in hand. Thyroid extract, although so beneficial in its action, requires care

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in its use in some cases, and the precautions necessary in its employment are set forth clearly in this article. With reference to Exophthalmic Goitre Dr. Murray argues strongly in favour of its production by an excess of thyroid secretion in the blood, just as myxœdema is due to its deficiency. There is undoubtedly much to be said in support of this view, but there are still, we believe, considerable lacunæ in the argument. As Dr. Murray states (p. 811), there are, indeed, some cases of ordinary goitre which exhibit one or more of the symptoms of exophthalmic goitre, but this is by no means the rule, and did the latter condition depend solely upon excess of thyroid secretion in the blood we should expect it to be observed more frequently than it has been at some period in the development of ordinary goitre. The earliest description of an undoubted case of exophthalmic goitre Dr. Murray attributes to an anonymous writer in 1816. There appears, however, to be considerable justification for the Italian synonym, "morbo di Flajani," for Virchow states, according to Warburton Begbie, that "Flajani was the first to notice the coincidence of goitre with lasting palpitation of the heart." Nor do we think Dr. Murray sufficiently acknowledges Dr. James Begbie's contribution to our knowledge of a disease which some desired at one time to call by his name. These are, however, small matters, and the use of a patronymic nomenclature has many objections. This article may be recommended as affording a very adequate account of the diseases with which it deals from the point of view of the physician, for surgical questions are not treated in detail.

After careful perusal of the whole volume, and excepting the strictures we feel it our duty to pass on the first article, we can recommend it as a valuable and trustworthy exposition of present-day views on the matters treated. There is a good general index and the publisher's work has been well done.

Recherches Bactériologiques sur l'Étiologie des Conjonctivites Aiguës et sur l'Asepsie dans la Chirurgie Oculaire. (*Bacteriological Researches on the Etiology of Acute Conjunctivitis and on Asepsis in the Surgery of the Eye.*) Par le Docteur V. MORAX de la Faculté de Paris, Ancien Interne des Hôpitaux de Paris. Paris: Société D'Éditions Scientifiques, 4, Rue Antoine-Dubois. 1894.

THIS work contains the results of the researches of Dr. Morax with regard to the application of bacteriological knowledge to ophthalmic surgery, especially in connexion with conjunctivitis, both as regards diagnosis and treatment. Accepting the bacteriological fauna of a normal healthy eye and appendages as given by Fick, Combert, Marthen, and others, he has paid special attention to the microbes that are found in conjunctivitis, and has tried to estimate their importance in connexion with the complications that may arise during the course of the disease or as the result of interference by treatment, especially, of course, in relation to the prevention of septic conditions following operative treatment. He comes to the general conclusion that acute conjunctivitis can only be classified according to its etiology, as the symptoms are in many cases almost, if not absolutely, identical, even when the etiological factor differs. He is convinced that contagious acute conjunctivitis occurs most frequently; it can be set up by inoculation and may be met with in all stages, from a comparatively slight attack of catarrh to the most characteristic purulent conjunctivitis, sometimes accompanied by corneal lesions. He looks upon the microscope as being the best diagnostic instrument in cases of blennorrhagic and other forms of infective conjunctivitis, whether they be the benign form, characterised by the presence of the pneumococcus, or the acute, associated with the streptococcus, especially when accompanied by a similar inflammation in the lacrymal ducts. In connexion with the aseptic treatment of diseases of the eye Dr. Morax points out that pathogenic microbes are very rarely found in the conjunctival *culs-de-sac* in the healthy condition, but that in certain diseases pyogenic organisms are often found. He points out, however, that the importance of the presence of bacteria in these sacs is sometimes unduly magnified and that a just appreciation of their importance in any special case can only be arrived at after a careful bacteriological examination. In all cases instruments used for operation should be carefully sterilised by means of heat. The only asepsis possible is that obtained by washing, and as in this class of cases this acts mechanically and not chemically he recommends the use of sterilised water, which does not irritate the eye and which gives quite as good results as chemical antiseptics. He recommends, of course, a careful and regular removal of all secretions, especially where there is any tendency to inflammation.

The work throughout is evidently based on careful observation, and although the observations of others have not been entirely passed over Dr. Morax relies to a very great extent upon his own experience as a basis on which to found his conclusions and recommendations.

Fear. By ANGELO MOSSO. Translated from the Fifth Edition of the Italian by E. LOUGH and F. KIESOW. Pp. 278. London: Longmans, Green, and Co. 1896.

THE name of the Turin professor is familiar enough to physiologists, and it is pleasant to meet the inventor of the plethysmograph and the well-known student of the cerebral circulation on more popular ground. The interest which his little book on "Fear" has aroused in its original Italian fully justifies its translation into English, and Messrs. Lough and Kiesow have done good service in the admirable translation here presented. Professor Mosso is much more than an accomplished physiologist: he shows himself a man of wide culture and a careful student of human nature; he is, further, master of a literary style at once luminous and picturesque. The strange combination of accurate scientific observation with real and unaffected sentiment and a remarkable power of vivid illustration make the book very unusual and attractive reading to the more phlegmatic temperament of our northern climate. It is an essentially popular book, which will interest the general reader as well as the physiologist and the physician, but accuracy has not been sacrificed to general effect. The author is a disciple of Darwin and Herbert Spencer, and not of Weissmann, but he differs from the first-named in several points. Many will agree with him that "The Expression of the Emotions" is not one of Darwin's greatest works, and it is natural enough that the progress of experimental physiology should offer simpler and more direct explanations of phenomena—such, for instance, as blushing, which Darwin attributed to the effect of self-consciousness acting on the vaso-motor nerves. The Action of the Central Nervous System, the Circulation in the Brain during Emotion, the Beating of the Heart, Oppression of Respiration, Trembling, the Physiognomy of Pain—these are some of the headings of the sixteen chapters in which Professor Mosso elaborates his subject. His illustrations and conclusions are always interesting, the final chapter on Education being particularly valuable and suggestive; and the book will not fail to captivate the reader by its style, even though he may not agree with its author in every respect.

LIBRARY TABLE.

Love Fugue. JON. B. FROST, Atlanta, U.S.A. London: The Roxburghe Press. Price 2*s.*—"So, departed shade of my weary Aunt, forgive my life! Forget or palliate my word! I but live a life for which occasion has not yet

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occurred to be thankful." Why the Roxburghe Press have sent us this remarkable book we cannot say, for it is a perfect specimen of what Mark Twain calls hog-wash. The sentence we have quoted will give an idea of the chastened style in which it is written. Here is another gem: "You judge the conduct, did not observe the lady, her clean face, her eye brilliant with mischief, her fine forehead shown by the artful arrangement of her frizzes ..... she was embarrassed, if bad she would not have been abashed. Did you fail to observe that she was met by a motherly woman who may have been her aunt and borne from the depot in a private carriage? Everything indicated that she is vivacious—nothing that she is vicious." The opening words of the author are "I know not why I yet live." Neither do we.

Willing's British and Irish Press Guide for 1896, price 1*s.* published at 162, Piccadilly, contains the usual particulars concerning the press of the United Kingdom, together with a list of the principal colonial and foreign journals and a variety of general information.

Dod's Parliamentary Companion for 1896. London: Whittaker and Co., Paternoster-square. Price 4*s.* 6*d.*—The seventy-second edition of this well-known and indispensable book has reached us, carefully revised and brought up to date; it thoroughly deserves the popularity it enjoys.

JOURNALS AND MAGAZINES.

The *Practitioner* for May devotes its pages to vaccination in view of the coming 14th of May, the date upon which Edward Jenner performed the first vaccination on the body of one James Phipps. The editor remarks upon the extraordinary lack of appreciation shown by this enlightened country with regard to Jenner and his work. In this we cordially agree. A man who slays his thousands is honoured, and rightly, with dinners, orders, medals, and pensions; while he who has delivered his tens of thousands from one of the most horrible diseases known to humanity is passed by as no one. Perhaps the greatest praise and most striking commentary upon Jenner's invaluable services is to be found in the recent epidemic at Gloucester, and we would suggest (1) the inscription on the pedestal of the statue of Jenner in Kensington Gardens in large letters of—(*a*) the numbers of those attacked with small-pox; (*b*) the deaths; and (*c*) a tabular statement showing the proportion of deaths to vaccinations; while upon the other side of the pedestal should be the names of the anti-vaccination guardians and the members of the anti-vaccination societies—"These are raging waves of the sea foaming out their own shame ..... murmurers, complainers, walking after their own lusts." In the original communications Dr. Monckton Copeman writes on Small-pox and Vaccinia, their Manifestations and Inter-relations in Man and the Lower Animals; Dr. Buist upon Natural and Cultivated Vaccine; Dr. Colcott Fox upon the Accidents of Vaccination, a most valuable paper; and Dr. Edward Seaton upon Compulsory Vaccination from the Legislative Point of View. Dr. Edwards's paper upon Vaccination and Small-pox Statistically Considered ought to be in the hands of every guardian. The hero of medicine for the month is, of course, Jenner, and the medico-literary causerie, Small-pox before Vaccination.

The *Quarterly Medical Journal for Yorkshire and the adjoining Counties* has an interesting paper by Dr. Norman Moore upon Tuberculosis and an admirable plea for greater purity in medical nomenclature by Dr. C. A. Greaves. Dr. Crochley Clapham cites an interesting case of Congenital Absence of the Uterus. Dr. Preston King has a good paper upon Bath as a Health-resort.

The *Birmingham Medical Review.*—Mr. Oliver Pemberton has an appreciation of the late Sir William Savory worthy both of the writer and his subject. Mr. Jordan Lloyd discusses the Curability of Cancer of the Uterus, his conclusions being summed up in the words, "Operate early if you can." Dr. Simon writes upon the Treatment of Typhoid Fever, and Dr. Sydney Short reports a very interesting case of death from some mysterious cause, probably cerebral. Dr. James Russell reports a case of Cerebral Thrombosis with some very Unusual Symptoms. There is an interesting "note" upon Provident Medical Aid.

In the April number of the *American Journal of the Medical Sciences* Dr. J. J. Thomas of Boston discusses Twenty-nine Cases of Diphtheritic Hemiplegia recorded by various authors, and describes two cases which had come under his own observation. Dr. J. H. Etheridge of Chicago gives a very full account of three cases of ovarian abscess caused by the micrococcus lanceolatus (diplococcus pneumoniæ, pneumococcus of Fraenkel and Weichselbaum). He believes that although this organism is a well-known cause of many inflammatory processes there has not until now been any record of ovarian abscess due to it. Dr. Chittenden and Dr. Mendel conclude their articles on the Influence of Alcoholic Drinks on the Processes of Digestion.

The *Edinburgh Medical Journal* for May has two instructive articles on Osteomalacia, in one of which Dr. James Ritchie summarises the results of numerous observers and describes in detail several cases attended by himself. One of the patients took both white and red bone marrow without any apparent benefit, but improved very much after undergoing oöphorectomy. Dr. T. M. Allison gives an elaborate account of another case of the same disease in which there was visible improvement at the end of a week from the commencement of the bone-marrow treatment, and after seven months the patient's condition was greatly changed for the better. Dr. J. W. Ballantyne writes on Congenital Teeth and Dr. W. G. Sym on Ophthalmia Neonatorum.

Journal of Mental Science. April, 1896.—From a clinical point of view the current number of this quarterly perhaps does not present so many features of interest as usual. One of the articles is original in more than one sense. It emanates from the pen of a gentleman who suffered from temporary mental aberration, from which he happily recovered, and he depicts in vivid language the strange impressions and visual hallucinations which troubled his perverted mentality. Dr. Hyslop contributes a suggestive paper on "Pseudo-general Paralysis" which is referred to in another column of our present issue. There is no doubt that his argument is well founded when he states that many cases, of which he gives examples, are really not cases of general paralysis *per se*, but rather of special paralysis with insanity. A temperately written article on the occurrence of insanity amongst the prison population ought in a measure to remove much of the misconception that appears to exist regarding the origin and causation of mental disease in prisons. The psychological and therapeutic retrospects, as usual, contain valuable information.

MESSRS. N. M. ROTHSCHILD AND SONS have sent 50 guineas to the Royal Hospital for Diseases of the Chest, City-road, E.C., towards the fund being raised in connexion with the festival dinner to be held at the Hôtel Métropole on May 26th.

MEDICAL MAGISTRATES. — Mr. Sydney L. Richardson, L.R.C.P. Edin., M.R.C.S. Eng., has been appointed a Licensing magistrate for the district of Queanbeyan, New South Wales.—Mr. Leonard L. Seabrook, M.B. Ch.B. Adel., has been appointed a Justice of the Peace for South Australia.—Mr. R. A. H. Williams, L.R.C.P., L.R.C.S. Edin., of Fermoy, has been appointed by the Lord Chancellor to the Commission of the Peace for the county of Cork.

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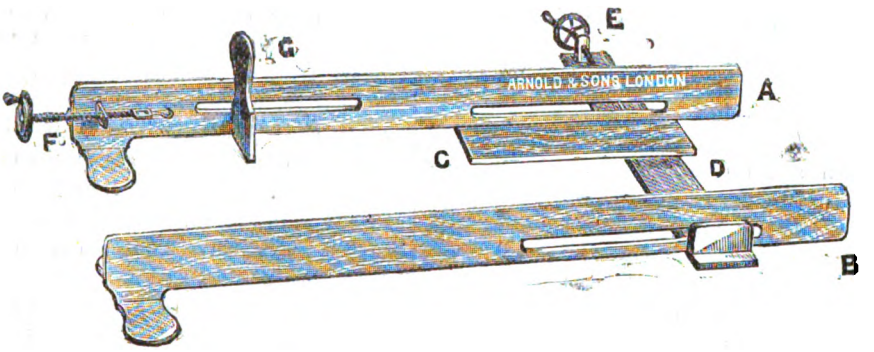
New Inventions.

IMPROVED HIP-SPLINT.

APPRECIATING the difficulty of obtaining bony union in all fractures about the hip-joint (and this I take to be due to want of proper apposition with consequent want of proper fixation of the bony fragments and neglecting to fix the entire pelvis during treatment), the splint I have had made for me by Messrs. Arnold and Sons of West Smithfield meets all these requirements. It consists of two long side-splints A B, with sliding foot-piece G, and by thus fixing both lower extremities the pelvis is fixed. Extension is obtained by means of screw F. The hip-joint is prevented from sinking into the bed by the back-splint C, which is movable along the slot. To obtain absolute approximation of the fragments in capsular fractures pressure must be made on the great trochanter of the injured side, and this is provided for by the screw E, which, when turned gradually, approximates the upper ends of the two long side-splints. The splint is reversible, so that it may be used for either side of the body; also, as it is detachable, one side-splint can be used if required.



A. HERBERT BUTCHER,
Surgeon to the Birkenhead Borough Hospital.

THE "UNIVERSAL" TEAPOT.

TEA properly made should be an infusion and not a decoction, but the vessel in which this beverage is ordinarily prepared is more adapted for the latter process than the former. In our issue of Nov. 30th, 1895, we described a new tea infuser from which we obtained very satisfactory results, but the peculiarity of its construction rendered it practically useless unless a full pot of tea was required. The object to be aimed at in the construction of a really good teapot is, of course, the separation of the spent tea leaves from the hot infusion; and this Messrs. George Donald and Co., of Central-chambers, Glasgow, seek to accomplish by attaching to a chain, which passes through the lid of the pot, a small vessel for containing the tea (see illustration). This vessel or infuser is allowed to rest at the bottom of the pot until the tea is "drawn" and is then elevated into the lid by means of the chain and kept in position by a pin passing through one of the links. The "Universal" teapot is made in brown ware, stone ware, and china, the best materials of which teapots can perhaps be made; and for the end in view—namely, the making of an infusion and not a decoction—the contrivance is almost all that can be wished. We would point out, however, that it is far from desirable to use a brass chain however heavily it may be plated with silver (in the present instance it is triple plated), as the contact of the two metals is likely to set up an electrical action. A chain made from pure aluminium would be far preferable.

NUTRIENT SUPPOSITORIES.

THE nutrient suppositories for rectal feeding manufactured by Messrs. Parke, Davis, and Co. are about an inch long and half an inch in diameter at the base. Each contains about 125 grains of fresh lean beef almost entirely peptonised. They are firm in consistence and have a smooth, dry surface.

GELATIN CAPSULES.

MESSRS. PARKE, DAVIS, AND CO., of 21, North Audley-street, Grosvenor-square, have forwarded to us samples of their improved empty gelatin capsules, by the use of which the difficulties of administering unpalatable powders are reduced to a minimum. The capsules are made in ten sizes, differing greatly in their several dimensions, but all on the same principle. The larger sizes very much resemble short, round-ended, glass test-tubes, such as are used by chemists everywhere, but are without the ordinary everted border, and have a well-fitting cover, consisting of a similar but shorter tube sliding over the other. For administration by the mouth they are made in seven sizes, the smallest of which is about as large as an ordinary three-grain pill, and will contain either three-quarters of a grain of sulphate of quinine or one grain of powdered aloes or rhubarb. The largest of these is about a third of an inch in diameter and one inch long when closed; it will hold eight grains of sulphate of quinine and about ten grains of powdered aloes or rhubarb. By means of them it is also easy to swallow nauseous uncoated pills without tasting them. The capsules are hard but elastic, they are smooth, the covers fit well, and the shape is convenient for being swallowed, but if held in the mouth they dissolve before long. There are also three sizes having a tapering end for rectal administration and three for veterinary and vaginal capsules. The latter are convenient for the local application of medicated cotton. A special filler is supplied for powders and pills.

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THE LANCET.

LONDON: SATURDAY, MAY 9, 1896.

THE action in which Mr. and Mrs. ARTHUR KITSON claimed damages from Dr. and Mrs. PLAYFAIR for publishing a slanderous statement concerning the female plaintiff has now come to a definite conclusion. At the trial before Mr. Justice HAWKINS the defendant denied publication and claimed privilege. No plea of justification was put on the record, and consequently the presiding judge would not allow charges aspersing Mrs. KITSON'S character to be made in Court. Of course, it was impossible to present the case to the jury without bringing out the salient facts upon which the alleged slander was founded. It is not necessary for our present purpose to give a detailed account of these facts. Suffice it to say that Mrs. KITSON, who had been in England for over a year—her husband remaining abroad—suffered from metrorrhagia for some weeks. At her suggestion, or with her consent, her medical attendant sought the aid of Dr. PLAYFAIR, whose wife was the sister of Mr. KITSON. On two occasions a direct examination was made, and on the latter a substance was removed from the uterus which Dr. PLAYFAIR judged to be the product of a recent conception. In a correspondence on the subject Dr. PLAYFAIR informed Mrs. KITSON of the opinion he had formed and intimated to her that he could only keep intact the seal of professional secrecy on condition that she left London and broke off social intercourse with his immediate family circle or that she could show that she had seen her husband within a period which would remove the grounds of the charge of unchastity. From first to last, though she had to face as terrible a situation as it is possible to imagine a wife and mother to be placed in, Mrs. KITSON persisted in her innocence. Dr. PLAYFAIR not finding his suggested terms of compromise accepted informed his wife and also Mrs. KITSON'S brother-in-law of the facts and the deduction he had drawn from them. This was the slander complained of and on which issue was joined in the High Court.

Although the case is one of profound interest from a medical and pathological standpoint we intend at this moment to discuss it only on the lines presented to the Court. At the trial the verdict went against the defendant, the jury finding that there was publication with interested motive and express malice on the part of Dr. PLAYFAIR. An appeal was entered against the verdict, but when the time arrived for it to be heard terms were agreed upon between the parties to the suit and thus the litigation ceased. It is not within our province to criticise the questions of law as laid down by Mr. Justice HAWKINS at the trial or to challenge the findings of the jury. The former must be taken as an equitable presentment and the latter to embody the opinion of twelve unbiased men upon their oath. But beyond the four corners of the law there is ample field for meditation. Never was the question of professional etiquette more forcibly presented. It must be allowed that there is no written code to guide a practitioner in every case in which his discretion and judgment are evoked. There are those which it would be subversive of all moral rule to divulge. There are those which it is his bounden duty to disclose; but on the frontier between compulsory secrecy and publication there are many instances every one of which must be decided upon its particular merits. It may be held to be a safe formula that, unless there are overpowering reasons to the contrary, a patient's secret should be held inviolate by his medical adviser almost, if not quite, as binding as the confessional of the Roman Catholic priesthood. Where it involves the actual commission of crime, morality and justice require the breaking of a confidence which the recipient should never have been asked to accept. Where it is supposed an illegal act is contemplated the line of action is not so clear. Mr. Justice HAWKINS had in mind such a contingency when he asked Sir JOHN WILLIAMS what he conceived would be his duty if consulted professionally in a suspicious case of criminal abortion. Sir JOHN WILLIAMS without hesitation replied he would communicate with the Public Prosecutor. "I am not so sure you would be doing right," came the rejoinder of the learned judge. There is much to be said on both sides. In the first place, it is obviously every one's duty to prevent the immediate commission of a crime and to deter from more remote repetitions of such. Moreover, failure to guide the hand of justice may strengthen the evil intents of ill-doers. We should say, on the other hand, that unless the information possessed by the medical practitioner is sufficiently weighty to make it reasonably certain that the allegation will be sustained it is better to observe a discreet silence.

Reverting to the basis of our special commentary we feel it our painful duty to assent to the proposition that Dr. PLAYFAIR did not act as discreetly as he might have done. Was it wise to place such alternatives before Mrs. KITSON as it was proved in evidence he did place? To a statement in one of Mrs. KITSON'S letters to him suggesting, though not defining, an explanation of her innocence he lent a willing ear, although there was no evidence forthcoming that there was reasonable probability of the existence of such grounds of exculpation. We refer to the question of a visit to England by Mr. KITSON. It seems that at that time Dr. PLAYFAIR was struggling between two opposing forces—the one compelling him, out of human pity and from a sense of professional duty, to keep secret the conclusions at which he had arrived; the other to shield his family from the pollution which, he thought, further social intercourse would entail. Whilst recognising his perilous position it would have been well, we think, had he sought in confidence the help and advice of some distinguished members of the profession. In so doing he would have proved better than in any other way that midst all his undoubted difficulty and trouble he was striving to act justly between man and man. Although we are unable to endorse as fully as we could have wished the course and

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tenor of his action, we cannot but regret his misfortune and tender the sympathy such misfortune claims.

FOR some years past the study of the errors of refraction in the eye has been earnestly pursued in America. The journals devoted to ophthalmology in that country, which are many and excellent, are remarkable for the number of important articles they contain on the symptoms and methods of treatment of the defects of vision arising from these errors. They discuss at great length and with much ingenuity not only the ordinary defects of myopia, hyperopia, and astigmatism, but those conditions of imperfect vision that are dependent upon, or that are associated with, defects of the nervo-muscular apparatus of the eye and which are capable of being alleviated or altogether remedied by appropriate treatment with lenses and prisms. These articles, primarily addressed to the instructed ophthalmologist and presupposing a thorough and complete medical education, are, of course, accessible to the public and therefore to the optician. Partly as the result of knowledge gained from such sources, partly from observation of the successful means adopted by experts and of the trials and essays, and it may be of the failures of such experts in difficult cases, and partly from information acquired by the desire to carry out in an intelligent manner the orders of the surgeon, the optician has of late years stepped in and now not only claims the selection of glasses as a branch of his work for which he believes himself to be specially fitted, but contends that it is no part of the duty of the medical practitioner to treat such cases at all, especially since in most cases he has neither the apparatus required for testing vision with accuracy or the knowledge which would enable him to select the glasses that would remedy the defect. As a matter of fact, few practitioners in the country, or even in large towns, feel themselves to be competent to undertake the treatment of defects of the eye requiring the use of glasses, and as a rule send such cases to some friend in whom they have confidence and who is practising exclusively as an ophthalmic surgeon. But, as an American contemporary remarks in a leading article devoted to this subject, it is certain that we are entering upon a prolonged period of controversy and even warfare with the opticians. In the State of New York a determined attempt, it is said, is being made to secure the passage of a law which shall recognise jewellers and spectacle vendors as "official refractionists," whilst the physician or professed ophthalmologist is to be relegated to the position of one who shall treat only diseases of the eye whether by medicines or the knife.

In England the contest has not arrived at quite so acute a stage, and we are inclined to think that it may, with a little generosity of feeling and action on both sides, be altogether averted. For one thing, it is quite certain that no legal enactment could be made so stringent as to prevent a man from walking into an optician's shop, trying for himself a pair of convex or concave spectacles, paying for them, and walking out again. He takes the risk of the numbers being correct and may or may not be helped or aided in his selection by the optician with whom he deals. If after one or two trials he finds them unsuitable he probably applies to an ophthalmic surgeon and no harm is done. Hundreds of pairs of glasses are thus purchased daily, and it is difficult to see what exception can be taken to the transaction. On the other hand the optician entirely misses the point of the discussion when he contends that he is as capable as the ophthalmologist of determining the glasses that are required in any given case. Freely according to him the benefit of the doubt that he can supply the appropriate glasses as well as the ophthalmic surgeon can, the real question is, Are glasses required at all? To prescribe correct concave or cylindrical glasses for a case of short sight is not a difficult matter, and any intelligent man might learn to do so in a few months; but it is impossible to impress too strongly on the optician the fact that although the selection of appropriate glasses is an important matter, it by no means comprises the whole treatment of myopia. The case may be one in which a delicate child from a spirit of emulation is working hard and is actually developing the defect. Would any optician say to the parents: These glasses give your child perfect vision, but I strongly recommend you *not* to purchase them? We apprehend not. Yet this is precisely the advice that every ophthalmic surgeon has to give, not once or twice, but repeatedly to those most interested. Avoid glasses, he will say; send the child into the country and do not let him look at books. Again, there are various conditions of the eye which require a quite special medical training to recognise, and which are temporarily benefited by glasses, but which, if treated with them alone, are likely to lead to loss or great impairment of vision. Let us take glaucoma, for example. A sufferer in the earlier stages applies to an optician, who with his tests makes out accurately enough the number the patient requires. Within a month the latter becomes dissatisfied and applies to another optician, who supplies him with another and stronger pair of glasses with the same results. At length he calls in the aid of an ophthalmologist, is then told the nature of the disease, and is informed that an operation is imperative—an operation that might have been avoided had he been in the first instance examined by an expert. In many—nay, in most—instances the physical condition of the patient, the family history, the nature of his work, and, still more important, the internal changes which become apparent under the ophthalmoscope are all duly weighed by the surgeon and their influence for good or bad considered before glasses are prescribed. How can the most experienced optician discuss these points with his customers? It is quite true that the average practitioner, who during his student career has given but little attention to the eye, would certainly be beaten by a practical optician in the selection of appropriate glasses; but we would infinitely rather rely upon the judgment of such a practitioner than upon that of any optician as to whether glasses should or should not be worn.

Taking the lowest and most commercial aspect of the question, we cannot see that the optician would lose by sending to a duly qualified ophthalmic surgeon the cases that apply to him for relief. No ophthalmic surgeon in Great Britain supplies glasses; the patient must obtain them from some optician, and it would be rare indeed for

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a patient sent by an optician to be directed to apply to some other tradesman. We are inclined to think that English opticians will make no attempt to encroach beyond the reasonable limits of giving low powers of concave and convex glasses, with astigmatic correction, if they feel themselves competent to determine the amount, and will send all high degrees of these defects and all those exhibiting unusual conditions to those who are alone properly able to deal with them—to wit, the ophthalmic surgeons—and we sincerely trust that no rivalry in any way resembling that which appears to be in progress in America will take place in England.

ALTHOUGH it is too early yet to estimate the full extent of the outbreak of small-pox in Gloucester and its effect on the material prosperity of the city enough is already known to indicate that both directly and indirectly a heavy price is being paid for years of neglect of the primary safeguard against such visitations. Were it not so pitiful we might dwell upon the irony of fate which has brought into conjunction this scourge and the eve of the centenary of JENNER'S first vaccination and in a place so near to the scene of his patient and fruitful investigations. The latest returns gave a total of some 1600 cases of small-pox notified in the city during this epidemic, the height of which seems to have been reached in the middle of last month, when in one week there were no fewer than 211 cases notified. This for a city of about 40,000 inhabitants is sufficiently striking, whilst the weekly return of deaths shows that the mortality has been exceptionally high. Nor is it disputed that amongst the victims there have been a large number of children, which is in contrast with modern experience and doubtless recalls the incidence in times gone by when the child community had not received the protection afforded by JENNER'S discovery. The energetic measures that are now being taken to reach the children who are still unvaccinated, although late, may lessen the extent of the plague, whilst the natural decline of the disease as summer advances must raise hopes that the city may be free from it before the autumn comes round.

Small-pox has prevailed in England for the past five or six years, and Gloucester, like many other towns, has not been free from sporadic cases introduced by the tramp class — those nomadic distributers of contagion. But Gloucester, like some other places, had a weak place in its armour. So long as cases were few and scattered the measures of isolation &c. adopted by the sanitary authority could limit the spread of infection within the city; and the comparatively mild experience of Leicester two years ago may have encouraged the opponents of vaccination in Gloucester in the belief that they were equally secure. They have had a rude awakening from this dream, and some day—no matter how vigilant they may be—Leicester and other unvaccinated communities will receive the same lesson. For it has been demonstrated in Gloucester that, if the first line of defence against small-pox be abandoned, the provision of hospital isolation and the means for supervision of infected households must be on a scale far more extensive than is requisite in towns where the children are protected by vaccination. It is said that the rapid extension of the disease in the month of February was due to school infection; but so rapid was it and so widely diffused that the ordinary measures for coping with epidemic disease failed to have any influence in checking it. We may dismiss as ridiculous the argument that the disease has been fostered by defective drainage. It has been shown by the medical officer of health that the southern part of the city, in which it has mostly been prevalent, is the least crowded and the healthiest district, being free from diseases attributable to such defects. There is, however, a source of further infection in the hospital which has been rapidly extended to meet with the requirements. It is futile to carry out isolation if thereby a fresh focus of infection is established, and we trust, for the sake of the city, that the sanitary authorities will seriously consider the propriety of retaining these buildings. There has been no lack of earnest endeavour to do all that is possible to provide the means for isolation, and it seems particularly ungracious to criticise these well-meaning efforts; yet there is so much evidence in favour of the view that small-pox hospitals may *per se* disseminate contagion that it is impossible not to regard with some anxiety the retention of buildings for that purpose within a few hundred yards of inhabited dwellings.

The lesson which Gloucester has learnt may, we trust, be impressed on other towns. Small-pox can be controlled by efficient vaccination and revaccination, but if these precautions are disregarded there should be provided such machinery and such an amount of isolation accommodation to meet emergency which may at any time arise as would in themselves constitute a heavy standing tax upon the community. But wherever the second alternative is adopted as the sole method of coping with small-pox, it will have to be done with the full knowledge that the cost will not be one of money alone but will include the inevitable sacrifice of many of those who have not been afforded the personal protection that vaccination gives.

Annotations.

"Ne quid nimis."

THE APPEAL OF THE APOTHECARIES' HALL OF IRELAND TO THE PRIVY COUNCIL.

THE hearing of this case by the Privy Council—that is, the matter of an application by the Apothecaries' Hall of Ireland for the appointment of examiners to assist at the qualifying examinations which are held by the said Hall, which application has been refused by the General Medical Council—is fixed for Monday, May 11th, at eleven o'clock, in the Council Chamber, Whitehall. As the first instance of an appeal from the judgment of the General Medical Council to the Privy Council it cannot fail to be interesting, apart from the importance of the continuance or otherwise of the Apothecaries' Hall in the medical economy of Ireland. The proceedings will, of course, be open to the public and the Press.

KISSING THE BOOK.

As long ago as November last reference was made in our columns to a scene at a Sussex police-court, Petworth, between the Rev. Rowley Lascelles, rector of Graffham, and

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the chairman of the bench of magistrates because the former declined to take the oath in the customary unclean fashion. Mr. Lascelles was in the witness-box at a neighbouring police-court, that of Midhurst, last week, and it is to be regretted that the chairman of the bench thought fit to make similar and unjustifiable comment upon Mr. Lascelles' refusal to be sworn except in the Scottish fashion. The magistrate's clerk observed, "But you are a clergyman of the Church of England?" to which the witness very properly replied, "I refuse to answer any such question and claim to be sworn in the Scotch fashion." The chairman then said, "Are you not an Englishman?" a question which also was rightly disregarded. This sort of thing is of no importance in the case of a gentleman who is strong and sensible enough to form his own opinion and to stand by it despite official sarcasm, but it is not right that an ignorant or ill-informed person should run the risk of a bullying at the hands of those whose duty it is to administer justice in the exercise of his undoubted and unquestionable prerogative.

TOURISTS AND IMPURE WATER.

THERE is not a more important question affecting the well-being of the tourist than that of the water supplied to him. The quality of the water at places visited by tourists, holiday-makers, and others is so frequently an object of suspicion as to lead them to avoid it altogether for drinking purposes. It is to be feared that the doubts thus often entertained as to the fitness of the water-supply at many hotels and health resorts, and especially abroad, are not without a reasonable foundation. It is well known that illness amongst travellers is very often directly traceable to a bad water-supply. We do not refer to cases where typhoid fever or cholera has been the result, although, of course, their occurrence from this cause is well known, but to certain minor complaints, such as sore-throat, boils, &c., where the water is probably also the *fons et origo mali*. There is no doubt, further, that a mere change in the quality and composition of the water consumed has an important influence, it may be favourable or unfavourable, upon the health. The question then arises, What shall the tourist or the individual seeking health and change of environment drink? He has been recommended on good grounds not to drink a strange water unless it has been boiled as in the preparation of tea and coffee. But these are not substitutes for the plain and pure water which he requires. The use of filters cannot be recommended unless their working is carefully managed and supervised by a trustworthy person, since with many kinds of filters it has been shown that this precaution has resulted in something worse than if it had not been applied. We think in this connexion that the germicidal effect of carbonic acid gas dissolved under pressure in water has been to a large extent overlooked. Mr. Hankin showed some two years ago that the carbonic acid gas in aerated water acts as a poison to the microbes, so that a bottle of aerated water which was teeming with bacteria when first made is generally perfectly free from active bacteria at the end of a week. The aerated water experimented with was bottled in India under a much higher pressure and temperature than is the case in England, and it is considered probable that in the Indian aerated water these conditions greatly aid the action of the gas. The results appear to lead to the conclusion that the virulence of the cholera, typhoid fever, and other microbes is thus destroyed and the risk of infection from carbonated water can be avoided if it is kept a week or more before use. These observations suggest that a carbonated *natural* mineral water is quite safe and trustworthy for drinking purposes, since previously to coming to the surface it is under an extremely high pressure of carbonic acid gas, to which pressure, furthermore, it has been subjected for a very long time. These are precisely the conditions, according to the researches alluded to, under which bacteria would be destroyed, and this effect may in some measure account for the advantages which a natural mineral water possesses over artificially aerated waters. Another important point connected with the safety of natural aerated waters for drinking purposes is that as a rule before being bottled the water is allowed to stand so that the iron may be oxidised and allowed to settle. This process not only makes the water clear and bright, but has an important purifying influence upon the water both in regard to organic and organised matters. There is no lack of supply of natural aerated waters on the Continent, where, also, they are comparatively cheap; and it would seem, therefore, that if these views be correct the visitor could confidently employ them for drinking purposes. At places of health resort at home, also, should any doubt be entertained on the same score, natural aerated water, it is reasonable to conclude, may be used with the same confidence. The subject is well worth attention in view of the approaching holiday season.

"PYGMY RACES OF MEN."

PROFESSOR FREDERICK STARR'S article on "Pygmy Races of Men" in the *North American Review* contains much interesting information regarding a curious and fascinating subject. The existence of pygmies has been known from the earliest times, and allusions to them are found in the writings of Homer, Herodotus, Aristotle, and Pliny. Although many of these allusions contain a fabulous element and are destitute of any scientific accuracy they at least represent a widespread belief which probably had some basis of fact as its foundation. In view of recent discoveries it is interesting to find that one of the most detailed and precise accounts of the ancient pygmies locates them in the deserts of Libya. De Quatrefages, quoted by Professor Starr, asserts that "the ancients had information more or less inexact, more or less incomplete, but also more or less true, concerning five populations of little stature, from whom they made their pygmies. Two were situated in Asia; the third toward the sources of the Nile; the fourth toward the East, but not far from the preceding; the fifth still in Africa, but entirely in the south-west." Modern travellers have confirmed these accounts, which have often been received with much incredulity. Schweinfurth found the diminutive Akkas at the court of Munza, King of the Monbuttu. Du Chaillu found the little Obongos in the Ashango country. Finally, Stanley put an end to all doubts on the subject and established beyond cavil the existence of various pygmy races in the interior of the African continent. The best known of the African pygmies are the Akkas, who are thus described by Stuhlmann writing so recently as 1893. He described them as "averaging 1·25 metres in stature, with light brown skin tinged with reddish-yellow. They have a round head, flat nose, prognathic face, and woolly brown hair. The beard is scanty, but a growth of light down-like hairs covers the whole body. They are characterised by a penetrating and disagreeable odour. In character they are cunning and cruel, with thievish propensities and many childish traits. They live in slight temporary shelters and dress scantily in leaves. They have no characteristic tattooing and no ornaments, but sometimes bore the upper lip. They are hunters and use the bow and poisoned arrows. Though sometimes cannibals, they are so but to a moderate degree." These pygmy tribes are generally found in isolated groups surrounded by populations of different ethnic origin and of normal stature. As might have been conjectured the pygmies usually occupy the less

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favoured districts. They are by no means confined to Africa, but are found in India, the Malacca peninsula, Annam, New Guinea, the Andaman Islands, and Japan. With some divergencies of type, they usually present four leading characteristics—viz., small stature, dark skin, woolly hair, and short, round skulls. The Mincopies, or pygmies of the Andaman Islands, represent a well-marked type. They are even shorter in stature than the Akkas. The head is very large, the body well formed and developed, the hands and feet small and delicate, the skin black, and the hair black and woolly. They are active and vigorous, but short-lived. Quite recently the existence of a race of dwarfs in the Atlas Mountains of Southern Morocco has been demonstrated. They are reported to be about four feet high, with a "mahogany" complexion and short woolly hair. They are active and brave, skilled at single-stick and in hunting ostriches, and have some knowledge of tinkering and cobbling. They live on milk and camel-flesh. Remains of pygmy races in Europe have been found in the Crimea, Kazan, Astrakhan, Sicily, Sardinia, near Naples, and elsewhere. Sergi, the Roman anthropologist, finds evidence of a pygmy population at present existing in Russia and Italy. His theory is that there was an early migration of pygmies from Africa northward into the Mediterranean islands, Italy, and Eastern Europe. The Nanos of the Pyrenees are only about four feet high. They have a red complexion, red hair, a round face which is as wide as it is long, prominent cheek bones, a flat nose, and eyes like those of a Chinaman. Opinions differ as to whether these Nanos are simply cretins or the last remnants of a vanishing race. Traces of pygmy races are not wanting on the American continent. The remains of ruined buildings in Yucatan and Central America are suggestive of pygmy origin. "Various writers have commented upon little Mexicans. In 1882 a band of little people invaded British Honduras. They were from four feet to four feet six inches in stature, and are said to be warlike, to make human sacrifices, to use the blow-gun and poisoned arrows, and to be makers of Panama hats." It is evident that the existence of pygmy races has passed out of the region of myth and fable into that of history and science. Our information regarding these strange races is still incomplete and inexact, but it is being steadily augmented and brought into line with accepted results in biology and anthropology. The facts already educed suggest many interesting reflections, but perhaps raise more problems than they solve. It seems clearly impossible to regard the pygmy races as owning a common origin, although their tendency to conform to a single fairly well-defined type is very curious. Is their case one of degeneration owing to some special circumstances of climate and environment, or do they represent a remnant still remaining in a stage of development long since left behind by the rest of the human species? We cannot say with certainty, but such questions may yet become capable of solution when our information on the subject has become more extensive and exact.

THE PLAGUE AT HONG-KONG.

IT is evident that the inability of the Hong-Kong sanitary authorities to eradicate the bubonic plague with which the colony has so long been afflicted must in some measure, at all events, be due to the numerous body of irregular practitioners, chiefly Chinese, who through ignorance or carelessness fail to report the cases of the disease that they are called in to attend. Any persons who choose to do so are apparently at liberty to practice medicine on the island, the law under ordinary circumstances being powerless to interfere; but good sometimes springs out of evil, and, as will be seen by the following extract from the *Hong-Kong Daily Press* of March 4th last, the existing epidemic has led to the infliction of well-merited (if inadequate) punishment upon one member of the unqualified fraternity. "A Chinese doctor named Wong San Chan, of 307, Queen's Road West, was charged at the Police-court yesterday with failing to report a case of plague. The defendant attended the patient, Ng Oi, on the first-floor of 14, Pokfulam-road, and when death from plague took place the doctor failed to report it. Dr. Atkinson, who examined the body, said there was a swelling in the deceased's neck. The defendant said he did not know the law, and further excused himself by saying that his patient suffered from fever and he did not see a swelling in the neck. The magistrate, Mr. T. Sercombe Smith, fined the defendant 25 dols. or a month's imprisonment." It is possible that with skilled medical assistance the hapless Ng Oi might have survived and be still in the enjoyment of his first-floor in Pokfulam-road, but manifestly the presumable Chinaman with a name like a chemical symbol never had the chance, for the nature of his disease was not even recognised by the ignoramus Wong San Chan.

"X" RAYS AS A DEPILATORY.

ALL sorts of physiological effects produced by "x" rays have been recorded since the Roentgen boom, but the announcement that they are likely to cause baldness is calculated to spread dismay amongst those who have been experimenting closely with the Crookes's tube. In a preliminary experiment to ascertain the possibility of photographing a bullet in the head of a child it was found that twenty-one days after the experiment all the hair came out in the region exposed to the "x" ray discharge. If the time that elapses before positive baldness was effected could be reduced what an incalculable benefit would Roentgen's discovery confer on shavers. Thus to remove the beard would only require the placing of a Crookes's tube for a few minutes over the chin before retiring to rest, when next morning the ordinary application of soap and water would complete the operation! Under these circumstances the "new barber" may not impossibly be one of the many outcomes of the "new photography."

"PSEUDO-GENERAL PARALYSIS."

IN a recent number of the *Journal of Mental Science* is reprinted an address on this subject delivered by Dr. Theo. B. Hyslop at the February meeting in Cambridge of the Medico-Psychological Association. Dr. Hyslop begins by disarming any criticism which might be offered with regard to the expression "pseudo-general paralysis." He explains that the term "general paralysis" as used at present tends to cover many cases which are not truly general paralyses, but really are cases of insanity associated with a form of paralysis which, strictly speaking, is only partial. Dr. Hyslop next considers the twofold meaning of the term "general paralysis" in extension and intention, and points out the limitations enforced upon it by the addition of the words "of the insane." The only exemplification, he remarks, is in the stage immediately preceding dissolution, and this he regards as the explanation of the wonderful truism that general paralysis is invariably fatal. But he proceeds: "As it at present stands, general paralysis would appear to be best defined as a progressive disease which begins anyhow but ends somehow." The different definitions of general paralysis are next considered and their insufficiency pointed out. He regards general paralysis as a disease in which there is progressive paralysis of all mental and physical functions terminating in complete dementia on the one hand and complete paralysis on the other. Strictly speaking, it is pointed out that th

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only condition answering to such a definition is death. He next explains that by the term "pseudo-general paralysis" he means to denote no particular disease, but to imply that there are certain forms of paralysis which are like general paralysis and which have been mistaken for it, but which in reality are partial paralyses, mainly cerebral with associated mental degenerations. The different forms of this pseudo-general paralysis are next alluded to. Thus alcoholic general paralysis from the symptomatic point of view is almost identical, or may be so, with true general paralysis, but the bodily and mental symptoms gradually disappear. The attacks may be repeated and ultimately such patients become alcoholic dements. Lead intoxication also gives rise to one of these pseudo forms. The chief difference is in regard to course and prognosis. The affection is an essentially curable one and has a tendency to recur under the influence of suitable conditions. Febrile diseases, such as typhoid fever &c., are occasionally followed by a condition simulating general paralysis, and so also is malaria, but in such cases the course of the disease is widely different from that in true general paralysis, and the pathology is consequently distinct. The relation of syphilis to general paralysis and the occurrence of a pseudo-general paralysis in connexion with syphilis are next alluded to and the difficulties surrounding the determination of this are fully recognised. Sunstroke he does not think an actual cause of general paralysis, but he thinks the sequelæ of sunstroke are not uncommonly mistaken for the symptoms of general paralysis. In conclusion, Dr. Hyslop submitted to the meeting two points for consideration: (1) whether the term "general paralysis" is entirely satisfactory and not merely convenient, and whether it is desirable to substitute another—e.g., progressive paralytic dementia; and (2) whether by viewing general paralysis as an entity we should be able better to avoid the danger of false prediction as to the course of the disease. The whole paper is a very interesting contribution towards the elucidation of many difficult points, and it brings out clearly the need that there is for the careful consideration of each case of supposed general paralysis on its own merits, and especially as regards antecedent conditions which may have causal connexion with the onset.

MR. REGINALD ACLAND ON THE HOSPITAL SATURDAY FUND.

THE recent address of Mr. Acland, as the chairman of this Fund, is worthy of the attention of all who are interested in the relation of the working classes to the medical profession on the one hand and to the great medical charities on the other. It is a courageous deliverance for one in Mr. Acland's official relation to the Hospital Saturday Fund. It does not hide the weak points in the administration of the Fund. It discloses faithfully a want of fervour in the council and even in the executive committee. The street collection—which we have always regarded as rather a waste of strength and which was smaller last year by £160 than the year before—Mr. Acland would give up entirely and would devote more effort to a whole-hearted attempt to place the workshop collection on a wider and more effective basis by securing, for this end, the coöperation of local committees. This collection showed last year an increase of £748. It is undoubtedly the feature of the Hospital Saturday Fund by which, as we have always maintained, it will be judged. But it is as yet far from satisfactory. The position of the working classes is improving much, and their wages more. Nobody will say that the sum of £18,000 from the workshops of London represents either the means or the obligations of the working classes to the hospitals of London, in which the highest skill and the best nursing are placed at their disposal. Mr. Acland will do well to continue, in the spirit of his able address, to urge his colleagues to assist in the development of this feature of the Fund. His remarks on the different principles on which the Hospital Sunday Fund and the Hospital Saturday Fund are distributed are worthy of consideration. We hail with pleasure the expression of his readiness as regards the Hospital Saturday Fund "to cease giving any marks at all for the attendance of Out-patients because of the enormous increase which is continually taking place in these attendances"; this increase he seeks to abate. With that object the Hospital Saturday Fund has given a fixed grant for the power of recommending patients for immediate treatment at the branches of the Metropolitan Provident Dispensary Association. We have not space to deal further with the various questions boldly dealt with by Mr. Acland. But we congratulate the Fund on having a chairman so faithful and so sound in his views of the proper functions of hospitals and dispensaries.

INFANT LIFE PROTECTION.

AT a recent meeting of the Select Committee upon the Infant Life Protection Bill Mr. A. Braxton Hicks gave important evidence. He said it was extremely difficult to prove criminal intent in connexion with deaths of nurse children, that bottle-fed children were more difficult to rear, and that foster-mothers required more supervision. In our columns for May 2nd we quoted a particularly horrible case of cruelty, and now another comes from Plymouth. A married woman who looked after three children in addition to her own was convicted of gross cruelty to two of them and sentenced to six months' hard labour. The magistrates *regretted they had not the power to order defendant to receive twenty-five lashes.* This is really excellent. We only wish the Legislature would pass a short flogging bill making it legal to flog those guilty of brutal assaults or wanton cruelty upon the bodies of (*a*) persons and (*b*) animals. Pain is the only method of appealing to some natures. Roughs of all classes and those who tear out horses' tongues, &c., would possibly think twice about their little games if they knew "the cat" would follow. But, alas! flogging is dying out, even at public schools.

LANDRY'S PARALYSIS.

IN the *American Journal of the Medical Sciences* for April Dr. Diller and Dr. Adolph Meyer relate a case which, if incomplete in some respects, is of considerable interest as furnishing an example of an obscure and not very usual condition. The patient was a married woman aged fifty-three years who was admitted to hospital on account of loss of power in the legs which had come on suddenly about ten days previously. The loss of power was not absolute, but gradually became more marked, and a week after admission she began to lose power in the arms as well, and the control of the sphincters of the bladder and rectum became impaired. By-and-bye bulbar symptoms were superadded—difficulty in phonation and deglutition—so that she had to be fed with the stomach-tube, and she died from respiratory failure about three months after the onset of the first symptoms. The psychical condition remained unimpaired until just towards the end; there was no impairment of sensation in any way, both knee-jerks were lost, and there was swelling of both knees and pain was caused in carrying out passive movements at these joints. There were no muscular wastings, no changes in electrical reaction, no fever or pain more than that mentioned in connexion with movements at the knee-joints, and no tendency to trophic disturbance. The case in its clinical features, as the writers point out, differs only from the classical picture of Landry's paralysis in the affection of the sphincters and the somewhat prolonged

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course of the malady. Only the spinal cord and nerve roots were examined microscopically. In the grey matter the anterior horn cells appeared normal except that they were deeply pigmented. The white matter was changed in the crossed pyramidal tracts throughout the cord, the medullated fibres in these tracts being lessened in number and the neuroglia increased, and in one part of the dorsal region the posterior columns were similarly affected. Unfortunately the peripheral nerves were not available for examination, so that the morbid anatomy of the case remains in great part uncertain. At the conclusion of the recital of their interesting case the writers give a *résumé* of the different conditions, clinical and anatomical, which have been recognised as constituting "Landry's paralysis," and from a consideration of these they feel justified in including their case in that group.

UNIVERSITY COLLEGE HOSPITAL.

A FESTIVAL dinner in aid of University College Hospital was held in the King's Hall at the Holborn Restaurant, London, on Wednesday, May 6th, when His Royal Highness the Duke of Cambridge, K.G., presided. Replying to the toast of "The Houses of Parliament," Lord Reay took occasion to point out the advantages which would accrue to the nation if the medical profession were represented in the Upper Chamber. The toast of the evening was proposed by the Duke of Cambridge. He called attention to the alarming decrease in the income of the hospital. Whereas in 1894 the subscriptions received amounted to £2007, last year they only reached the sum of £1978, and the same decrease was noticeable in both donations and legacies. It may be, as the Duke said, that there is a tendency on the part of the benevolent to run after new institutions and leave the old ones to take care of themselves. New institutions are necessary with a growing population, but old ones, especially those which can show a record like University College Hospital, should not be neglected. At the close of last year the debt reached a total of £14,765, an increase of nearly £3000 upon the previous year. It is gratifying to note that donations amounting to £1444 were announced by Mr. Newton H. Nixon, the secretary, but a great deal more is wanted if the institution is still to carry on its beneficent work untrammelled by debt.

DEATHS UNDER ANÆSTHETICS.

A DEATH under chloroform occurred on Feb. 26th in the Royal Infirmary, Bristol. We are indebted for full notes to Mr. Maurice Barber, junior house surgeon. The patient, a lad aged fourteen, suffered from recurrent appendicitis, for which an operation was to be performed under chloroform. The patient had taken chloroform successfully in November, 1895, and on the present occasion was carefully examined before the anæsthetic was administered. About twelve minutes after the commencement of the administration and five minutes after the operation had been in progress the boy became pale. The pupils were contracted and reacted to light. Chloroform was stopped and a few minutes later the patient became blanched, the pupils dilated, while respiration grew shallow. No pulse could be felt in the facial artery. The head was drawn over the end of the table and artificial respiration and other measures for resuscitation were practised. The patient breathed at intervals for ten minutes. After this respiration almost ceased, although occasional inspiratory gasps occurred for fifteen minutes longer. Artificial respiration was kept up for over an hour. No heart sounds were to be detected. After the first partial dilatation of the pupils a semi-contraction occurred, the pupils being of unequal size, but this was followed by medium dilatation. Besides artificial respiration inversion and electrical stimulation of the heart were practised. Ether and strychnine were injected hypodermically. Chloroform was given by a medical man who has an experience of 700 cases. A Skinner's frame was used and from two and a half to three drachms were administered. The mask was held one inch and a half from the face. The necropsy showed dilatation of the right ventricle with thinning of the walls; the lungs were markedly emphysematous; and tuberculous deposits were found upon the abdominal viscera. The operation—an abdominal section—was commenced but not completed, but there does not appear to have been any unusual amount of shock attendant upon its performance. — The death of a patient under chloroform is also reported from the Cumberland Infirmary, Carlisle. The patient, a lad aged eighteen, was kicked in the thigh in February and an operation was performed under chloroform. Subsequently in April, as a further surgical proceeding was necessary, chloroform was again administered. A thorough examination of the patient was made on each occasion and no organic visceral disease was detected. When the operation was practically over the patient suddenly became very pale and died. This was twenty minutes after the first chloroform was inhaled. The account furnished to us by the house surgeon does not help to explain the sad occurrence. The death appears to have been caused by the chloroform and to have been due to syncope.— We have been favoured by Dr. Smart with careful notes of a death under chloroform which recently took place at the workhouse hospital, Toxteth. The patient, a dock labourer aged thirty-two, was upon admission much collapsed and had been suffering from intestinal obstruction for ten days. The pulse was irregular. He was admitted into the wards, and when operation was decided upon chloroform was given, although it was intended to maintain the anæsthesia when once obtained by ether. Chloroform to the extent of a drachm was given when violent struggling took place. The man suddenly sat up and then fell back dead. The necropsy showed the heart to be somewhat dilated. This case again shows the great danger to the patient of struggling. The muscular tension not only mechanically interferes with the circulation and unduly taxes the heart, but fixes the thorax and either renders respiration impossible or sorely hampers it. The quantity of chloroform given was extremely small.

SALE OF BAD MEAT.

WE have again this week to comment upon more cases of this description in which convictions have been obtained and fines inflicted. Two charges were brought against a butcher of Birmingham, one for having on his premises three carcases of veal which were unfit for food and another for having bad meat hanging in his shop. The carcases of veal were said to be black and yellow in colour and covered with slime, while the meat taken from the shop was decomposed and gave off a very bad smell. The defendant was fined £20 and costs in each case, with the alternative of two months' imprisonment. Another case, also at Birmingham, occurred, where meat which was green from mould was found hanging with healthy meat, presumably for the purpose of selling the good and the bad together. Here the defendant protested that he had not put the bad meat under the counter because of the rats which pulled it about, but the magistrates failing to see the matter in the same light, imposed a fine of £10 and costs. A third case occurred at Clerkenwell, where a dealer was fined £20 for depositing at the premises of a salesman the body of a heifer which showed traces of having suffered from pleuro-pneumonia. It is to be hoped that a series of heavy punishments will in some measure stop the sale of putrid meat, which is apparently an evil that is growing in extent and no doubt affords a substantial profit to the vendors. It is not only a business fraud in the sense that a damaged article is sold for a good one, but bad meat is liable to produce serious illnesses in those who are unfortunate enough to eat it. In the best interests of public health the most stringent means

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should be used to keep such practices down. In connexion with this subject Dr. Sedgwick Saunders, the medical officer of health for the City of London, states that in 1882 the total meat supply to the Central Markets alone was 211,461 tons, whereas in 1895 it was 347,283 tons, an increase of 64 per cent. In 1882 there were 175 tons condemned, and in 1895 no fewer than 599 tons, an increase of 242 per cent., while in the first three months of this year 127 tons were seized. The inspection of the huge quantities of meat sold is far too much for the powers of the present number of inspectors, with the result that the poor are often imposed upon by the sale of inferior and unsound meat. On the recommendation of the medical officer of health the Commissioners of Sewers have determined to increase the staff of meat inspectors to six, the new officials commencing at a salary of £200 a year each.

THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY.

WE have already given an abstract of the annual report of this useful society[1] which was read at the annual meeting on May 1st, and on which the society may be congratulated. After this meeting the annual dinner of the society was held. Mr. Hutchinson, president of the society, was in the chair and was supported by various visitors, including Mr. Warburton, the counsel of the society. The dinner was the more interesting by reason of the presence of ladies. Mr. Hutchinson, in proposing "Prosperity to the Society," dwelt with feeling on the efforts of the society to bring about an honourable amalgamation, so much to be desired, with the sister society. Dr. Glover and Mr. Warburton returned thanks for the visitors. Pleasant music was discoursed and all present seemed to enjoy the entertainment. The toast of the chairman's health was proposed by Dr. Paramore and seconded by Dr. Heron.

SERUM TREATMENT OF DIPHTHERIA IN CRACOW.

DR. STAPA has presented to the Cracow Medical Society a report of the results obtained by the serum treatment of diphtheria in the Children's Hospital of that city. During the year 1895 the number of children subjected to it was 258. Of these the mortality was 22 per cent. This compares very favourably with the mortality in the ten previous years, which was as high as 56·3 per cent., there being 709 deaths out of a total of 1354 patients who were treated by other methods. Various serums were employed—Behring's, Roux's, Aronson's, Buivid's, and Paltauf's. Laryngeal croup occurred in 165 cases, and a rash having the appearance of scarlet fever and lasting from two to sixteen days in fifty-eight cases. It was noticed that certain samples of serum always produced rash. No effect on the occurrence of albuminuria by the serum could be shown. There were seven cases of return of the disease after from ten to twenty days and three cases in which it returned after an interval of from two to three months.

THE DOOM OF THE SILKWORM AND THE HORSE.

WE know that that useful beast of burden and of draught—the horse—is threatened with expulsion from our highways by the introduction of auto-cars, and now it would seem that the silkworm will soon be dispensed with as a source of silk. We wonder what law of evolution it is which just now appears to be bringing about these drastic changes and threatens to lead to the extinction of two most useful members of the animal kingdom. Silk in future is to be made from wood, and thereby a new British industry is to be installed in Lancashire which is calculated in a measure to add to the commercial prosperity of that district which has been so much menaced of late. It appears from an account contained in the *Times* of May 2nd that the process consists in nitrating wood pulp and afterwards submitting it to pneumatic pressure so that ultimately filaments are obtained of which no fewer than ten are required to make up the thickness of a single human hair. The small orifices through which the liquid matter is forced are known as "glass silkworms." After it is drawn out into filaments and passed through a process of weaving the artificial silk is denitrified and it is then rolled to produce lustre. The invention cannot fail to have an important bearing on modern life and custom, and it may not be without some influence in deciding the momentous question which was seriously discussed in our columns some years ago as to the desirability and rationality of the medical man continuing to wear a tall silk hat.

[1] THE LANCET, May 2nd, 1896.

A TERRIBLE COLLIERY DISASTER.

"OVER sixty coffins have been ordered by the colliery company" is the gruesome announcement made in an account of the colliery explosion near Leeds in the daily papers of Monday last week, and probably the actual number of lives lost was more than sixty. The harrowing details of the disaster need not here be recounted—suffice it to add that the explosion appears to have been one of terrific and exceptional force. Yet we learn that the mine was considered so safe that it was worked with naked lights and that gas was practically unknown in the workings. The cause of the explosion is, therefore, surrounded with considerable mystery. We do not know, however, and we can gather no information as to whether the mine was dry and dusty, and if so whether the precaution of damping was taken. Then, again, there is no evidence as to whether some high explosive or gunpowder was in use for shot-firing purposes. Evidence on this latter point is of special importance since the use of high explosives in the place of gunpowder greatly limits the risk of explosion in dry, dusty, and fiery mines. We trust that the colliery owners will be able to satisfy the Home Office on each and all of these points. It is a significant fact that on the very day of the disastrous explosion a colliery warning was issued directing the attention of miners to the change which had taken place in the atmospheric conditions over the British coal fields and "during Wednesday night an anti-cyclone of considerable size and intensity began to affect the coal country, the barometer rising more or less decidedly everywhere." Is any heed paid to these colliery warnings?

LONDON POST-GRADUATE COURSE.

THE opportunities afforded by the London Post-graduate Course have been, as our readers know, largely used by members of the profession desirous of acquiring a practical knowledge of the more recent advances in medical science, and the programme now unfolded for the coming season promises well. Instruction will be given at the following hospitals and institutions:—The Royal London Ophthalmic Hospital, Moorfields (diseases of the eye); the Hospital for Diseases of the Skin, Blackfriars (skin diseases); Bethlem Royal Hospital for Lunatics (mental diseases); the London Throat Hospital, Great Portland-street (diseases of the throat, nose, and ear); the Bacteriological Laboratory, King's College (pathogenic organisms); the Central London Sick Asylum, Cleveland-street (clinical lectures); the Parkes Museum, Margaret-street (lectures and demonstrations in hygiene); and the British Institute of Preventive Medicine, Great Russell-street (chemistry and bacteriology of urine). The teaching will be, as far as possible, of a practical character, including demonstrations of selected cases and lectures on

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the diagnosis and treatment of disease. There will also be instruction in the use of the microscope, ophthalmoscope, laryngoscope, and aural and nasal specula. The hours of attendance are all in the afternoon, at various times, from one o'clock to eight. The summer term extends from May 4th to June 29th, and the winter term from Oct. 5th to Nov. 27th. The fees for attendance at any single course are £1 1*s*., £2 2*s*., or £3 3*s*., according to the number of lectures and demonstrations. Inquiries and applications for cards of admission should be addressed to the secretary, Dr. J. Fletcher Little, 32, Harley-street, W.

MEDICAL CERTIFICATES AND THE LONDON SCHOOL BOARD.

ON Wednesday last Dr. Glover, Dr. Bridgwater, and Dr. Colcott Fox had an interview of some length with the Attendance Committee of the London School Board with a view to the removal of the friction which unhappily prevails between the profession and the Board in reference to medical certificates. The deputation was most courteously received by the members of the committee, who showed a desire to meet as far as possible the wishes of the profession. They will announce in a few days how far they can do so.

THE May dinner and annual meeting of the Aberdeen University Club (London) will be held at the Holborn Restaurant on Wednesday, May 20th, at 7 P.M. Dr. Nicolson, one of the Lord Chancellor's Visitors in Lunacy and late Superintendent of Broadmoor Asylum, will take the chair, and we are certain will adequately discharge the duties. It is hoped that he will be supported by a large gathering. Members wishing to attend are requested to communicate with the hon. secretaries, Mr. J. Gerald Laing, 2, Brick-court, Temple; and Dr. James Galloway, 21, Queen Anne-street, W.

AMONG the fifteen candidates whose names are announced as having been selected by the Council of the Royal Society for recommendation for election into the society are two members of the medical profession—Dr. F. W. Mott, Assistant Physician to Charing-cross Hospital, and Mr. Charles Stewart, Professor of Comparative Anatomy and Physiology and Conservator of the Museum of the Royal College of Surgeons of England.

A GENERAL monthly meeting of the members of the Royal Institution was held on the 4th inst., Sir James Crichton Browne, M.D., F.R.S., Treasurer and Vice-President, presiding. The following medical men were elected members:—Mr. J. H. Badcock, M.R.C.S. Eng., Dr. W. J. Gow, and Dr. Thomas Oliver, F.R.C.P. Lond.

DR. F. J. WALDO, medical officer of health to the Middle and Inner Temples, has been called to the Bar. On the same day Dr. William M. Leslie and Dr. Sidney R. Dyer were called to the Bar.

MR. A. A. KANTHACK, M.D. Lond., has been approved as Deputy for Dr. Roy, the Professor of Pathology in the University of Cambridge, for a period of three months at a stipend of £120.

WE understand that Sir William Roberts, M.D., F.R.S., has been appointed to succeed Dr. Wilks as representative of the University of London in the General Medical Council.

THE annual dinner of the West London Medico-Chirurgical Society will be held at the Café Monico, Piccadilly-circus, on Wednesday, May 20th, at 7.30 P.M.

Pressure on our space has compelled us to omit the usual weekly instalment of the biography of THOMAS WAKLEY, *the Founder of* THE LANCET.

THE NILE EXPEDITION.

SINCE our last report intelligence has been received of a cavalry action at Akasheh—the first fight of the campaign. Some squadrons of Egyptian cavalry attacked, about four miles from Akasheh, a mixed force of Dervish horse and foot numbering altogether between 1200 and 1300. The Dervishes were completely defeated and made so hasty a retreat that the Soudanese infantry battalion supporting the Egyptian cavalry had not an opportunity of taking part in the encounter. The Egyptians behaved uncommonly well, having charged the Dervishes with pluck and determination, showing that their previous military preparation and training had not been thrown away and that under the leadership of English officers they were capable of giving a very different account of themselves to what they had done on most previous occasions. The heat during the action is described as having been terribly trying to the troops. The thermometer registered 116° F. in the shade, and in the open desert, owing to the radiation from the sand and rocks, it is stated that the temperature reached 150°. The special correspondent of the *Standard* gives some illustrations of the drying effects of the heat on all sorts of stores at Wady Halfa in causing their shrinkage, amounting in some cases to 20 per cent. Onions lost a thousand pounds out of five thousand; meat slaughtered at seven in the morning and packed in wet cloths lost 15 per cent. by seven the next morning and became unfit for food. The baking of bread is a great difficulty; native bakers have taken over this work for the troops in consequence of the men with the force being unable to stand it for more than a short time. Considering the intolerable heat the health of the expeditionary force and the energy and activity that are being displayed at all the stations on the Nile are remarkable.

There appears to be ample accommodation for the troops at Wady Halfa and elsewhere. Time is an essential element in making proper arrangements, and the comparative inactivity of the Dervishes up to the present has enabled the military authorities to make their preparations. The more rapid a campaign the greater is the strain, of course, upon all departments. According to all the reports that have been received in this country the amount of hospital accommodation provided for the troops is ample and the arrangements satisfactory. With the exceptional heat that prevails (tempered happily by a breeze as a rule), the sand-storms, the toughness of the meat, and the monotony of the diet, it is only to be expected that there will be a good deal of sickness. The heat at Wady Halfa is very great and is likely to continue to be so for some time. There has already been a death from heat apoplexy; still the troops are so far bearing the effects of the climate better than might have been anticipated. The excitement and novelty of the scene, the work in which they are engaged, and the success that has hitherto attended their labours have all tended to keep them in excellent spirits. The telegraph to Akasheh is completed and in operation, and the railway is progressing, but the work has proved rather more tardy and difficult than was anticipated. The Camel Corps is stated to be now amply provided with camels, and according to the latest accounts the wounded at the late fight are doing well. Every effort is being made, we are glad to say, by the erection of ice-making machinery to provide the troops with ice as far as possible.

LITERARY INTELLIGENCE.—A new work on Descriptive and Practical Histology has been written for the use of students by Mr. Arthur Clarkson, M.B. Edin., formerly demonstrator of physiology in Owens College, Manchester, and in the Yorkshire College, Leeds. The publishers will be Messrs. John Wright and Co., Bristol, and Messrs. Simpkin, Marshall, Hamilton, Kent, and Co., London. It will consist of about 600 pages with 174 coloured original illustrations, and will be divided into seventeen chapters in which the student will be taken tutorially over the various parts of the subject and instructed in the methods of preparation.

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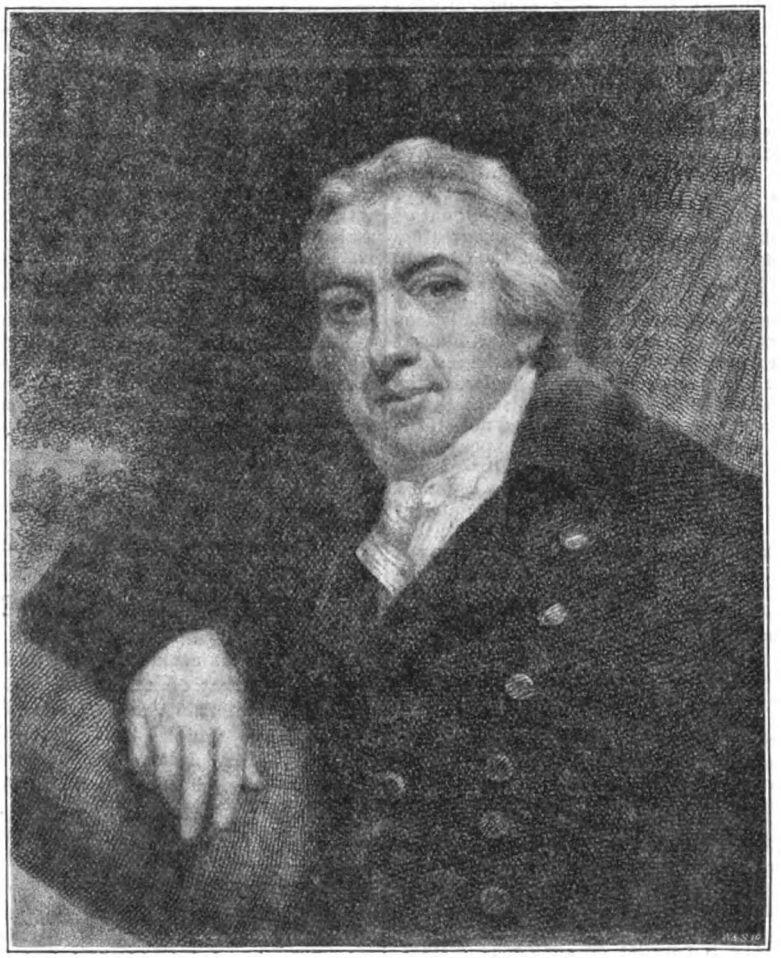
JENNER AND HIS WORK.

IN a recent *brochure* by a prominent anti-vaccinationist it is seriously suggested that one reason for giving up vaccination is that, as regards its prevalence, small-pox is now a very inconsiderable disease and contributes a mere fraction to the total death-rate of this country. In advancing this argument the anti-vaccinationist in a single sentence shows how illogical even a well-educated anti-vaccinationist can be, and at the same time in stating the fact on which the suggestion is based he pays an unwitting compliment to the author of vaccination. It is unquestionably true that small-pox in the end of the nineteenth century contrasted with small-pox as it was in Jenner's time has diminished from the proportions of a giant to those of a dwarf, and for this diminution it is not possible to find any explanation other than vaccination which will meet all the facts of the case. If it be suggested that the diminution in small-pox was owing to the cessation of the practice of variolous inoculation, the reply is not far to seek. It is not at all certain that artificial variolation did increase the total amount of "natural" small-pox in the country. It is possible indeed to argue for quite the opposite view, and many competent observers, who were well acquainted with the influence of small-pox inoculation both in large cities and in rural districts, had no doubt whatever, judging from their own knowledge of local facts, that the practice had greatly diminished the total mortality from the disease. In places, too, where variolation had never been more than an experiment but where small-pox largely prevailed the introduction of vaccination was followed by the same kind of diminution in small-pox that occurred in other places where the spread of vaccination was coincident with the shrinking of the older practice of variolation. If it be alleged that it is to sanitation and not to vaccination that we owe the fall in small-pox, the reply is manifold. Sanitation cannot account for the fact that whereas before the introduction of vaccination in a given community four children died of small-pox in the first half year of life for every one child that died of it in the second half year of life, but that when in this community vaccination was made compulsory at the age of six months the proportion of deaths in the second six months of life fell so amazingly that instead of being four times greater than for the first six months it became four times smaller. Sanitation cannot account for the fact that in the last century small-pox was a disease of childhood, but that when vaccination came into vogue the pestilence at once ceased to prevail among the vaccinated children, while later, after these children had become adults, it began to reassert some part of its sway among them. Sanitation cannot account for the fact that in places where there was no sanitation the introduction of vaccination was followed by the usual striking diminution in the prevalence of small-pox. Sanitation cannot account for the fact that in hospitals at a time when the only protection which nurses attending to sufferers from typhus fever had against typhus fever consisted in a previous attack of the disease, and when the only protection that probationers in typhus fever wards could hope for was a non-fatal attack of that fever—that at this time their sister nurses in the small-pox wards, living and breathing in an atmosphere saturated with the poison, remained free from attacks of small-pox, though, indeed, an attack of typhus fever was not unknown amongst them. Nor can sanitation account for the fact that among small-pox nurses of the present time the many who are revaccinated remain free from danger while the few who by some mischance escape revaccination are forthwith attacked by small-pox, nor for the fact that in the small-pox wards at Leicester, where anti-vaccination was so popular a cult that some half-dozen of the nursing staff refused revaccination, all but one of the half-dozen were attacked by small-pox and one had to pay the death penalty for her temerity; while of the sixteen or thereabouts who submitted to revaccination not one had also to submit to small-pox.



EDWARD JENNER, M.D., F.R.S.

(From a painting by J. R. Smith, R.A.)

It is in very truth to Jenner and to vaccination that the nineteenth century owes its freedom from small-pox. In the present day we can have little appreciation of the difficulties with which he had to contend before he could present to the world his new system of small-pox prevention. He was a busy practitioner in a wide rural district, subject to all the distractions of general practice and of social duties, and with his scanty leisure broken in upon and interfered

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with by the sudden calls to which every country doctor is liable. He was quite unprovided with the laboratories and with all the apparatus that make exact research so possible and even so convenient in our own time. Even half a century later so able and persevering an observer as Robert Ceely, with the way already paved for him by Jenner and other less distinguished workers, found enormous difficulties in his researches, carried on amidst the filth and darkness of country cowhouses. For Jenner, however, there was little or no assistance to be obtained from anything that had gone before. Other practitioners besides himself had seen good reason to believe in the traditions of the dairies, but none of them had ever ventured seriously to grapple with the subject as one that could be made generally useful in the interests of mankind. In these days the term cow-pox was popularly used to mean anything and everything in the way of eruption, or excoriation, or abrasion, or fissure, that could attack the teats and udders of cows. Even after Jenner had satisfied himself that all cow eruptions were not cow-pox, and that it was cow-pox and cow-pox alone which had the peculiar anti-variolous power, and after he had published his "Inquiry," we find a veterinary surgeon, apparently of good standing, describing in print as cow-pox a teat affection which obviously was not cow-pox and which, correctly enough, the veterinary surgeon opined to have no power against small-pox. We have further to recollect that Jenner had, to begin with, no knowledge of the various operative details which we, in the present day, know to be absolutely essential to the proper carrying out of vaccination. From the cow's teats there was the greatest possible risk of taking along with the lymph of the cow-pox itself all manner of extraneous matter, the result of filth in the lairs, of dirt on the milker's hands, and of what Ceely long afterwards described as "the merciless manipulations of the milkers." So, too, he had to decide for himself whether matter either from the cow's teats or from the vesicles of a vaccinated arm should be used in the vesicular, or the pustular, or the ulcerative stage. Before him also there was the fact that his experiments had to be conducted not on the lower animals, but on human beings, and that the possibility of mishap made very weighty the responsibility of the operator. With such material as Jenner had to begin by using it is not surprising that at first he called the inflammation surrounding the vaccine vesicle "erysipelatous" rather than erythematous, and that he gave careful instructions as to the prevention and treatment of possible ulceration following local disease. His theory that cow-pox itself had its origin in an equine disease led to considerable doubt and difficulty among some of his *confrères*. Here, too, there was a popular and all-embracing name "horse-grease" to be contended with, and, as in the case of the bovine disease so with the equine, it was only one particular malady among several that went under the same name that had anything to do with cow-pox or small-pox. One result was that in London endeavours were made to produce cow-pox by inoculating material from some unhealthy or erysipalatous condition of the heels of a horse and that the failure of these attempts led to doubt as to the very genesis of the Jennerian system. Two or three years later, however, Loy of Whitby published his observations, which went to show that Jenner's fault was rather in the use of the name than in the reality and in the supposition that horse-pox was necessarily the parent of cow-pox rather than merely a parallel or analogous disease. It is not easy in these days to realise the fact that when vaccination began to be practised in London any weight could be attached to the opinion of John Birch of St. Thomas's Hospital who held that "small-pox was a merciful provision on the part of Providence to lessen the burthen of a poor man's family," or of Dr. Rowley who declared that "the small-pox is a visitation from God; but the cow-pox is produced by presumptuous man: the former was what heaven ordained, the latter is perhaps a daring violation of our holy religion." Nor can we read without a smile the record of that famous consultation between Rowley and Moseley, regarding which Rowley reports: "Dr. Moseley ..... saw this case of the ox-faced boy by my desire. He observed to me that the boy's face seemed in a state of transforming and assuming the visage of a cow." Yet 100 years ago all these assaults on vaccination had their own weight. The proposal to introduce by way of inoculation into the human frame any matter from the body of a lower animal was entirely new. The cow-pox itself, moreover, especially in its differences from the yellow-pock and the blister-pock or white-pock and the other diseases with which it had been confused, was quite unknown to the profession at large. Jenner's "golden rule," so early and so clearly formulated by himself and so important for safe and successful vaccination, to take matter from a vesicle only when it is clear and limpid before it has reached the pustular stage and before the surrounding areola has begun to appear, was openly scouted by at least one of the principal vaccinators in London. Through all these difficulties and through many others which it would take too long to detail here Jenner had to fight his way. Sometimes he was inclined to despair, but his absolute certainty and knowledge of the value of vaccination spurred him on to continued endeavour, and his strong and sagacious grasp of every essential principle of the practice enabled him to deal with every fresh objection as it arose and with every fresh blunder as it was perpetrated. It was not given to Jenner to know all that we now know about vaccination. He hardly lived long enough to enable him to appreciate the need for re-vaccination. It was years after his death, when the children vaccinated in the early years had grown to be adults, before that essential came to be fairly recognised. Similarly in the early years experience as to the importance of sufficiency of amount of the local disease had not accumulated, and it was left to another generation to formulate the rule that the best results of vaccination can only be obtained by operating both efficiently and sufficiently. But in all other respects Jenner's knowledge of the essentials of vaccination was remarkably thorough, and in our own day little has been added to it. It has fallen to the lot of no other single member of the medical profession, or perhaps even of the human race, to be the direct means of saving so many lives, so much disfigurement, and so much concurrent grief and misery. The thanks of the world are due to-day to the quietly thinking and quietly working village practitioner in Gloucestershire, and, to quote the words of Sir John Simon, "the close of the eighteenth century, which had much to darken it, will be remembered to the end of human history for the greatest physical good ever yet given by science to the world."

THE ANNUAL REPORT OF THE SANITARY COMMISSIONER WITH THE GOVERNMENT OF INDIA FOR 1894.

[FIRST NOTICE.]

AMONG the numerous official reports rendered to different Governments that of the Sanitary Commissioner with the Government of India occupies—and in our opinion very deservedly so—a high place. The voluminous character of the Sanitary Commissioner's reports, the number of statistical tables, and the amount, as well as the variety, of material they contain are, no doubt, sources of difficulty and embarrassment to the reader; but it must be borne in mind that the facts and figures connected with the vast populations with which they deal may without hyperbole be termed colossal. The text of the report itself is nevertheless, and apart altogether from the tables and details required for official reference, always valuable and instructive, and the present volume strikes us as a very able one. It contains an amount of information, with an analysis of the results of recent researches and theories of disease, not to be met with elsewhere. A note at the commencement of the volume indicates that these annual reports will probably undergo some modification in future, for it states that the recommendations of the Army Sanitary Commission as to altering and reducing the number of the tables were received too late to be acted upon in the case of the present report.

In the case of so vast a country as India, with its imperfect systems of registration and with the large amount of disease that either escapes observation altogether or at least is subjected to no scientific observation, it may be urged that the record of figures and alleged facts is quite valueless and the labour in collecting them simply a waste of energy. But such is certainly not altogether the case, for we possess in our army and in our gaol populations scattered over different parts of India accurate and reliable tests and gauges of the medical events of any given year. The European

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army in India and the native army of that country, though to a less extent, together with the inhabitants of the gaols, amount in the aggregate to a very large population living under conditions that are well known and under skilled medical surveillance. Moreover, as regards the epidemic and endemic diseases of India, these are commonly attended with some familiar features or phenomena that cannot altogether escape the notice of the least observant and usually declare their presence also by an increased mortality; and data gleaned from native races can therefore be compared with, and corrected by, those afforded by the military and gaol communities with a similar environment and living in their midst.

The urban and rural registration of births and deaths, if very far indeed from perfect as regards the native population, is still not altogether illusory and it is improving year by year, and the presence of an unusual amount of disease is soon bound to declare itself and be recorded. While we have but little sympathy with those who are content to point to what has been already done in India and to oppose further progress as if we had reached a stage of finality we have, if anything, still less sympathy with those self-satisfied, irresponsible people who make the East a touring ground for the cold weather and regard everything which differs from the Western standard of civilisation as wrong and requiring to be radically and promptly changed, regardless of the traditionary customs and feelings of the people, political expediency, and financial considerations. But to come to the subject of the report itself. Section I. deals with the meteorology of the year and gives a summary of the meteorological phenomena month by month. Section II. treats of the European army in India, and it contains much that merits and should receive grave attention. The year 1894 was a wet and unhealthy one, and the number constantly sick per 1000 was unusually high. Venereal diseases caused 34 per cent. of the total sickness and ague 27 per cent.; and of the total deaths enteric fever caused 36 and cholera 13 per cent. The total death-rate in 1893 was only 12·61, whereas in 1894 it was 16·07 per 1000 of strength. The following table gives the percentages respectively of enteric fever, hepatitis, dysentery, and pneumonia in the total deaths of each presidency in 1894.

—	Bengal.	Madras.	Bombay.
Enteric fever	36·5	30·7	36·1
Hepatitis and hepatic abscess	6·6	10·2	10·8
Dysentery	3·9	5·5	2·1
Pneumonia	5·4	3·9	2·1

The prevalence, and unfortunately increasing prevalence, of venereal diseases in the European army of India constitutes a most serious cause of inefficiency, and it is not easy to exaggerate the magnitude of the evil from whatever point of view it is regarded. The immediate effects of venereal disease are to render, we are told, 3062 men daily ineffective; but it is impossible to say how many of these men become affected with secondary syphilis. The returns only show the admissions into hospital, and one case may, of course, represent several admissions. A table at p. 43 of the report, prepared by Brigade-Surgeon-Lieutenant-Colonel Exham, and placed at the disposal of the Sanitary Commissioner by the Principal Medical Officer of Her Majesty's Forces in India, brings out the actual condition of the army as regards venereal disease in a very forcible way. It reveals the fact that of the 70,642 British soldiers present in India in July, 1894, only 37 per cent. had never suffered from venereal disease, while 63 per cent. had at some period of their service contracted it in one form or other. The ratio of admissions for these diseases in the army of India—511·4 per 1000 in 1894—is vastly higher than that of most of the Continental armies and higher than the ratios of our troops in other British possessions. There are no means of comparing the figures with those relating to the civil adult male population; but, judging from the results of inquiries by Mr. Acton in the surgical divisions of our larger hospitals in London, there is reason for believing that the disease is far more prevalent than is generally believed.

As regards the European military population of India a return to a system of long service and increased facilities for marriage seems impracticable, and the influence of moral and physical efforts—such as increased cleanliness and athletic amusements—is inadequate to cope with the evil. That the compulsory lock hospital system in India, notwithstanding all the difficulties and defects that attended its working, nevertheless did much good cannot, we think, be doubted; but public opinion and the House of Commons will not apparently tolerate new and more stringent legislation in this direction, and it is, moreover, alleged that the experience of the cantonment lock hospital system in India failed to effect that amount of reduction in the prevalence of these diseases which its advocates hoped for or the cost incurred warranted the Government in expecting. A system of voluntary lock hospitals in India on the one hand, and the provision of healthy occupations and recreations for the soldier on the other, have, however, proved inoperative. The question comes, and comes with pressing force, What is to be done? The powers of the military and police authorities to exercise a greater surveillance over illicit prostitution may be enlarged, and various things may be done no doubt in this and similar directions, but we can scarcely believe that these will form an effectual remedy. The authorities in India should certainly have the power of compelling diseased women to submit to treatment in hospital or to leave the cantonment. They would do so in the case of any other infectious disease, why not in this? A woman under such circumstances is surely an acknowledged source of danger, and of very grave danger to all who may consort with her. If the evil continues, as we fear it will, the only practical method of coping with it, as it seems to us, is by the re-establishment of a compulsory lock hospital system and by legislative enactment of some kind, carried out and applied even more systematically and stringently than before.

Some method could surely be devised by which these unfortunate women could, with every regard to humanity and considerate kindness, be treated and be prevented from spreading infectious diseases among our troops. We recognise the difficulties, but do not believe them to be insurmountable; in any case the duty of striving to limit the spread of these contagious diseases by any means in our power seems clear, and we cannot go on shirking it for ever.

We hope in our next article to deal with various other points, and especially with the summary analyses of the different views and theories at present held in regard to some of the more prevalent diseases endemic to India which are set forth in the report under review.

ANNUAL REPORT FOR 1894 OF THE MEDICAL OFFICER OF HEALTH OF THE ADMINISTRATIVE COUNTY OF LONDON.

II.[1]

WE now come to the consideration of that part of Mr. Shirley Murphy's report which treats of the influence of school attendance on the diffusion of infectious diseases. The general question of measles fatality in London has already been discussed in our notice of the Registrar-General's annual summary for 1894. It is evident, however, from the report now before us that in many London districts measles prevalence has seriously affected the regularity of school attendance, and consequently has caused much anxiety to the county medical officer and his staff. It will be remembered that in 1892 compulsory notification of measles throughout London had been suggested to the County Council by the London School Board; the former authority, however, appear to have been unwilling to incur the responsibility of so heavy an expenditure pending completion of the inquiry which the Local Government Board had undertaken with a view of determining the value of notification as a means of controlling the spread of measles in urban communities. It is surprising, however, to what extent the attendance, more especially in the infants' department of elementary schools, is reduced during an epidemic of measles. In one large school cited by Mr. Murphy the absentees from school were on one occasion 50 per cent. of the average number on the roll. Not all the children, however, were absent on account of being themselves the subjects of measles; some of them

[1] No. I. appeared in THE LANCET of May 2nd.

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were kept from school because of the infected state of their homes. The notified attacks by scarlet fever were only half as numerous in 1894 as they had been in the year previous: they corresponded to an attack rate of 4·2 per 1000 of the population, against a rate of 8·6 in 1893. The case mortality, however, in 1894 was 5·2 per cent., or 0·9 per cent. higher than in the preceding year. As regards the incidence of scarlet fever on persons of different ages, the experience of 1894 accords with that of the preceding year in showing that the greatest incidence was upon children between four and five years of age. Concerning the influence of school attendance on the prevalence of scarlet fever Mr. Murphy says that the year 1894 was characterised by irregularity in the behaviour of this disease and especially by the entire absence of the usual rise in the latter part of the year. There was a decrease in the number of cases reported in the four weeks of "holiday influence" (the thirty-second to the thirty-fifth week), and the decrease was most observable among children of school ages (from three to thirteen years). Again, whilst in the four weeks following "holiday influence" there was a decrease both among infants under three and among persons over thirteen years of age, the number of attacks among children of school age increased by 33½ per cent. These facts accord with the hypothesis that the interruption of school operations was responsible for some part of the decrease in the period of holiday influence of attacks at school ages, and that the increase of attacks amongst school children in the subsequent four week period was largely due to the reopening of the schools. Mr. Shirley Murphy is convinced of the correctness of his hypothesis by the experience of the four years 1891–94. The records of the last-mentioned year furnish evidence of the occurrence of subsequent cases of scarlet fever shortly after the return from hospital of antecedent cases. In one district 24 instances of this misfortune are reported to have occurred in this year alone.

With reference to diphtheria prevalence in London Mr. Shirley Murphy reminds us that the notification statistics of the year 1893 showed that when school operations were suspended by the summer holidays there was a *notable diminution* in the prevalence of diphtheria, especially among children at school ages, and, further, that a *marked increase* followed the reassembling of children after the holidays. Precisely the same facts are revealed by the diphtheria notifications in 1894. A table in the report shows that, as had been the case in the previous year also, there was a considerable *falling off* in the notifications at school age during the four weeks of holiday influence and an even greater *rise* in the ensuing four weeks. Mr. Murphy further remarks that the August depression of the diphtheria curve in his diagram showing attacks under three years occurs somewhat later than the depression in the school age curve in a way to suggest that children under three had been infected by their older brothers or sisters, and that the decrease in the frequency of attack amongst the former was due to diminished opportunity of infection from the latter. This behaviour of diphtheria had also been noted in the year 1893. In regard, therefore, to the influence of school attendance on the spread of diphtheria as well as of scarlet fever the experience of 1894 teaches the same lesson that the preceding year had taught, and in commenting on this circumstance Mr. Shirley Murphy pertinently remarks that the attention of medical officers of health and of school authorities should be directed to the perfecting of measures for counteracting as completely as possible the tendency of the aggregation of children in school to spread infection.

The incidence of enteric fever in 1894 was somewhat lighter than in the year previous. There was, however, a notable increase in the number of attacks in the forty-ninth, fiftieth, and fifty-first weeks. This distribution of attacks in 1894 was exceptional and inquiry showed that the abnormal increase was not due to special local prevalence, but was manifested over a large area of London. It was observable in the populations supplied by all the water companies except the East London and Kent Companies. Chemical investigation showed that an intimate relation existed in these weeks between the condition of the waters supplied for drinking purposes and the condition as to flood of the rivers from which these waters were derived. Certain notable floods in November materially altered the condition of the drinking-water at a time when some new factor probably came into operation which led to increased prevalence of enteric fever in London. Mr. Shirley Murphy thinks that this increase may be best explained on the hypothesis of water-borne contagion. In an instructive memorandum on this subject he shows that whereas in the four-year period 1890–93 there had been a decrease in the number of cases notified in the forty-ninth, fiftieth, and fifty-first weeks, in the same weeks of 1894 there were, contrarily, an increase. Regretting the fact that the statistics of only a few years can be placed under contribution in order to determine what is the normal behaviour of enteric fever in London, Mr. Murphy observes that "an *increased* relative *prevalence* of enteric fever *over a very wide area* at a time when enteric fever might be expected to *decrease* raises questions whether or not the disease has been disseminated by water. All the usual modes of diffusion of infection—contaminated milk, insanitary conditions, &c.—are discussed in this memorandum, and are dismissed as inadequate for the production of an abnormal disease prevalance of such wide distribution as that which actually took place, and the conclusion arrived at is that the hypothesis of water-borne contagion affords better explanation of the increase in question than any other which has been suggested. These considerations appear to Mr. Murphy to indicate the need for watchfulness over the distribution of enteric fever in London in relation to its water-supply. The investigation of the causes leading to unequal distribution of phthisis in London districts has recently been greatly facilitated by the action of the General Register Office, which now publishes in its quarterly and annual reports the true death-rates of the sanitary areas from this disease, the deaths occurring in hospitals, workhouses, and lunatic asylums having been referred to the localities from which the patients originally came. Accordingly, Mr. Murphy has availed himself of the Registrar-General's figures to construct a chart which exhibits graphically and by means of appropriate shading the distribution of mortality from phthisis in the year 1894. Examination of the chart shows that the areas with highest mortalities from phthisis are mainly the low-lying spots near the river, which are equally notorious for heavy mortality from causes other than this. The phthisis mortality for London averages 1·7 per 1000 living, but it varies greatly in the several districts. It does not exceed 9 in 10,000 in the high grounds of Hampstead, and averages 11 in four other districts, whilst it ranges upwards to 29 in St. Saviour Southwark, 31 in Hackney, and 32 in the sanitary district of the Strand. Mr. Murphy further shows the relation subsisting between "overcrowding" and phthisis fatality. From the census returns the proportion is ascertained of the population occupying tenements of one, two, or more rooms and in which there are more than two persons in each room. Employing the term "overcrowding" to represent such usage and grouping the various districts according to the overcrowding therein existing, it is shown that the phthisis mortality in these groups increases with the overcrowding. Thus we find that in districts where the proportion of population living two or more in a room does not exceed 10 per cent. the phthisis mortality is relatively low (10·7 per 10,000), whilst in districts where the proportion exceeds 35 per cent. phthisis kills at the rate of 24·6 per 10,000 of the population. It is also found that the mortality from causes other than phthisis increases with overcrowding in like manner.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN ordinary meeting of the Comitia of the Royal College of Physicians of London was held at the College, Pall Mall East, on the 30th ult., Dr. SAMUEL WILKS, the President, being in the chair.

Various formal communications were read from the Royal College of Surgeons of England.

The Rev. Thomas Bramley, husband of the daughter of the late Dr. James Copland, wrote offering for the acceptance of the Royal College of Physicians of London a portrait in oils by Room of Dr. Copland. A vote of thanks was passed on the suggestion of the President, who gave some personal details of his acquaintance with Dr. Copland as the writer of the well-known Dictionary of Medicine and as a President of the Pathological Society. Dr. Bagshawe offered to the Council a collection of engraved portraits and autographs of surgeons and men of

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science formed by the late Dr. Greenhill, and this was also accepted with thanks.

A letter from the headmaster of Bury St. Edmund's school asking for a copy of the engraving of Sir Thomas Watson, to be added to the collection of worthies who were educated there, was read and the request was agreed to.

Dr. Lauder Brunton and Dr. Saundby resigned their respective examinerships.

Mr. Sinclair Gillies, M.B. Lond., of St. Bartholomew's Hospital, on the report of the examiners, was awarded the Murchison Scholarship with special commendation.

The following Members were elected as Fellows:—John Anderson, C.I.E., M.D. St. And.; Sir Hugh Reeve Beevor, Bart., M.D. Lond.; Harry Campbell, M.D. Lond.; Charles Montague Chadwick, M.D. Oxon. (Leeds); John Michell Clarke, M.D. Camb. (Clifton, Bristol); Arthur Gamgee, M.D. Edin. (Lausanne, Switzerland); William Hunter, M.D. Edin.; Arthur Pearson Luff, M.D. Lond.; Ernest Septimus Reynolds, M.D. Lond. (Manchester); and William Aldren Turner, M.D. Edin.

The following gentlemen having passed the required examination were admitted as Members:—Arnold Francis Bill, M.B. Oxon., Robert Henry Cole, M.D. Lond., Charles Arthur Mercier, M.B. Lond., F.R.C.S. Eng., Thomas George Stevens, M.D. Lond., F.R.C.S. Eng., and Arthur John Whiting, M.D. Edin. Licences were granted to a large number of candidates.

The quarterly report of the Finance Committee and the reports of the Committee of Management and of the Laboratories' Committee were read. The statistics of the examinations for the Licence and the list of books presented to the library during the past quarter were also placed before the Comitia.

THE HISTORY, METHODS, HINDRANCES, EXPENDITURE, AND POLICY OF THE CIVIL RIGHTS DEFENCE COMMITTEE.

(Continued from p. 1159.)

HINDRANCES.

IN prosecuting their labours on behalf of Mr. Anderson, and the important rights both of British subjects generally and of the members of the medical profession in particular which are involved in the case, the Civil Rights Defence Committee has had to contend with several obstacles, some of which have not yet been fully overcome. During the earlier stages of the work of the Committee there had been much misapprehension on the subject of "maintenance," or the offence of illegally contributing to carry on, or promote, actions at law without being connected with, or having any real interest in, such actions or their results. To avoid any such question the Committee undertook the case of Mr. Anderson, obtaining special leave to appeal to the Privy Council to provide funds for the other side as well, and to this Mr. Anderson gladly consented. The ideas and difficulties as to maintenance have now entirely disappeared, it being fully realised that every man, woman, and child in the Empire has an interest in, and a right to unite in defending, the rights and liberties of all British subjects. It has been already mentioned that Lord Stamford's letter giving a *précis* of Mr. Anderson's case and strongly appealing to the public for support was sent to 250 leading newspapers in London and the provinces, but that, with the exception of a brief abstract in the *Times* and short notices in a few other papers, it did not receive insertion or comment. It will, therefore, be seen how difficult it is for the Committee to avail themselves of the services of the public press for applying to the community for the funds necessary to prosecute the appeals to the Privy Council and to the House of Lords. The medical journals are staunch supporters of Mr. Anderson, and two or three well-known lay London journals, like *Truth*, the *Pall Mall Gazette*, and the *St. James's Gazette*, and a few provincial and Colonial papers have rendered substantial aid, but what is wanted is a general awakening of the public press.

Even in the ranks of the medical profession there is a certain reluctance in some quarters to uphold the rights of medical men in regard to their liberty of action to make stipulations as to fees, to decline attendance, and to retire from attendance of patients under particular circumstances where no injury is thereby inflicted—rights which are impugned by the still unquashed decisions of the Court in Trinidad in the case of Mr. Anderson. For instance, a medical practitioner whom the Committee endeavoured to influence in defence of these rights dissented from the principles above mentioned and generally accepted in the profession, considering it contrary to the duty of a medical man to make any stipulation before rendering his services as it seemed to be taking an unfair advantage similar, as he expressed it, to "holding a pistol to a man's head." Then, again, there has been considerable disinclination displayed on the part of medical corporations and bodies concerned with professional interests to take up Mr. Anderson's case by sending representatives to the Civil Rights Defence Committee and rendering pecuniary aid. In London the only corporation represented on the Committee is the Royal College of Surgeons of England, an obligation which the Council could not well escape in face of Section XV. of the By-laws, which expressly stipulates that "The Council will at all times protect and defend every Fellow and Member of the College who may be disturbed in the exercise and enjoyment of the rights, privileges, exemptions, and immunities acquired by him as a Fellow and Member or Member thereof." It is worthy of note that the solicitor of the College was of opinion that Mr. Anderson's case did not come under the meaning or operation of the by-law, but the common sense and good feeling of the Council rose superior to legal subtleties. The representation on the Committee of the Council of the Royal College of Surgeons of England is a tower of strength to Mr. Anderson, but, on the other hand, the Royal College of Physicians of London, the University of London, the Apothecaries' Society, and the General Medical Council are not represented. The removal of these hindrances to the success of the work undertaken by the Civil Rights Defence Committee is so important that it is desirable to enlarge upon those which are still in operation.

As the case stands, there is no security for the enjoyment of the liberties and rights which are the heritage of Englishmen or for the special professional rights of medical men. The latter may be stated to be the following: (1) the exclusive right to practise the medical profession for remuneration according to its customs and ethics in peace, free from the illegal institution of vexatious or speculative actions at law or other violence or disturbance; (2) the exclusive right to recover at law remuneration for professional work and services rendered; and (3) the right to refuse to attend in any case whatever—to refuse to attend unless satisfied of payment or if payment is refused or evaded; to refuse to attend or discontinue attendance for any reason that appears to render such a course desirable. If it be objected that the complaints of Mr. Anderson are injuries done to one man by the malice of the judges in a distant colony, and are never likely to be, never could be, repeated in this country, if even in any colony, it must be remembered that—1. The only appearance of redress or protection was obtained by the action brought in England against the offending colonial judges and by means of the right conceded by Justices Cave and Charles to sue the judges and to take the case to a British jury, on the ground that illegal and malicious acts done by a judge are *not* judicial acts. But it is now declared by the judgment of the Court of Appeal in Anderson *v.* Gorrie that all, even the most extreme violation of Mr. Anderson's rights were (*a*) judicial acts and (*b*) were not actionable, and (*c*) that Mr. Anderson had no right to go to a jury and (*d*) therefore had no right to protection. Judicial acts are acts done by authority of the Crown wielded by the judge. 2. Under this decision any judge may do any illegal injury to anyone in disfavour, may instigate the most frivolous and baseless claim or counter-claim, and on it may deprive a medical man of his earnings, give punitive damages against him, and seize his goods and imprison him to make him pay. All these injuries were done to Mr. Anderson and all are declared now to be judicial acts. 3. The right of remedy by suing for compensation and redress and submitting the claim to a jury is by this decision absolutely taken away in case of the injury being accomplished by the agency of a judge who, in depriving us of our rights to charge or recover, and in punishing us for refusing to attend for nothing or when insulted, is now declared to be using the authority of the Crown.

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It is clear, then, that if perversions of justice by judges, if malicious acts by judges are to be called judicial acts, if all the charters of our liberties may be violated by judges with impunity, the right to sue for compensation being taken away, the subject and the professional man are left without protection from wrong and without any means of obtaining remedies for injuries wilfully, wantonly, and illegally inflicted. But this being contrary to the fundamental maxim that there is no wrong without remedy it becomes necessary for some other remedy to be devised. It may be that actions against judges are inexpedient and that they should be punished only by the Crown or by Parliament, but no punishment, such as removal from office, inflicted on a judge affords compensation to the person injured by the illegal acts of a judge, and, therefore, if for sound reasons of State the right to sue the judge be abrogated, it remains for Parliament to provide the means of redress to the injured individual. The Civil Rights Defence Committee is not wedded to any particular course, but is only interested in securing the means of remedy for admitted wrongs.

With regard to the objections raised to medical men recovering fees by law, entering into stipulations as to fees before attendance on patients, to their refusing to attend and withdrawing from a case before the completion of the attendance, the following considerations may be adduced. The rights involved in these conditions are elementary and fundamental. The right to charge *at all* is *lost* if the right to *recover at law* is lost, for, though many seldom or never use the right to recover at law, it is because of its existence that they are paid by numbers who otherwise would never pay. In Mr. Anderson's case even the right to stipulate to be paid and the right to decline to attend unless on an understanding to be paid were absolutely denied by the court. If these rights do not exist or are not to be exercised the medical man could not, without incurring punitive damages or imprisonment, refuse to pay a second visit till paid for the first, could not refuse the first visit to a patient who had deprived him of his honorarium in a previous illness, and must continue to visit the patient though he were vilified and insulted at every visit, and be solaced on seeking remedy by the comforting declaration that the act being that of the judge no rights had been violated and that he must rest content. Mr. Anderson was punished by damages and imprisonment and was sold up and ruined for exercising the elementary rights of a medical practitioner. If these rights are not to exist on the side of the medical man the opposite rights must belong to the public, and medical men would become the slaves of all who demanded their services.

The hindrance resulting from the disinclination of medical authorities and corporations to join in the work of the Civil Rights Defence Committee must be met by the inculcation of a higher standard of obligation on the part of these bodies. The case stands thus. The Crown has granted charters to the licensing bodies authorising them to confer diplomas or qualifications to practise the medical profession, and these diplomas convey certain definite rights and privileges. To obtain these diplomas and rights pupils flock to the medical schools, become candidates for the diplomas of the corporations, and when successful register their qualifications at the offices of the General Medical Council, by which they obtain the security of an Act of Parliament for the right to recover their fees if necessary in a court of law. The schools with their staffs, the corporations with their examiners, and the General Medical Council subsist upon the fees which they receive from the students and medical practitioners who obtain their diplomas and the rights conferred by the diplomas and by the registration of their diplomas in return for their work and their fees. In the light of Mr. Anderson's case, the supposed rights held out by the schools, corporations, and General Medical Council become empty and valueless promises, and the schools, corporations, and General Medical Council will become channels or agents of false promises. Mr. Anderson's case—and unless the decision is annulled there may soon be others like his in the future—illustrates as clearly as any case can illustrate the moral obligation resting on the schools, corporations, and General Medical Council to unite in resisting an invasion of the rights by traffic in which they themselves subsist, since by consenting to it they would consent to be agents for, and to profit by, conferring supposed rights which when relied upon may be, as they have been in Mr. Anderson's case, formally declared to be inoperative and valueless. If this is once understood and public attention is secured great public bodies with reputations to preserve will feel it to be impossible to accept so discredited and dishonourable a position, and will take their share with other public and professional bodies now engaged in the defence of these rights, now endeavouring to raise funds for the purpose of testing by appeal to the House of Lords the validity of the judgment of the Court of Appeal, and, should such appeal fail, determined to secure the correction of so great an evil by the action of the Legislature. To secure the coöperation of the medical schools, the corporations generally, and the General Medical Council would ensure success to the cause and would no doubt lead to the establishment of a recognised method and system of coöperation that would be of general and far-reaching advantage to the profession and the public.

(To be concluded.)

THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND AND THE REPRESENTATION OF THE MEMBERS OF THE COLLEGE ON THE COUNCIL.

IT will be in the recollection of our readers that at the meeting of the Council of the Royal College of Surgeons of England, held on March 12th, the following resolution was passed by a small majority:—"That as the members of this Council represent the body corporate of this Royal College and consequently its Members as well as its Fellows, it is the opinion of this Council that no further representation of the Members is desirable." A discussion on the subject of the resolution, passed by the Fellows of the College at their half-yearly meeting in January by a large majority, in favour of according representation on the Council to the Members of the College, had taken place at the meeting of the Council in February, and this discussion resulted at first in the adoption of a resolution to take a poll of the Fellows on the question, but by a subsequent decision of the Council to take into consideration at the March meeting the question whether Members should or should not be directly represented on the Council before consulting the Fellows the poll was set aside altogether. It was with sincere regret that we chronicled both the adverse resolution of the Council to the Members' claims in face of the important vote of the Fellows at the January meeting and the loss of the resolution that a poll of the Fellows should be taken, and after reviewing the position and merits of the question of the representation of the Members on the Council and the state of opinion in the Council itself, as shown by the suspended minutes, we expressed our belief that it would not be surprising if these decisions should be reviewed and possibly rescinded at an early date. We are glad to be able to state that the whole subject will be reopened at the meeting of the Council on May 14th. At the March meeting of the Council Mr. Tweedy gave notice of the following motion for the meeting of the Council in May—viz.:—

"That a poll of the Fellows be taken respecting the motion passed at the general meeting of Fellows on Jan. 2nd in favour of giving to the Members of the College direct representation upon the Council, and that a committee be appointed to prepare for the approval of the Council an elucidatory statement of the subject in question together with the interrogatories which shall be submitted to the Fellows." A further step was taken at the quarterly meeting of the Council on April 9th, when Mr. Rivington gave notice that he would move at the May meeting:—

"That the following resolution, proposed by Sir William MacCormac, seconded by Mr. Bryant, and carried by 11 votes to 8, be rescinded—viz.:—

"As the members of this Council represent the body corporate of this Royal College, and consequently its Members as well as its Fellows, it is the opinion of this Council that no further representation of the Members is desirable."

Opinion upon the Council on these questions appears to be so evenly balanced that the result of the discussion will probably depend upon the accidental circumstance of the attendance or non-attendance of particular members of the Council. Half the Council voted on a former occasion in

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favour of consulting the Fellows, and just less than half at the March meeting sufficed to negative the principle of representation of Members of the College on the Council. This is an anomalous condition of things, and it is obvious that even if the Council does not adopt Mr. Rivington's motion to rescind the resolution passed at the March meeting the exclusion of Members of the College from a voice in the management of the College which they do so much to support cannot be of any long continuance when they have a majority among the Fellows attending a meeting at the College and half the Council in their favour. We cannot but think that there could not be a more favourable time than the present to settle this much vexed question. A moderate concession now would be accepted by the Society of Members who are prepared, we understand, to give a fair trial to any measure agreeable to the Fellows and the Council, and it will be assuming a weighty responsibility to let the opportunity slip of uniting the Council, the Fellows, and the Members as they have never been united in the history of the College since 1843.

THE CONVERSAZIONE OF THE ROYAL SOCIETY.

THE annual conversazione of the Royal Society, held in Burlington House last Wednesday, when Sir Joseph Lister presided and received many distinguished Fellows and visitors, was from a spectacular point of view less striking than the exhibitions of preceding years. This was probably due to a great extent to the almost complete absence of purely electrical display. Not even the familiar crack of long sparking could be heard, but only the buzzing and comparatively unalarming sound of the induction coils employed in lighting up the Crookes's tube in the new photography. Photography, indeed, seemed to be the favourite subject of demonstration. That section of it now described as "new" was, as might have been anticipated, well represented by Messrs. A. A. C. Swinton, Mr. Herbert Jackson, and Mr. Sidney Rowland, the first two gentlemen adding some very effective experiments by means of the fluorescent screen. There was, however, nothing demonstrated which showed any important advance in the application of the "x" rays to medicine beyond what has already been published in THE LANCET. Turning to ordinary photography the prints exhibited by Professor Worthington were remarkable examples of the pitch to which instantaneity of photography has been brought. He showed photographs of the splashes produced by a falling drop of water, taken with the electric spark, the exposure being less than three-millionths of a second. The resulting pictures are very curious and interesting in pourtraying the disturbance. Progress in photography was also charmingly illustrated in Mr. Ives' exhibition of his stereoscopic photo-chromoscope, an instrument which records and reproduces colours more perfectly than the phonograph does sounds. The pictures shown were of singular beauty and most realistic. Mr. Friese Greene showed a rapid photographic printing machine at work which threatens to revolutionise the art of illustrating journals. The machine produces prints wholly or partly by photography, the chief object being to effect a very rapid production of copies adapted for use as illustrated supplements in newspapers, magazines, or for other purposes where a large number of copies of the same picture, design, or other objects are required. Thus it is possible to "run off" several thousand excellent photographic prints in an hour at an initial cost of a farthing each print.

Professor Clowes exhibited his ingenious apparatus for the detection of inflammable gas in electric culverts. In principle it is the same as the lamp used for measuring the amount of gas in the air of coal mines, and it is obviously adapted also for detecting and measuring the inflammable gas in inaccessible places, as in gasworks, coal-bunkers, and furnace flues. Professor Boys presided over the fragments that were left of the steel gas cylinders which were recently the subject of experimental inquiry which had its origin in the Fenchurch-street explosion. The report ultimately issued showed (1) the danger of using hard or unannealed steel for gas cylinders; (2) the extraordinary amount of violent ill-treatment to which a good soft annealed cylinder may be subjected without destruction, even when charged to 120 atmospheres; (3) the effect of very great internal pressure steadily applied; and (4) the violently destructive character of the explosion of mixed gases under pressure, which no practicable cylinder can withstand. One of the most interesting novelties in the exhibition was the "aërator" shown by Messrs. Read, Campbell, and Co. It consists of a sheet-steel bulb, not quite so large as a pigeon's egg, and containing compressed carbonic acid gas. The soda water bottle being filled with water, the "aerator" is inserted in the stopper, the closing of which liberates the gas by piercing the bulb. A few shakes complete the process, and excellent soda-water is thus quickly obtained. There is certain to be a successful future for this ingenious device. It is the best and simplest method of extemporaneously obtaining aerated water with which we are acquainted, and, further, is not expensive, the "aërators" costing probably not more than 6*d*. a dozen, and each being sufficient to make a "large soda." The "aërators" may also obviously be charged with other gases, the application of which for medical purposes is probable. Professor Roberts Austen of the Mint showed a simple and pretty experiment. By passing a current of thirty ampères through an aluminium wire a coating of oxide is almost instantly formed, which enables the temperature to be carried far above the melting point of the wire without breaking it. In fact the film of oxide serves as a pipe to contain the fluid metal. On approaching the wire with a magnet it twists about in a curious fashion, as though it were a thread of silk being turned. Specimens of boring marine animals were exhibited by the Marine Biological Association; while Mr. Walter Garstang, M.A., showed certain adaptations subservient to respiration in sand-burrowing Annelids and Crustacea. In aquatic animals which burrow in fine sand the activity of the gills would be impaired by the accumulation of sand around the gills, or in the course of the respiratory currents. To prevent this, the water before passing to the gills is "sieved" in the Annelid Aphrodite by a felted mass of fine hairs, and in Decapod Crustacea by the hairs bordering the branchiostegite. In the crabs Atelecyclus and Corystes the normal respiratory current is reversed and the water passes to the gills through a sieve-tube formed by the interlocking of rows of special hairs on the apposed antennæ.

The lantern demonstrations in the meeting-room were devoted to the beautiful colour photographs of Professor Lippmann taken by the interferential method. Later in the evening the same room was occupied by Professor Dewar, who repeated many of his remarkable experiments with liquid air at the Royal Institution.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6438 births and 3838 deaths were registered during the week ending May 2nd. The annual rate of mortality in these towns, which had been 19·0 and 19·5 per 1000 in the two preceding weeks, declined again last week to 18·4. In London the rate was 18·5 per 1000, while it averaged 18·4 in the thirty-two provincial towns. The lowest rates in these towns were 8·6 in Burnley, 11·3 in Brighton, 12·4 in West Ham, 13·9 in Bradford, and 14·1 in Cardiff; the highest rates were 20·4 in Oldham, 21·9 in Sunderland, 26·4 in Swansea, 26·9 in Manchester, and 28·7 in Salford. The 3838 deaths included 640 which were referred to the principal zymotic diseases, against 635 and 699 in the two preceding weeks; of these, 258 resulted from measles, 204 from whooping-cough, 67 from diphtheria, 42 from "fever" (principally enteric), 36 from scarlet fever, 30 from diarrhœa, and 3 from small-pox. No fatal case of any of these diseases was recorded in Burnley; in the other towns they caused the lowest death-rates in Norwich, Preston, Plymouth, and Leeds, and the highest rates in Croydon, Salford, Sunderland, and Oldham. The greatest mortality from measles occurred in London, Bristol, Manchester, Croydon, Oldham, and Sunderland; from scarlet fever in Salford; from whooping-cough in London, Manchester, Bradford, Salford, Bolton, and Croydon; and from fever in Halifax. The 67 deaths from diphtheria included 36 in London, 5 in Liverpool, 4 in West Ham, 4 in Birmingham, 3 in Hull, and 3 in Newcastle-upon-Tyne.

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Two fatal cases of small-pox were registered in London and 1 in West Ham, but not one in any other of the thirty-three towns. There were 13 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 2nd inst., against 16 at the end of each of the two preceding weeks; 3 new cases were admitted during the week, against 5, 4, and 8 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2523, against 2587, 2527, and 2534 on the three preceding Saturdays; 236 new cases were admitted during the week, against 226, 201, and 236 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 328 and 287 in the two preceding weeks, rose again last week to 292, and were 53 below the corrected average. The causes of 52, or 1·4 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Cardiff, Oldham, Newcastle-upon-Tyne, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Sheffield, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·0 and 19·0 per 1000 in the two preceding weeks, declined again to 19·0 during the week ending May 2nd, but was 0·6 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 11·9 in Leith and 17·7 in Edinburgh to 22·2 in Perth and 22·8 in Paisley. The 556 deaths in these towns included 30 which were referred to whooping-cough, 18 to diarrhœa, 11 to measles, 9 to "fever," (principally enteric), 6 to scarlet fever, and 2 to diphtheria. In all, 76 deaths resulted from these principal zymotic diseases, against 56 and 67 in the two preceding weeks. These 76 deaths were equal to an annual rate of 2·6 per 1000, which was 0·5 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 21 and 30 in the two preceding weeks, were again 30 last week, of which 14 occurred in Glasgow, 7 in Aberdeen, 4 in Edinburgh, and 3 in Paisley. The 18 deaths from diarrhœa showed a further increase upon recent weekly numbers, and included 9 in Glasgow and 4 in Edinburgh. The fatal cases of measles, which had been 9 in each of the two preceding weeks, were 11 last week, of which 8 occurred in Glasgow and 2 in Dundee. The deaths referred to different forms of "fever," which had declined from 12 to 4 in the three preceding weeks, rose again to 9 last week, and included 2 each in Glasgow, Edinburgh, Paisley, and Greenock. The fatal cases of scarlet fever, which had increased from 5 to 10 in the four preceding weeks, declined again to 6 last week, of which 3 occurred in Glasgow and 2 in Dundee. The deaths referred to diseases of the respiratory organs in these towns, which had been 109 and 120 in the two preceding weeks, declined to 88 last week, and were 36 below the number in the corresponding week of last year. The causes of 52, or more than 9 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 20·6 and 23·3 per 1000 in the two preceding weeks, further rose to 23·7 during the week ending May 2nd. During the past five weeks of the current quarter the death-rate in the city has averaged 23·7 per 1000, the rate during the same period being 19·1 in London and 17·6 in Edinburgh. The 159 deaths registered in Dublin during the week under notice showed an increase of 3 upon the number in the preceding week, and included 10 which were referred to the principal zymotic diseases, against numbers declining from 10 to 4 in the three preceding weeks; of these, 6 resulted from scarlet fever, 2 from whooping-cough, 1 from "fever," and 1 from diarrhœa, but not one either from small-pox, measles, or diphtheria. These 10 deaths were equal to an annual rate of 1·5 per 1000, the zymotic death-rate during the same period being 3·9 in London and 2·1 in Edinburgh. The fatal cases of scarlet fever, which had been 2, 4, and 1 in the three preceding weeks, rose again to 6 last week, and exceeded the number recorded in any week during the past eight years. The 2 deaths referred to whooping-cough were within one of the number in the preceding week. The 159 deaths registered in Dublin last week included 22 of infants under one year of age, and 29 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a marked decline from those recorded in the preceding week. Six inquest cases and 7 deaths from violence were registered; and 58, or more than a third, of the deaths occurred in public institutions. The causes of 5, or rather more than 3 per cent., of the deaths in the city last week were not certified.

THE PUBLIC HEALTH IN THE FIRST QUARTER OF 1896.

The Registrar-General's Quarterly Report for the first three months of this year has exceptional interest. It shows the effect on the public health of a winter of almost unprecedented mildness. During each of the five months ending with March last a considerable excess of temperature prevailed, which averaged more than 3°F for the whole period. The annual death-rate in England and Wales during the first quarter of this year was so low as 17·9 per 1000, and not less than 3·9 below the mean rate in the first quarters of the ten preceding years. The death-rate was far lower than that recorded in the first quarter of any previous year since civil registration was established in 1837. The nearest approach to so low a rate in the first quarter of the year was 19·7 in 1884 and in 1893. The remarkably low death-rate last quarter would have been still lower except for an excessive mortality from the principal zymotic diseases, mainly due to the fatal prevalence of measles and diphtheria. As might naturally be expected, the exceptional mildness of last winter most favourably affected the mortality of persons aged upwards of sixty years. The annual death rate among persons at this group of ages did not exceed 69·2 per 1000, whereas the mean rate at the same ages in the corresponding periods of the preceding ten years was 95·4. Thus the mortality among persons aged upwards of sixty years was 27·5 per cent. below the average last quarter; whereas among infants under one year of age the decrease was only 4 per cent., and among children and adults aged between one and sixty years only 15 per cent. The death-rate in towns last quarter showed even more than its accustomed excess on the death-rate in rural districts. In other words, the mildness of the winter appears to have more favourably affected rural than urban districts. The death-rate in the aggregate town districts of England and Wales was 18·4 per 1000 last quarter and 3·9 below the average; while in the country districts the rate was only 16·6 and was 4·2 below the average. Thus during last quarter the urban rate was 11 per cent. in excess of the rural rate, whereas the average excess in the first quarter of the ten preceding corresponding quarters was only 7 per cent. This result is obviously due in great measure to the fact that in country districts the population includes a far larger proportion of elderly persons than it does in urban districts, and we have seen that the mild winter most favourably affected the mortality of elderly persons. The main feature of the mortality returns just issued as regards zymotic disease was the exceptional fatality of measles, the annual death-rate from which during the quarter was 0·70 per 1000 and 0·27 above the average rate in the first quarters of the previous ten years. This rate from measles was 0·96 in the 100 largest towns, while in the remainder of England and Wales it was less by one-half, or 0·48 per 1000. Among the largest towns the rate was 1·82 in Leicester, 2·10 in Salford, and 3·25 in Norwich. Still higher rates prevailed in some of the smaller towns. Diphtheria, although far less fatal than measles, showed a larger increase in the death-rate compared with the ten years' average. The highest death-rates from this disease occurred last quarter in London and its suburbs, Birmingham, Wolverhampton, and Halifax. If we exclude the exceptional fatality in the metropolitan district, the death-rate from diphtheria was almost identical last quarter in the urban and in the rural groups of districts. Small-pox caused 192 deaths in England and Wales last quarter, of which not fewer than 144 occurred within the city of Gloucester. The mortality from whooping-cough, scarlet fever, and enteric fever was in each case below the average. In conclusion, the remarkable further decline in the birth-rate calls for notice. Notwithstanding the recent recovery in the marriage-rate the

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birth-rate in England and Wales last quarter was unprecedentedly low and was only equal to 29·1 per 1000. This rate was 2·6 per 1000 below the mean rate in the ten preceding corresponding quarters, and 3·0 below the rate in the first quarter of last year. The decline in the English birth-rate is an increasing decline. In the four last periods of five years the birth-rate has successively averaged 35·4, 33·5, 31·4, and 30·5 per 1000. Thus in its effect on the population of England and Wales the constant decline in the death-rate is neutralised by the equally constant decline in the birth-rate.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

THE following officers have arrived from India on completion of a tour of service:—Surgeon-Lieutenant-Colonel Donovan and Surgeon-Majors Hart, Swabey, and Mosse. Surgeon-Captain Shaw has embarked for South Africa. Brigade-Surgeon-Lieutenant-Colonel Brown and Surgeon-Majors Donaldson and Tidbury have been appointed to Cork, Surgeon-Major Cusack to the Curragh, and Surgeon-Major Cowen and Surgeon-Captain Carter to Dublin.

ARMY MEDICAL STAFF.

Surgeon-Major-General Sir William Alexander Mackinnon, K.C.B., Q H S., Director-General, Army Medical Department, is placed on retired pay. Surgeon-Major-General J. Jameson, M.D., has been appointed Director-General, Army Medical Department, vice Surgeon-Major-General Sir W. A. Mackinnon. Surgeon-Colonel Alexander F. Preston, M.B., to be Surgeon-Major-General, vice J. Colahan M.D., retired. Brigade-Surgeon-Lieutenant-Colonel George J. H. Evatt, M.D., to be Surgeon-Colonel, vice A. F. Preston, M.B. Surgeon-Lieutenant-Colonel John Dallas Edge, M.D., F.R C.S. Irel., to be Brigade-Surgeon-Lieutenant-Colonel, vice J. H. Reynolds, V.C., M.B., retired. Surgeon-Lieutenant-Colonel Charles E. Dwyer to be Brigade-Surgeon-Lieutenant-Colonel, vice G. J. H. Evatt, M.D.

NAVAL MEDICAL SERVICE.

The following appointments are announced:—Surgeons: C. Strickland to the *Mohawk;* W. G. Stott to the *Magnificent;* P. N. Randall to the *Victory*, additional for the *Duke of Wellington;* and A. G. Wildley to the *Cruiser*. Surgeon and Agent: W. J. Shaw at Redheugh.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain David Thomson, M.D., to be Surgeon-Major.

YEOMANRY CAVALRY.

Nottinghamshire (Southern Nottinghamshire): Henry Williams, gent., to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

Artillery: 1st Hampshire (Southern Division, Royal Artillery): The appointment of Mr. E. F. Eliot as Surgeon-Lieutenant is cancelled at his own request. 1st Caithness: Surgeon-Lieutenant-Colonel G. Banks, M.B., resigns his commission, but is permitted to retain his rank and to continue to wear the uniform of the corps on his retirement. 2nd Glamorganshire: Surgeon-Lieutenant A. Hood, M.B., resigns his commission. *Rifle:* 1st Volunteer Battalion the Queen's (Royal West Surrey Regiment): Surgeon-Captain C. W. Philpot, M.D., resigns his commission.

THE OUTBREAK OF ENTERIC FEVER AT ALLAHABAD.

The *Pioneer Mail* of April 16th gives an account of a recent outbreak of enteric fever in this cantonment. It seems that the disease began in the autumn of last year in the Royal Irish Fusiliers. The corps moved in relief to Burma, and was succeeded by the Norfolk regiment, in which after some weeks' interval a few cases of the disease occurred in February of the present year, and these were followed by others at a later date. Up to the present time forty-seven cases and upwards of twenty deaths have occurred. Allahabad is stated to have probably the best managed dairy-farm in India, and it has water-works which recently cost between twenty and thirty lakhs of rupees. Mr. Hankin, the Government bacteriologist, has recently made a searching investigation into the causes of this severe outbreak. The pipe-water as drawn from the taps has been found to be excellent, and that drawn directly from the barrack-room filters was also good, but the water in the *surais* on being subjected to a bacteriological examination was found to be most impure. The subject is still under investigation, and we shall probably learn subsequently more about it; meanwhile we must content ourselves with a bare statement of the facts as given by our contemporary.

THE MATABELE RISING.

The news connected with the Transvaal crisis has been of so exciting a character of late that it has for the most part absorbed public attention to the exclusion of the events connected with the Matabele rising. The inhabitants of Bulawayo seem to be quite capable of holding their own until the arrival of reinforcements; indeed, it is stated that owing to the successful attacks that have been made upon the Matabeles the neck of the insurrection is broken, and that all danger will probably be over before the arrival of the Imperial troops at Bulawayo. The forces proceeding to its relief have, owing to the prevalence of cattle disease, to encounter great difficulties in the way of transport and supplies. The wounded in Bulawayo are reported as doing well.

CHOLERA AT CALCUTTA.

Cholera has been unduly prevalent of late in Calcutta. During the week ending April 4th there were 235 deaths from cholera, against 179 and 114 in the two preceding weeks. The number is higher than the average of the past quinquennium by 180. To arrest the progress of this disease at Tarkessar the Commissioner of the division prohibited the East Indian Railway authorities from running special trains during the time the great fair was held there last month. According to Indian experience cholera may be expected to prevail early in the year in the eastern districts and late in the year in the western districts of the province. In Lower Bengal, when the surface is under water, cholera is extinguished as a fire would be.

THE MEDICAL STAFF CORPS.

The Director-General, Sir William Mackinnon, K.C.B., in issuing his last corps order, has expressed his farewell wishes to all ranks and also his appreciation of the work done by them during his tenure of command. He earnestly trusts that each soldier will always endeavour to uphold the reputation of the Medical Staff Corps and do his utmost to maintain its efficiency both in peace and war.

DEATH IN THE SERVICES.

Mr. James Flanagan, L.R.C.S.Irel., R.N., Deputy Inspector-General of Hospitals and Fleets (retired), at Portsmouth, on the 30th ult., aged sixty-one. He was Assistant Surgeon in charge of the *Shannon* Naval Brigade during the Indian Mutiny (Indian medal and clasp), and was specially promoted for his services.

His Excellency the Commander-in-Chief has accepted the invitation of the senate of the Army Medical School to preside and distribute the prizes at the termination of the present session of the Army Medical School.

Three hundred and eleven patients were admitted to the Royal Victoria Hospital, Netley, on April 28th *ex* H.M.'s troopship *Malabar* from Bombay. This was the last voyage of the *Malabar* as H.M.'s troopship.

ABERDEEN UNIVERSITY BUILDINGS EXTENSION.—The special effort made to raise £10,000 before May 1st, so as to secure Mr. C. W. Mitchell's subscription of £6000, was successful, £200 above the sum required having been contributed at that date. The scheme was inaugurated in 1891, and the total sum collected up to May 1st was £109,365 8*s.* 10*d.*, made up as follows: General public (including £10,000 from the Aberdeen town council), £42,365 8*s.* 10*d.*; Government, £40,000; the late Dr. Charles Mitchell, Jesmond Towers, £21,000; and Mr. C. W. Mitchell, Jesmond Towers, £6000. The £16,000 referred to will go towards the erection of the south wing at Marischal College. Good progress is being made with the north wing. More money is required to complete the scheme and no final answer to the application to Government for a further grant of £40,000 is expected for about three months. Meantime additional subscriptions from private sources continue to come in. Should the funds permit of the scheme being carried out in its entirety Marischal College will be the largest and finest granite building in the United Kingdom.

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Correspondence.

"Audi alteram partem."

"THE REGISTRATION OF MIDWIVES."

To the Editors of THE LANCET.

SIRS,—I can perhaps give no higher praise to the admirably wise and judicial deliverance in your issue of April 25th upon the above subject than to say that it is worthy of the reputation of the Editors of THE LANCET. As I have had the misfortune—as a punishment for my sins, I suppose—to become interested in the midwives question I crave your indulgence in order to place before your readers some thoughts which have occurred to me in connexion therewith. It has been the grave misfortune of the British Medical Association, in attempting to deal with this important subject, that it has apparently derived both its inspiration and its ideas from the Midwives' Institute, and that, so far as I can judge, the matter has been but little considered either from the standpoint of our profession or that of the public. In what I desire to say on the subject I shall endeavour, as far as possible, to do justice to all three. In connexion with any proposed legislation the initial point to determine is the achievements to be aimed at, and in connexion with the present matter I regard these as mainly three in number:—1. To help and protect the poor. As labour of this kind is familiar to every member of our profession from his professional cradle to his very grave, I feel sure that any wise proposals in that direction will meet with nothing but a generous and hearty response from every one of us. 2. To maintain the just rights and liberties of the profession. The Medical Act of 1886 was, I understand, passed into law in the interests of the public and in order to protect them from the dangers arising from the employment of partially and incompletely educated medical practitioners. These dangers are quite as real to-day as they were in 1886, and midwifery certainly ought not to be the least important part of a medical man's training. The door of our profession stands as widely open for women as it does for men and all are welcome who enter in that way; but attempts to get over the wall (as proposed by these Midwives Registration Bills) are sometimes devoid of an honest intent and ought to be very carefully attended to. 3. To deal justly with so-called midwives. The extensive employment of these women by the poorer members of the community has rendered them an apparent necessity of our civilisation, and the wise course for our profession to pursue is to recognise the fact and deal fairly and honestly with the same. Having thus indicated the chief objects to be aimed at in any proposed legislation, I pass on to consider very briefly the principles which should guide that legislation, and these, also, are in my opinion mainly three:—1. To maintain the Medical Act of 1886. This I have already dealt with, and it does seem to me that the profession which is not prepared to defend and maintain its lawful rights and privileges never deserved to have any. 2. The local registration of midwifery nurses by the medical officer of health. The advantages of such a course as distinguished from the creation of a national register for these women seem to me to be as follows. (*a*) It meets the circumstances of the case. When I reflect that there are from 20,000 to 30,000 midwives in England and Wales, and that on an average the professional training of these women has probably cost less than a five-pound note, the need for a national register in order to conserve an educational training of that value is not apparent, and such a register in their case would be very likely to bring national registers into contempt. (*b*) It would be efficient. There is little doubt that as far as it goes our sanitary service deserves this character. In urban districts, where the medical officer of health is exclusively devoted to the duties of his office, there is no doubt that he would deal perfectly justly with these women, and would, in his desire to keep down his puerperal mortality, exercise upon them an enormous influence for good. We should have in this case direct medical supervision in the best and I believe the only possible sense. Where the medical officer of health is engaged in general practice safeguards against injustice ought to be provided by permitting an appeal either to the medical officer of health for the county or to some other impartial authority. (*c*) It would be cheap because the machine for its administration is already in existence. The creation of an administration anything like so efficient in connexion with a national register would annually cost an enormous sum of money. (*d*) It would be a register for sanitary purposes only, and I confess that with the best intentions possible I quite fail to see what just claim existing midwives have to anything more exalted. 3. The training of the midwifery nurse. Nursing is essentially a practical matter, involving little or no theory, and the training should for that reason be as far as possible practical also. There is a real danger of the training of these nurses being pitched too high, and I consider that six months' residential training in a public lying-in hospital or union infirmary, where there are not less than fifty confinements per annum, conducted in every case under the direct supervision of the resident medical officer, would meet the requirements of the case.

These are, Sirs, it seems to me, the main principles to be held in view in connexion with any proposed midwifery legislation, but there are several others of great but secondary importance. No medical practitioner, for example, should be permitted to undertake the training of these women until he has satisfied the General Medical Council as to his capacity to comply with the requirements of the Act, and he should be responsible to that body for the discipline and efficiency of the training imparted. The question of an examination is also important and one requiring careful consideration. I have little confidence in, and less admiration for, midwives' examinations as hitherto conducted, and I believe that this much over-done ceremony might in their case be dispensed with with advantage. The British public are an extremely efficient set of examiners. In any case the setting up under legal authority of special examining boards for the exclusive use of these women is, in my opinion, an error of judgment. If the General Medical Council is fit to govern the great profession of medicine it is quite competent to deal efficiently with such a trifling matter as the examination of these midwives, and the whole matter should be left in its hands. Having received her training it would be possible for the midwifery nurse to follow one of two courses—viz., either to go out as a monthly nurse under a medical practitioner (in which case her training would be an inestimable help and boon to him and a very distinct and palpable advantage to the public) or she might at once—or after a year or two's experience as a monthly nurse—get registered by the medical officer of health and undertake the duties (subject to the sanitary and other conditions furnished her by that official) now discharged by so-called midwives. When so registered the midwifery nurse would, of course, only attend cases devoid of complications within the meaning of the Act.

When I consider, Sirs, the average cost of the training of existing midwives—on an average certainly not more than £5—and also consider that in the Act suggested the cost would probably not exceed £10, and when I reflect upon the very substantial earnings of good monthly nurses and midwives, I entirely fail to see how under such an Act any injustice could arise to these women. This essentially sanitary scheme of registration has at least the advantages of being simple, of being cheap, and, for the purposes which it is intended to accomplish, of being efficient. If carried into law it would, in my opinion, do the profession no harm, it would do the better class of midwives some good, and it would very certainly materially reduce the puerperal mortality for England and Wales in the course of a few years. I should be very glad to be able to believe that some much more ambitious projects were capable of doing as much good and as little harm.

I am, Sirs, your faithfully,

Salford, April 27th, 1896. WILLIAM FRASER.

MATERNAL SYPHILIS.

To the Editors of THE LANCET.

SIRS.—Dr. Shaw-Mackenzie's courteous criticism of my first Hunterian Lecture calls for but short reply from me. The view that inherited syphilis in the infant is in every instance derived from the mother is, I should have thought, sufficiently refuted to need no further demonstration on the point. To have entered at any length on this part of the subject would have seemed to me equivalent to dealing with the proverbial "man of straw." I would readily grant that

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transmission through the germ is much more easily comprehensible than that through the sperm, but I would contend that all facts confirm inheritance from the father independently of the mother. Some obscurity in my language has doubtless led to a misapprehension on Dr. Shaw-Mackenzie's part. I never intended drawing any percentage between the two sets of cases, in the one of which the mothers were apparently healthy and in the other undoubtedly syphilitic. Without having gathered any statistics on the point I should from personal impressions consider that the cases of inherited syphilis where the mother is apparently free outnumber those where she is obviously syphilitic by three or four to one. Dr. Shaw-Mackenzie's statistics from Mr. Henry Lee's note-books will be of interest. The value of their bearing on the point at issue, however, will be vastly discounted by the consideration that they probably only relate to women coming under notice for obvious syphilis. Dr. Shaw-Mackenzie's experience at children's hospitals probably furnishes the truer view of the state of affairs as regards the mothers of syphilitic infants in general. To one of his statements I must take strong exception, and this is that immunity to syphilis, partial or complete, is the equivalent of the acquisition of the complaint itself. I shall look forward with pleasure to the appearance of Dr. Shaw-Mackenzie's paper in your columns, and shall possibly find occasion to comment on it.

I am, Sirs, yours truly,

Upper Berkeley-street, May 5th, 1896. J. A. COUTTS.

"THE BRONCHITIS KETTLE AND POULTICES IN PNEUMONIA."

To the Editors of THE LANCET.

SIRS,—I am glad to see in THE LANCET of April 18th that Dr. F. de Havilland Hall draws attention to the treatment of acute lung affections, and in particular to the use of bronchitis kettles, poultices, and diet. It has too long been the custom to follow the stereotyped method without giving the matter that consideration which it deserves. For some time I have failed to see the *rationale* of the treatment of pneumonia with poultices, and consequently they are now banished from my list of remedies, with, I am convinced, much better results than I formerly obtained with them. To load a person's chest with an accumulation of evil-smelling and uncomfortable material whilst he is suffering from respiratory difficulties seems contrary to common sense, when to open the window and secure to him a breath of fresh air which he so much desires would much better meet the requirements of the case. If there is any advantage in a poultice, which I very much doubt, it is greatly outbalanced by the dangers of an ever-changing temperature in the region of the chest as must follow a succession of poultices. I have used Gamgee tissue now for some years and am satisfied that my results have fully justified its use. As far as diet is concerned, in cases of pneumonia I believe in giving the patient a fairly free scope; during the acute stage there is usually a dislike for food of any kind, and to try to force it at painfully regular intervals seems more cruel than kind. To give an instance, I have recently had a case of pneumonia in a child four years of age. The temperature stood at 105° F. for ten days; there was complete anorexia during the whole period, so I ordered milk with a little lime-water, cold water, and barley-water; these satisfied the patient's craving for liquids and being cold were more acceptable. The mother, fearing the child would become exhausted, gave some sickly preparation resembling beef-tea, which was immediately expelled; the experiment was not again tried. On the eleventh day the temperature went down to 99°, the appetite returned, the tongue cleaned, and the recovery was a rapid one. The child's cry for solid food was gratified and no discomfort followed. The bronchitis kettle I have no experience of.

I am, Sirs, yours faithfully,

Darwen, April 30th, 1896. F. G. HAWORTH.

"THE NEW PHOTOGRAPHY."

To the Editors of THE LANCET.

SIRS,—In conjunction with Mr. John Aitken I have been working for some time at a means of shortening the exposure required for the new photography. We first tried painting a platino-cyanide solution on to the sensitive film, but found that it injured the emulsion and made the negative difficult to fix. We also tried various forms of interposed fluorescent screens which, though they much shortened the exposure, interfered with good definition. Lastly, in consequence of your article on the use of fluor-spar placed behind the film, we have made, with Mr. Bidwell's help, some experiments in this direction. I may sum up the results we have obtained as follows: celluloid negatives should be used in place of glass; the fluor-spar should be finely powdered and pressed well against the film; the fluor-spar should be thoroughly removed before developing; the exposure time is reduced to about one-third of the ordinary exposure; definition is not interfered with; calcium tungstate may be used in place of the fluor-spar and appears to exercise a more marked effect; and platino-cyanide screens may also be made use of.

I am, Sirs, yours faithfully,

DAWSON TURNER, M.D. Edin., M.R.C.P. Lond.,
Lecturer in Physics at Surgeons' Hall, Edinburgh.

George-square, Edinburgh, April 20th, 1896.

THE NILE EXPEDITION.

To the Editors of THE LANCET.

SIRS,—Having recently returned from the Nile I have read your article on Egypt with much interest. I fully agree with what you say concerning the sanitary condition of Cairo and some of the towns up the river, but I disagree with you as to the probable result of the advance of the Nile expedition. Aswân I consider one of the healthiest of the health resorts on the upper reaches of the Nile, but visitors have been constantly scared during the past winter by the Dervish raids which have taken place between Wady Halfa and Aswân. One of these raids took place while I was myself at Aswân, and I can assure you it very greatly accelerated the return of Europeans down the Nile. The Dervishes having the rich province of Dongola to fall back on, from which they draw their supplies, are able practically to make these raids with impunity. There will be no safety for the upper reaches of the Nile until the Egyptian Government holds Dongola. I therefore think that a military expedition to Dongola will aid instead of retard the sanitary and social conquest to which you refer by rendering safe the upper reaches of the Nile. It is no good going in for costly sanitary improvements with a view of attracting invalids until the frontier is safe—patients will not go where they are liable to constant scares from Dervishes. Thanking you in advance for the insertion of this letter in your valuable journal,

I am, Sirs, yours faithfully,

EDWARD STEWART, M.D. Brux., M.R.C.P. Lond.

East Grinstead, May 2nd, 1896.

SAFE *v.* DANGEROUS ELECTRIC LIGHT CURRENTS.

To the Editors of THE LANCET.

SIRS,—As I have always, from practical experience, contended that electric light and power can be more efficiently and economically supplied to towns and urban districts within a radius of five or six miles by using continuous currents rather than high-pressure alternating currents, I was, to settle as far as possible the question of danger, impelled to write to the Board of Trade for information. To my letter of inquiry they have courteously replied as follows: "In reply to your letter of the 9th inst. I am directed by the Board of Trade to state that they have been informed of nine cases of fatal accidents to employés at generating or transforming stations where high-pressure alternating currents are used, but that no instances have been reported in the case of low-pressure continuous currents." As the information received is of great public interest I trust you will see the desirability of making this known to your numerous readers.

I am, Sirs, yours truly,

Electric-avenue, S.W., May 4th, 1896. A. L. FYFE.

*** The Board of Trade have given the answer that might have been expected. To give the comparison any real value it should have been made between alternating and continuous currents having the same effective voltage. There are reasons for supposing that high-pressure continuous current of, say, 1000 volts—e.g., as at Oxford—would by its electrolytic effect prove more dangerous than a sinusoidal

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current of the same effective voltage. It is true that the regulation which limits the low-pressure alternating current-supply to 250 volts and allows 500 volts for continuous current seems to imply that the former is the more dangerous. If the Board of Trade really hold this view the grounds upon which it is based have not, so far as we are aware, ever been made public. It may be that the idea is simply a survival of an opinion founded on certain "classic" experiments of Sir W. Siemens made in the days of comparatively crude machines; and, inasmuch as there may still exist in actual work certain alternators giving a very "peaked curve"—that is to say, whose maximum electro-motive force greatly exceeds the effective electro-motive force as registered by thermal or magnetic voltmeters—the rule in question is perhaps a useful one, allowing as it does for this margin of possible danger.—ED. L.

AN APPEAL.

To the Editors of THE LANCET.

SIRS,—At the last Liverpool Assizes an action for damages was brought against a medical practitioner in Wigan (Baucher *v.* Wright) for alleged negligence in the performance of his duties as club surgeon. The plaintiff received a severely contused wound of the hand, to which the defendant gave particular attention with a good result. Owing to an opinion that the metacarpal bone had been broken and that the fracture had not been discovered by the defendant the plaintiff entered an action claiming £250 damages. The verdict of the jury without leaving the box was for the defendant; but as the plaintiff is unable to pay the defendant's costs, which amount to nearly £150, a committee has been appointed with the object of raising this amount. Of course, it is to be regretted that the defendant did not belong to a medical defence union, but as he has successfully defended an action which should never have been brought we trust an appeal to his professional brethren will not be in vain. The committee—Mr. C. M. Brady (chairman), Mr. C. R. Graham, and Dr. Benson, and myself as secretary—will be pleased to receive any subscriptions and also will be grateful if you will kindly insert this appeal in an early issue of your valuable journal.

I am, Sirs, yours faithfully,

Wigan, May 4th, 1896. WM. BERRY.

The following subscriptions have been promised or received:—

	£	s.	d.
Mr. F. A. Southam	5	5	0
Mr. Robert Jones	5	5	0
Mr. Wm. Berry	2	2	0
Dr. R. P. White	2	2	0
Mr. T. Anglor	2	2	0
Mr. Brady (Wigan)	1	1	0
Mr. Street (Haydock Lodge)	1	1	0
Dr. Wolstenholme (Pemberton)	1	1	0
Mr. Graham (Wigan) ...	1	1	0
Dr. Harris, J.P. (Chorley)	1	1	0
Mr. Monks (Wigan)	1	1	0
Mr. Beaman (Southport)	1	1	0
Mr. France (Wigan)	1	1	0
Mr. Litherland (Pemberton)	1	1	0
Dr. F. R. Mallett (Bolton)	1	1	0
Mr. Neville (Wigan)	1	0	0
Dr. Benson (Wigan)	0	10	6
Dr. Howe (Whitehouses)	0	10	6
Dr. Unsworth (Blackrod)	0	10	0
Dr. Doman (Westhoughton)	0	5	0
Mr. Tyndall (Westhoughton)	0	5	0
Dr. J. A. Rigby (Preston)	0	5	0
Dr. Brazil (Bolton)	0	5	0

THE RELIABILITY OF CLINICAL THERMOMETERS.

To the Editors of THE LANCET.

SIRS,—I was informed some time ago by the head partner of a firm of surgical instrument makers that clinical thermometers altered after two years, as a rule—viz., registered higher than they ought to do. I stupidly omitted to ask him if this applied to all thermometers, or only to those in constant use. Can you give me any information on the subject? If not, will you kindly submit the question to the readers of THE LANCET, as the subject is an important one?

I am, Sirs, faithfully yours,

Mediterranean, April 22nd, 1896. R.N.

*** All clinical thermometers are liable to read somewhat high after having the scale divided about two years, if the graduation has been made as soon as the instrument was constructed. Use has nothing to do with this, or at any rate nothing worth mentioning: the reason is that the bore of the unseasoned tube is liable to slightly contract. Messrs. Down Bros. guarantee that in none of their well-seasoned tubes will any change take place, not to the extent of one-fifth of a degree in five years. Messrs. Arnold and Sons inform us that they do not mark any tubes for graduation which have not been manufactured at least two years.—ED. L.

THE ARMY MEDICAL STAFF.

To the Editors of THE LANCET.

SIRS,—I know you have the interests of the Army Medical Staff at heart, and I therefore ask you to insert a short letter from one who, as a medical officer of over thirty years' service, must be fairly well informed on the subject on which he is writing. In the first place, I cannot imagine why army surgeons are supposed to be such very ignorant practitioners. In the Ashanti campaign of 1873 and of 1896 they proved themselves exceptionally able; in all the wars of the last forty years they have shown themselves to be not only good officers but also good medical men; in peace time the results of practice in military hospitals are, I am quite certain, as successful as in civil hospitals, and I am equally certain that the medical treatment soldiers receive in the army leaves little to complain of. Military surgeons are certainly not specialists in certain affections peculiar to women—it is quite out of their line, and always will be; neither are they the equals of the leading hospital surgeons, nor will they ever be, for they have not the enormous practice and experience these men have. We have, of course, duffers among us, and I need hardly say there are duffers in the civil community. We military surgeons who are behind the scenes know well what errors in diagnosis and feebleness of treatment frequently meet our view in civil life. I do not myself believe that discontent exists to any degree among our patients, though I am well aware that medical advice which can be obtained for nothing is very lightly valued by all classes, and I quite agree with you that it is neither fair to the patient nor to his surgeon that the latter should be frequently changed while in charge of a ward. Some changes in military service are absolutely necessary.

Now, with regard to military titles, we are not in the least ashamed of the title of "Doctor," nor are we in the least degree anxious to be taken for combatant officers; but as we lead an entirely military life, accompanying the soldier in all his campaigns, sharing to the full his hardships and dangers—for however big or small the expedition may be if it involves a risk to the soldier there is found the army surgeon ready at hand to afford help in case of trouble—we are military men in every sense of the word, though not combatant officers, and naturally desire to possess military titles, which show, not to military men only, but also to civilians with whom we associate, what rank we have earned and hold in the army. Such titles as were formerly in use do not convey this information, nor were they ever used except officially. A surgeon of one month's service and an inspector-general of thirty-five years' active service were both addressed simply as "Doctor." We object to this.

Now, in conclusion I should like to state my conviction as to the present unpopularity of the service. We are satisfied with our pay, our retirement, and rank, but the medical profession is disgusted with the abuse, the continual endeavour to degrade instead of elevate the medical service and to make its members ashamed instead of proud of it. In the service journals ridiculous and impossible yarns are fathered on medical officers such as could never have had any foundation in fact, but yet serve the purpose of raising a laugh at the service. These are the reasons why young practitioners will not come forward. Is the prospect enticing? The pay may be increased, that most questionable suggestion of short service may be adopted (the certainty of provision for life is really the only attraction the medical service has to offer), and any possible expedient may be tried, but until it becomes a career carrying with it not only all the hardships and dangers of military life, but also some of its prestige, competitors of a desirable class for commissions in the Army Medical Staff will never be obtained. The marvel to me is that, in spite of the treatment this branch of the service has for years received, medical officers can be found willing to throw away their lives cheerfully at the call of duty. I wonder if our opponents are aware that the fact was elicited at a Royal

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Commission which inquired into these matters some few years ago—and whose suggestions by-the-bye, as they were favourable to the medical men, were never carried out—that the mortality among army surgeons was nearly double that of combatant officers? I do not think young medical men fear death as much as most other people, yet this can hardly be considered an additional inducement to enter an unpopular service. I am quite convinced that the endeavour to deprive army surgeons of their military rank earned by hard service in the field and to make them, as General Buller expressed it in his recent speech at Netley, merely an annexe to the army is at the bottom of the prevalent discontent, and until this is removed we shall never get good men to join the ranks of the Army Medical Staff.

I am, Sirs, yours faithfully,

April 17th, 1896. BRIGADE-SURGEON, A.M.S.

THE BATTLE OF THE CLUBS.—XXIX.[1]

(FROM OUR SPECIAL COMMISSIONER.)

(*Continued from p. 1171.*)

SHEFFIELD:—AN ANCIENT MEDICAL SOCIETY.—WORKMEN SWEATERS.—THE OLD GRIEVANCES.—PROBABLE FORMATION OF A MEDICAL UNION.

THE medical profession at Sheffield should encounter but little difficulty in forming a strong medical union to deal with ethical and economical questions. For social and scientific purposes the profession has already been united, and this for many years. There is still a minute-book extant which describes the fourteenth annual meeting of the Medico-Chirurgical Society of Sheffield held on Oct. 12th, 1848, so that the society was evidently founded so far back as the year 1834. The very age, however, of the society renders it more than usually difficult to depart from its customs and habits. Consequently it has very generally been decided that instead of extending the programme of the old organisation a new society must be created, but such an effort cannot be successful unless the old society lends active assistance. The Sheffield Medico-Chirurgical Society now numbers from 170 to 180 members and it may be said that almost every respectable practitioner in the town and neighbourhood belongs to this organisation; indeed, it would be difficult to find a town where the profession is so thoroughly united. Unfortunately this union has only been useful in promoting social intercourse, in fostering a friendly feeling between the members of the profession and in facilitating their medical researches and studies. Nothing has been done in the defence of their material interests. Yet we find here in Sheffield, as in other centres, the same complaint; the same exploitation of medical men by friendly societies and assurance companies as described with regard to other towns. Thus one of the first practitioners on whom I called related to me that he had recently sent to one of his patients, who lived at some distance from his surgery, a bill for £5 for medical attendance. A little time afterwards he received a letter from a life insurance company. The canvasser of this company had without any authority whatsoever given the name of my informant as the general medical attendant of the company, and the company now wrote to say that they thought three guineas would be an ample remuneration for the services rendered. Of course the medical practitioner protested that he knew nothing about the insurance company in question and could not admit that they had any right to interfere in his affairs; but his patient was at once surprised and disappointed to find that though he had insured his life he would have to pay the usual medical fees. Other men might have consented to the reduction in the hope that the insurance company would send them other patients, and have thus helped to bring about a general reduction in the fees usually given for medical services. It is a serious matter if canvassers of insurance companies are going to make use of the names of medical men without informing them of the fact and obtaining their authorisation.

Several of the friendly societies at Sheffield have formed an amalgamation and opened a dispensary of their own, where they used to employ a medical officer at, I believe, a salary of £200 a year. But the work gave rise to so many disputes that the medical officer left them, took away a number of their members, and started in private practice on his own account. His successors received a smaller salary, but they were allowed to engage in private practice. Nevertheless other disputes arose. Abuses are of course frequent. Thus a family who for several years had paid the usual 2*s.* 6*d.* per visit joined the Druids and now only pay 3*s.* a year. Practitioners who are officers of friendly societies often experience unpleasant surprises. One of these medical officers related to me that he had been called out to see a tradesman. For some considerable time he had to pay two visits per day. A consultant was called in to whom the tradesman gave a guinea fee. Then it appeared that the tradesman belonged to a friendly society and had recently caused his name to be transferred from the list of his usual attendant to the list of the medical officer who had been attending him so assiduously twice a day. Instead of about 5*s.* a day, which the tradesman could well afford to pay, my informant was destined to receive only 3*s.* a year. On another occasion he was called in to see a man who certainly had started in business in a very small way, but had prospered and now drove into town in his own carriage. When this patient died he left about £80,000. At first the medical officer treated this wealthy individual as if he was a private patient. Then he heard that he was a member of a club and did not propose to give any fees whatsoever. As medical officer of the club in question the medical man was obliged to continue the treatment, but he thought that, under the circumstances, he need not take the trouble of wrapping up the medicine bottles in paper. This it appears greatly offended the patient, who consequently did not come for any more consultations. Here, then, was a man possessing some £80,000 who was quite contented to go on paying only 3*s.* a year for medical attendance and yet was offended because he was treated like workmen and the poor people who alone have a right to demand medical attendance at such reduced rates.

One great difficulty in Sheffield arises out of the prevalence of the sweating system. In the cutlery trade foremen and other workmen contract for a certain amount of work. They only do a portion of this work themselves and give the rest out to other workers, charging them a commission for the work provided. It thus occurs that this sub-contractor or sweater often makes five and six times more out of the commissions he sweats out of the workers under him than he obtains for the work he does with his own hands. Apparently he is an artisan able to earn, perhaps, 30*s.* or 40*s.* a week by his work, and as such gains admittance as a member of a friendly society and claims medical aid when he is ill. But a case was pointed out to me of an artisan who, apart from his normal wages, secured in commissions £20 a week. These men dress as workmen, live in workmen's cottages, are apparently poor, hard-working men, but they drink champagne with their lunch. How can a wage limit be applied to this class? They are careful to conceal what they earn in the form of commissions. One such "workman" was pointed out to me who possessed £1000 in cash and had bought a considerable amount of house property. He was a member of a friendly society and would be very indignant indeed if it were suggested that he, "a poor working man," should pay the usual medical fees. He might live in a workman's cottage and wear cheap workmen's

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Aug. 24th, 1895, Brussels; (2) Aug. 31st, 1895, Brussels; (3) Sept. 21st, 1895, Portsmouth; (4) Sept. 28th, 1895, Portsmouth; (5) Oct. 5th, 1895, Eastbourne; (6) Oct. 12th, 1895, Lincoln; (7) Oct. 26th, 1895, Lincoln; (8) Nov. 2nd, 1895, Grimsby; (9) Nov. 9th, 1895, Bexhill-on-Sea; (10) Nov. 16th, 1895, Hull; (11) Nov. 23rd, 1895, Hull; (12) Dec. 7th, 1895, York; (13) Dec. 14th, 1895, Northampton; (14) Dec. 21st, 1895, Fermanagh Medico-Ethical Association; (15) Dec. 28th, 1895, Northampton; (16) Jan. 4th, 1896, Birmingham; (17) Jan. 18th, 1896, Birmingham; (18) Jan. 25th, 1896, Club Practices in Rural and Mining Districts; (19) Feb. 1st, 1896, The Formation of a Provident Medical Association at Folkestone; (20) Feb. 8th, 1896, The Manchester Medical Guild and Medical Aid Associations; (21) Feb. 15th, 1896, The Leicester and Leicestershire Provident Dispensary; (22) Feb. 22nd, 1896, The Organisation of the Profession at Leicester; (23) March 7th, 1896, Loughborough: Local Efforts Defeated by Consultants from Neighbouring Towns; (24) March 14th, 1896, Medical Aid Societies in Small Heath; Medical Clubs at Stockport; (25) March 21st, 1896, General Meeting of the Profession and the Formation of a Union at Nottingham; (26) April 4th, 1896, Nottingham; the London and Manchester Industrial Assurance Company, Limited; the Public-house Medical Aid Clubs; United Action at Lincoln; (27) April 11th, 1896, Leicester and Wolverhampton; a Hastings Dispensary wound up; (28) April 25th, 1896, Walsall, Formation of a Medical Union; the Medical Profession and the Friendly Societies; Trade and Medicine; the Family Clubs; Women's Public-house Clubs.

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clothes, but his medical attendant, though not nearly so wealthy, was compelled to live in an expensive villa, keep a carriage, and wear a frock-coat and tall hat. This wealthy working man would have thought himself badly used if his club medical attendant had come to see him on foot and had been shabbily dressed. He would not have had confidence, and would probably hesitate to take the medicine sent. Several members of the friendly societies are tradesmen, and this is notably the case with regard to the Druids, one of the latter being a cab proprietor. Even the secretaries of the clubs are beginning to see that the pay given to the medical officers is insufficient, and, to judge from the remarks made, some slight increase might be obtained from several of the societies; but the necessity of imposing a wage limit is far more important.

Several practitioners complained of the habit very prevalent at Sheffield of changing medical men. During the healthy and active part of a man's life he will live near to his work, and but rarely requires the services of his club medical officer. But when he becomes old and his health begins to give way he will probably go and live in the outskirts of the town, and then will want to have his name transferred to the list of some other officer living nearer his new abode. Thus some club medical officers get an altogether unfair proportion of invalid members on their list. It has been urged that when a member of a club wants to make this change he should be examined by the new medical attendant and accepted by the latter only if he is in a healthy condition. This suggestion is perhaps not very practical, for it would place members of the clubs at a very great disadvantage when they want to remove. Still, from the practitioner's point of view it does not seem fair that one medical officer should have the majority of his club members aged from twenty to fifty years, while in a suburban district there should be an extraordinary proportion of club members who are more than fifty years old. It is very certain that the suburban practitioner will have much more work to do for the same pay, and this will be spread over a much larger space. In the present state of affairs it is difficult to see how this problem can be solved satisfactorily for both parties, but the grievance would disappear naturally and without effort if a wage limit was established. Those club members who are able in more advanced years to remove from the centre of the town to the suburbs are in many instances members whose financial circumstances have so improved that the application of a wage limit would remove them altogether from club practice. They would go to increase the private practice of suburban medical men. This would be so advantageous to the suburban practitioners as to constitute an ample compensation for the few club members who, though removing to the suburbs, might still be so poor as to justify their remaining in their clubs.

To deal with these questions a medical union must be formed at Sheffield. The profession needs protection against the touting extensively organised by the life assurance companies. Then the medical men who accept fees of 6*d*. and 1*s*. constitute also a great grievance.

Such methods of practice will, however, under the stress of competition continue and increase if a strong medical union is not formed to deal with all such questions. Some efforts have already been made to constitute such a union. The Sheffield Medico-Chirurgical Society has been asked to take the initiative and convoke a meeting so as to form a union. The reply was that every possible help would be given, but that the club medical officers and those who were themselves the principal sufferers should take the initiative in convoking the meeting; the leaders of the profession were, however, ready to associate themselves with the movement, to speak at the meeting, and in any other way help the cause forward. It may be said, therefore, that there is a general awakening at Sheffield and that the time is not far distant when this town will join with its neighbours in seeking to constitute a local union.

THE BATTLE OF THE CLUBS AT LINCOLN.

IN THE LANCET of April 4th we published a resolution and scale of fees which had been adopted by the profession in Lincoln as those which ought to rule in medical clubs. This document was duly forwarded to the two medical institutes. Replies have been received as follows:—

(1)

Oddfellows' Medical Institute, Unity-square, Lincoln.
April 11th, 1896.

DEAR SIR,—I am directed by the committee of the above Institute to forward you copy of resolution passed by them at a special meeting held last night.

Yours truly,
WM. COULSON, Secretary.

"This committee, having received a letter from the medical practitioners of Lincoln containing certain resolutions which they assert should be the future condition of membership of this institution, resolved—'That we hereby refuse either to accept the conditions or to recognise their right to dictate them.'"

(2)

Lincoln United Friendly Societies Dispensary,
April 17th, 1896.

DEAR SIR,—I am requested to forward to you the following resolution which was passed by the delegates of the two Medical Aid Associations of Lincoln at their meeting last evening.—Yours truly,
WM. BAVIN.

Resolved: "That this meeting, having considered the character and effect of the resolutions therein, hereby declares its inability to recognise in any way the manifesto of the medical men of Lincoln or any outside pressure attempted to be put upon the committee of Friendly Societies."

It will be noted that Messrs. Coulson and Bavin do not err upon the side of courtesy. As a consequence of these replies the following letter of resignation was sent in and signed by three of the four medical men attached to the institutions in question:—

LETTER OF RESIGNATION.

We regret your refusal to accept the principles put forward in the resolutions passed at the meeting of practitioners held on March 30th last.

Under these circumstances we are pledged to tender our resignation, which we beg you to accept for this day month, unless in the meanwhile you should agree to alterations on those lines which have been submitted to you.

April 22nd, 1896.

It will be noticed that we say this letter was signed by three out of four medical men. The fourth, although his name appears in the manifesto published in our columns of April 4th; although he signed an agreement dated March 28th pledging himself to act in unity with his colleagues: although he denied at a meeting held upon April 11th that he was not acting in unity with his professional brethren, and although he expressed no ill-will towards the gentlemen who had questioned his position but shook hands with him—yet, in face of all this, he has declined to send in his resignation with the others. He still holds his post. We hope that Mr. P. W. Young will see the curious position in which he stands—that of a nominal friend and virtual foe. We appeal to him to fall into line with his colleagues. His present course will do him no good whatever, though it may temporarily impede the course of justice to his professional brethren.

We congratulate the three medical men on their very proper stand against the arbitrary conduct of the medical institutes. They have acted for the good of the profession.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester and Salford Sewage.

THE adjourned case of the Mersey and Irwell Joint Committee against the Salford corporation for polluting the Ship Canal came before the Salford County-court on the 20th ult. The counsel for the corporation said the system for treating the sewage had been decided on, and application had been made to the Local Government Board to borrow £50,000 to carry out the works and to hold an inquiry at the earliest possible date in order that the necessary sanction may be obtained, so that the work proposed may be begun without delay. The case was adjourned till the result of the application to the Local Government Board—a body not always very speedy in its proceedings—was known. At the meeting of the Joint Committee yesterday Mr. R. A. Tatton, the chief inspector, reported as regards the treatment of Manchester sewage that since the last adjournment thirty acres of land have been brought into operation as a filtration area, but the amount of sewage dealt with by this area is only about 2,000,000 gallons per day out of a total dry weather flow of 14,000,000 gallons, the remainder being treated by precipitation only. It is expected that "the whole of the sewage will be connected up towards the end of the summer of this year." Sir Henry Roscoe, speaking after a report respecting certain analyses of effluents had been read, stated that experience showed that mere chemical precipitation—whether at such works as those of fellmongers, breweries, tanneries, or in the case of the sewage of a large town—would not do, and they must have either land filtration or artificial filtration.

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He was glad to find that the chemical sub-committee had appointed a deputation to interview a number of fellmongers with regard to the serious pollution arising from their works, and to consider and advise as to the most satisfactory methods of dealing with the effluents from these places. A member of the committee said the condition of the Irwell had considerably improved, and Alderman Hopkinson was told that fish were coming up the Ship Canal as far as Latchford.

Special Treatment for Aged Poor.

The Manchester board of guardians deserve credit for endeavouring to treat those in their charge with humanity and discrimination. At the meeting a fortnight since Alderman McDougall moved a resolution to the effect that a committee should "consider and report as to the desirability and method of providing special accommodation and treatment for deserving aged persons; that until the method is decided upon and has been in operation for some time the selection should be made from inmates of the Crumpsall Workhouse; and that in considering such arrangements ordinary clothes should be provided and, if possible, periods of daily liberty be granted." The wording seems a little involved, but the intention is obvious, and if properly safeguarded the scheme would do much to brighten the closing days of many whose lines have been none too prosperous.

Hospital Saturday.

In a letter to the local papers Mr. Fred. Scott, the secretary to the Manchester Hospital Sunday and Saturday Fund and the Red Cross Society, corrects an impression likely to have an injurious effect. A delegate from a local town stated that in his district it was thought that the collections benefited only one or two of the principal hospitals in Manchester and Salford. Instead of this being the case "no less than twenty-one hospitals and other medical charities share in the proceeds of these collections, including hospitals for the treatment of special complaints, such as the Royal Eye Hospital, the Hospitals for Consumption and Skin Diseases, the Ear Institution, St. Mary's, Southern and Clinical Hospitals, the Cancer Pavilion, and other institutions at which large numbers of patients from surrounding towns are treated as freely as residents in Manchester and Salford." He appeals, therefore, to those living in the numerous towns in the surrounding district to support Manchester and Salford hospitals. The Red Cross Society is the working men's auxiliary to the Hospital Saturday and Sunday Fund. It has taken up the work of increasing the funds of the medical charities enthusiastically and hopes to effect a large increase in the sum contributed on Hospital Saturday, the arrangements for which day are under the special control of this new organisation.

Dog Muzzling.

For a long time past a good deal of feeling and irritation has been shown in this neighbourhood both by frequent letters to the papers and otherwise with regard to the sometimes apparently arbitrary enforcement of the muzzling order in certain districts, while in adjoining districts the dogs run free. If the muzzling were efficient, if it were carried out over the whole island for a period long enough to cover any possible length of incubation, and if the importation of dogs were absolutely prevented, there would be some compliance with common-sense requirements. But with the various ingenious devices adopted by many owners for preventing the efficiency of the muzzle and the frequent accident of the muzzle getting loose protection cannot always be relied upon. This partial enforcement is obviously irrational, for a mad dog often travels far and does not respect artificial boundaries, and it is no doubt felt to be so both by the muzzled and the unmuzzled dog when these sensible creatures meet on the imaginary line dividing the districts, the one to complain to, and the other to commiserate with, his friend. In a report of the Watch Committee of the Manchester City Council it is stated that under the muzzling order of February, 1895, 1008 summonses were issued against owners of dogs, 944 of whom were fined and 64 cases discharged. Most of these summonses were for dogs running out into the road unmuzzled, a thing difficult to prevent if they are to be allowed any freedom at all. But apart from the muzzling order an important and valuable work has been carried out systematically by the police in the impounding and destruction of ownerless and worthless dogs and the preservation and restoration of lost dogs to their owners. During last year 3331 stray dogs were brought by the police to the city pound and 598 by the owners. Of this total of 3929 219 were claimed, 253 were sold, 3439 were drowned, and 18 were waiting events. In January and February of this year 168 were brought by their owners to be destroyed for old age, disease, or savage and uncertain temper, and altogether more than 500 were impounded. There is usually a greater demand for the purchase of good dogs at the pound than can be met. They are sold at 2*s.* 6*d.* each, the purchaser giving an undertaking to restore to the owner, if required, on payment of the purchaser's expenses. The Watch Committee, after considering the subject, recommend: "(1) That the muzzling of dogs should be continued, subject to its being relaxed or dispensed with in the case of a dog which wears a collar with the owner's name and address and an official tablet, and is registered at one of the divisional police-stations; (2) that the existing muzzling order should be amended accordingly; (3) that the existing exemption in favour of sporting dogs be removed; (4) that all dogs be muzzled which are not registered and do not wear name-collars and tablets; and (5) that all dogs which do not comply with the regulation shall be destroyed or sold if not claimed within three days where the owner is not known, or within two, after notice, where the owner is known." There may be some difficulty about No. 3, and No. 5 implies a freedom of volition and throws on the dog a responsibility which the Watch Committee in its wisdom perhaps scarcely intended. If, however, this system of registration and supervision were universally carried out, and all stray dogs were impounded and, if need be, destroyed, cases of rabies would be less frequent and sooner detected, with a corresponding increase in the protection of the people against a frightful danger.

May 5th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Convocation of the University of Durham at Newcastle-upon-Tyne.

A CONVOCATION of the University of Durham was held in Newcastle-upon-Tyne on Saturday, April 25th. The ceremony took place in the library of the College of Medicine, and the Warden of the University, Dean Kitchen, presided. Honorary degrees were conferred upon the Lord Bishop of Newcastle, Dean Lukins Baronian, the Rev. Dr. Dallinger, Professor Arnison, Principal Gurney, Mr. Richard Howse, and Sir David Dale, Bart. Dr. David B. Lees, of St. Mary's Hospital, London, was admitted *ad eundem* M.D., and the Vicar of Newcastle, the Rev. Canon Lister, and the Rev. Canon Pennyfather *ad eundem* M.A. Some fifty ordinary degrees in medicine and surgery were also conferred. Great public interest was taken in this the first convocation held in Newcastle-upon-Tyne. The mayor and corporation attended in state and the large room was crowded with spectators. The undergraduates were, as usual, very much in evidence. The day was beautifully fine and the proceedings—owing in no small degree to the energy of Professor R. Howden, who is practically the dean of the Medical Faculty—passed off most satisfactorily.

The Bishop of Newcastle.

The Bishop of Newcastle preached last Sunday in the chapel of the Royal Infirmary to the inmates of the institution. Dr. Jacobs has not been long in the north, but he has on many occasions already shown his sympathy with the medical profession and the work of the medical charities of the city. He took a very active interest in the management of the hospital at Portsmouth, and it is to be hoped an opportunity will soon be afforded him of becoming connected with the Royal Infirmary here.

Typhoid Fever from Eating Raw Mussels.

In the River Blyth there are mussel-beds which supply a cheap and much-appreciated luxury to the poorer inhabitants of the populous town of Blyth. Unfortunately, close to them several sewers discharge their contents into the river. The medical officers of Bedlington and Cowpen report that the eating of mussels from these beds is a possible source of typhoid fever in the neighbourhood and the Board of Trade was approached upon the subject. Thence it was referred to the Sea Fisheries Committee for Northumberland and dismissed without remark. The Blyth port sanitary authority, on the

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advice of its medical officer, who was of opinion no infection could arise on account of the process to which the sewage was subjected, will take no action. Mr. Laing, in his annual report to the Cowpen council, declares emphatically that he has traced some of the cases of typhoid fever to the eating of uncooked mussels and urges the destruction of the mussel beds. Mr. Laing's statement deserves careful consideration and ought to be thoroughly considered and the issue should be determined. It should not be a matter of indifference as to whether typhoid fever is being spread or not by the eating of mussels rendered unwholesome by sewage.

Stoppage of the Rainton Pits.

Work has now ceased at these pits and the men's gear and the horses have been withdrawn. Notice has been given to the pitmen that they must either pay rent or vacate their houses on May 13th. They profess to think this very hard, and at a recent meeting it was stated by one of them that he believed Lord Londonderry would rather pay six or nine months' rent for them than evict them, though his doing so would cause him to lose another £1000. Last year Lord Londonderry lost some £15,000 by working these collieries. At Seaton Delaval, a pit village in Northumberland, a coöperative store last year made only 15 per cent. and in consequence the wages of the employés have been reduced. The store is owned by workmen, the Rainton pits by a nobleman. We are told that coöperation will solve the difficulties between capital and labour. No one suffers more from the unfortunate disputes between capital and labour than members of the medical profession, who, when a pit is stopped or a strike takes place, have to work without remuneration and are often, if not ruined, seriously crippled for years.

Newcastle-upon-Tyne, May 5th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Lay Press and the Midlothian Medical Officer of Health.

THE official reports of a public servant are, of course, open to public criticism, and the reports of medical officers of health need have no exemption claimed for them even from the lay press. It is, however, highly desirable that when the lay press criticises it should do so through a person acquainted with the present state of knowledge on sanitary matters. The neglect of this precaution is detrimental to the public interest, because erroneous views on matters seriously affecting the public health are thereby promulgated or confirmed. The medical officer of health for Midlothian and the adjoining counties, Dr. W. J. Brock, in his annual report refers to several matters of great importance from the public health standpoint. He refers to the inefficiency of the chemical analysis of drinking water and says it is "*practically* of little use" as it is powerless to detect the germs of disease which the water may contain. He also refers to the town refuse traffic being a source of much annoyance and adds: "Although the city refuse is not supposed to contain human excreta a certain amount is always present. It, however, contains dust from the skins of those affected with scarlet fever and dried sputa from the respiratory tracts of those affected with diphtheria, measles, and tuberculosis; and it is not surprising that on its coming to a district there at once is found an unusual number of sore-throats if not one or other of the diseases mentioned. Is it not, too, a very likely means of spreading tubercular disease, not only to man, but to the lower animals?" At another part of his report, in referring to an outbreak of typhoid fever the source of which could not be discovered, he says, "There is a cause always to be thought of—namely, importation of infection through goods, such as aerated waters, greengroceries, &c." All these are propositions accepted by the scientific sanitarian, and it is most desirable that the public mind should be impressed with their accuracy and that the hands of the public health medical officers should be upheld in their endeavours to make them known to local authorities and to the general public. And yet while this is so we regret to see an Edinburgh newspaper, ever active to expose what may interest the public, adversely criticising these statements and making comments upon them which certainly convey to the public the impression that the medical officer of health is wrong and the writer of the article referred to right. The state of the writer's knowledge may be judged by the following: "The best medical, veterinary, and sanitary authorities are agreed that the germs of phthisis do not retain their vitality for many seconds after exposure to air and particularly to sunlight." There might be no objection to the writer of this believing that which he writes, but it is to be regretted that such erroneous doctrines should be thrown broadcast amongst a community. The efforts of sanitarians and physicians to get the public to realise the danger of dried tuberculous sputum is much counteracted by ill-informed statements of this nature in the lay press, and we regret when a newspaper is led by any of its contributors into such a false position as the above quotation indicates. It is out of place here to examine at length the objectionable article, for its value can be estimated by the above quotation. We may, however, add that the statements and views of the medical officer are by no means "remarkable" in the sense meant by his critic, but are the accepted doctrines of enlightened sanitation.

Glasgow Medico-Chirurgical Society.

This society met on the 1st inst., Dr. Walker Downie being in the chair. Dr. T. K. Dalziel showed a child aged three years the subject of Spina Bifida. At three months the tumour was injected with Morton's fluid, and in time its cystic character completely disappeared, leaving a firm, shrunken mass. Evidences of involvement of nerve became increasingly conspicuous. Paralysis of the lower limbs appeared, with loss of control over the bladder and rectum and ulceration extending deeply into each ischio-rectal fossa. It was, therefore, decided to cut down on the tumour with a view to see if the nerves could be freed from pressure. After removing a superficial mass of fibrous and fatty tissue the membranes were opened and the nerve roots were found to be involved in a quantity of cicatricial tissue. To remove this it was necessary to divide the nerve roots in the cauda equina and the divided ends of the roots were afterwards stitched. No ill results followed the operation except a high temperature which lasted only a few hours. For some time no improvement was produced, but latterly the efficiency of the bladder had increased, the ulcers had healed, and there was a favourable movement in respect of the paralysis. Dr. Stirton read a paper on Vaginal *versus* Abdominal Surgery in the treatment of various pelvic conditions. He contended that a number of diseased conditions in which it was the custom to open the abdomen could be far more safely attacked through the vagina, and he quoted in support of his position records from his wards in the Royal Infirmary in which he had successfully treated by puncture from the vagina cases of pyosalpinx, hæmatocele, extra-uterine pregnancy, and cysts of the broad ligament. The paper led to a somewhat animated discussion, in which Dr. Samuel Sloan, Dr. Edgar, Dr. Renton, and Dr. Rutherfurd took part. The latter questioned very decidedly the wisdom of puncturing a parovarian cyst without subsequent removal of the cyst wall. Dr. T. K. Monro showed photographs illustrating the Value of the Thyroid Treatment in cases of Myxœdema. Dr. Henry Rutherfurd showed two series of photographs illustrating Arrested Development of Bone. In one the arrest of development was due to acute arthritis (epiphysitis) occurring in infancy; in the other it was associated with cartilaginous tumours.

The Antitoxin Treatment of Diphtheria in Glasgow.

In the current number of the *Glasgow Medical Journal* Dr. Ernest L. Marsh publishes an elaborate series of statistical tables showing the influence of the antitoxin treatment on the cases of diphtheria admitted to the City of Glasgow Fever Hospital during 1895. The admissions numbered 179, and of these 137 were treated by antitoxic serum, the remaining 42 being either mild infections (38 cases) or profound toxæmias (4 cases) moribund on admission. The fatal cases numbered 25, giving on the admissions a percentage of 14 deaths. In the five years previous to 1895 the cases of diphtheria had never given a less percentage than 35·5 deaths in any one year, so that the improvement is a very impressive one. Of the 179 patients in 1895 tracheotomy was needed in 29, and of these 10 died, giving a mortality of 34·5 per cent. Dr. Marsh draws special attention to these cases and contrasts the low death-rate with the high mortality of the tracheotomy cases in previous years—viz., 76 2 per cent. (42 cases) in 1893 and 86·9 per

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cent. (23 cases) in 1894. The article is a most complete one and is undoubtedly a very valuable contribution to the subject.

May 5th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Muzzling of Dogs in Dublin.

A RABIES scare exists in Dublin as elsewhere and is just now a subject of much interesting controversy. As regards the muzzling regulation, which has now been adopted by over eighty of the local country authorities in Ireland, the greatest difference of opinion prevails in Dublin. The South Dublin Union has approved of it and it is now enforced in that district, while the guardians of the North Dublin Union hold, "more Hibernico," a different view. The consequence is that it is not uncommon to see owners of dogs removing their muzzles as they cross over Carlisle bridge. Dr. Henry Fitzgibbon attended a recent meeting of the Guardians of the South Dublin Union and protested strongly against the muzzling of dogs as being calculated to produce rabies and to develop in rabid dogs a biting tendency. He failed, however, to have the order rescinded, although he utilised more than a column of the *Irish Times* in putting forward his views, which, as he is known to be a philanthropist and sportsman as well as a surgeon, carry a good deal of weight. "No muzzle," he says, "has yet been invented which is really effectual, and wire muzzles can all be dragged off by a dog's claws unless the strap round the animal's neck is almost tight enough to choke him." Dr. Fitzgibbon says, further, that this fact is so well known to dog owners that they do not attempt to really muzzle their dogs, but merely apply an ornamental contrivance to satisfy the police. A real muzzle is, moreover, in his opinion, a cause of madness, rabies sometimes originating without contact with another diseased animal. He gives three very interesting instances in support of this statement from his own experience, and concludes by strongly advocating the careful registration of all dogs, and obliging each of them to wear and be distinguished by a collar with a number attached. It is satisfactory to note from a statement of Mr. Gerald Balfour in the House of Commons last week that a Departmental Committee of the Board of Agriculture is being appointed to inquire into the working of the laws relating to dogs, and that the Irish Veterinary Department would be represented on it.

Royal College of Surgeons in Ireland.

The vacancy in the College Council was filled on the 4th inst. by the election of Dr. J. J. Cranny. The examining courts for the next year have just been elected.

Londonderry Eye, Ear, and Throat Hospital.

On April 28th the Lord Bishop of Derry and Raphoe opened a new Eye, Ear, and Throat Hospital for Londonderry and the north-west portions of Ireland. For some time Mr. Donaldson and other medical men have carried on this special work in premises in Hawkin-street, but as these buildings were hampered it was decided to provide a new building, which is situated in Rudge-street. This new hospital contains patients' waiting-rooms, consulting-rooms specially designed for the testing of sight, caretaker's room, and kitchen, all on the ground floor. Overhead are the operating-room and the two main wards—male and female—each capable of accommodating six beds. The nurses' rooms are on the top floor. Special lavatory fittings have been placed in the operating-rooms, and altogether the new hospital is in every respect most complete and commodious.

Epidemic of Measles in Newtownards.

At present there is an epidemic of measles in Newtownards. The matter came before the School Attendance Committee at their meeting on April 30th, and it was reported that the sanitary officer had gone to the houses where the disease exists and warned the people not to send their children to school. It was decided not to close the schools yet.

Local Government Board Inquiry at Downpatrick.

At a meeting of the Downpatrick board of guardians held on May 2nd a report was read from the Local Government Board in reference to the inquiry recently held by their inspector, Dr. Clibborn, into the circumstances attending the death of a dispensary patient in Downpatrick during the time the medical officer was required at the Down Assizes. The Local Government Board think the medical officer showed a want of consideration in the case that was not creditable to him, and while he no doubt complied with the regulations, yet his action in not visiting the sick man was to be disapproved of, although it was probable medical assistance would not have availed in the case. They held that the relieving officer deserved censure for not attending at the dispensary on March 13th as directed by the medical officer, and they had caused the facts elicited at the inquiry to be noted against him in the records of the office. The Local Government Board added it was much to be regretted that the guardians did not formally sanction the arrangements proposed to be made as to a medical substitute during the absence of their medical officer.

May 6th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

A Strange Endemic.

A CURIOUS incident, which occasioned considerable disquietude amongst the inhabitants, occurred recently at Barfleur (Manche). A young girl, a native of Barfleur, came on a visit to her parents from Cherbourg, where she was in service. During her stay at home she consulted a medical man with a view of ridding herself of a parasite which she had brought from Cherbourg, and which, having multiplied with prodigious rapidity, had infested the house of the patient's parents and also that of a relative. Sulphur was burnt in the house, and the linen and flooring were washed with sublimate solution. The plague continuing with undiminished intensity the neighbours ceased visiting the infected houses and sent the denizens thereof "to Coventry." The authorities then took the matter in hand and delegated M. Edmond Perrier, Member of the Institute and Professor at the Museum of Natural History of Paris, to investigate this mysterious malady. He soon discovered that the *origo mali* was the Glyciphagus domesticus, an acarus closely allied to the acarus scabiei, but, unlike the latter, provoking scarcely any itching or cutaneous lesions in its hosts. This acarus is, it appears, very commonly present in houses, and it is frequently met with in the interstices of hair-combs which are badly kept. It multiplies especially in houses in which organic débris accumulate. In groceries an acarus, the Glyciphagus prunorum, which is perhaps identical with the Glyciphagus domesticus, often flourishes on dried fruits, such as prunes and figs. Feeding exclusively on organic matter it is only a pseudo-parasite. Besides the Glyciphagus domesticus there was discovered in these same contaminated houses at Barfleur a false scorpion, the othonius, which had invaded them in the train of the first-named parasite. The othonius, otherwise called the *pince des bibliothèques*, is the declared enemy of the Glyciphagus domesticus, upon which it feeds exclusively. Three millimetres long, and resembling a tailless scorpion, it is recognisable by its long fore-claws shaped liked the lobster's. The young Barfleuraise had at Cherbourg been a servant at a pork-butcher's, and it was probably at the *charcuterie* that she became infected. Her scalp was so full of acari that when she shook her head a cloud of them fell on her shoulders. Her father, a respectable fisherman, had his eyebrows attacked, the only symptom being a slight irritation. A garment left by the girl at an aunt's had sufficed to infect an exceptionally clean house. M. Perrier ordered the evacuation of the houses and sulphur to be burnt during six hours in the sealed-up rooms, with the result of killing every acarus, as also the othonius. An eau de Cologne and sublimate lotion relieved the persons of the sufferers of the parasite, although the treatment had to be prolonged in the case of the girl. The case is interesting in that the acarus, caught at a pork-butcher's, had lain dormant for some time on the hair-comb, and transferred thence to the scalp had thriven therein for a period of eighteen months and invaded consecutively the garments. From the garments the parasite had spread to two houses and their inhabitants and the othonius had promptly followed in pursuit.

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The Prophylactic Employment of Marmorek's Serum before Cataract Extraction in Diabetics.

M. Boucheron[1] had recently under his care a man aged seventy years who, passing 46 grammes of sugar per litre of urine, was affected with a streptococcic disease—lymphangitis of the foot and leg. At M. Marmorek's suggestion 20 grammes of his anti-streptococcic serum were injected. Taking advantage of the consequent attenuation of the vitality of the streptococcus a cataract was extracted, strict antisepsis being, of course, observed. The corneal wound healed by first intention and the lymphangitis soon disappeared. This preventive treatment may prove useful previously to operation on a diabetic patient in whom suppurative processes due to streptococcic invasion are very prone to occur.

The Campaign against Foreign Medical Men.

The *Médecine Moderne* of May 2nd informs us that the *internes* in medicine and surgery of the Paris hospitals have almost unanimously—218 "yeas" against 11 "noes"—signed the following petition: "1. Any foreigner may be allowed to enter (*prendre ses inscriptions*) in a French faculty of medicine, but the degree of M.D. can only be accorded him *à titre d'étranger*, without conferring any right to practise in France. 2. No foreigner can practise in France unless he be naturalised a Frenchman, have performed military service in the French army, and be provided with the degree of *bachelier*." When we consider that a French M.D. is allowed to practise his art unmolested in our own free England we cannot but wonder that educated young men—the cream of the French *jeunesse médicale*—should lend themselves to the propagation of such illiberal proposals. I wonder what comment landlords of hotels and boarding houses and the tradesmen in general of French health resorts will make on a petition the application of which would hardly be favourable to their interests. We may perhaps treat the above move as the outcome of youthful exuberance, but that a strong anti-foreign current has set in amongst members of the profession in this country is a melancholy fact. Were our French *confrères* more frequent visitors to England they would learn that the travelling Briton prefers, rightly or wrongly, to be attended in case of illness by an English physician, and he would then not allow his common sense to be over-ruled by arguments dictated by his supposed commercial interests. The English practitioners who would renounce their nationality for the sake of being allowed to practise in France are, I am sure, in a hopeless minority. The adoption of protectionist measures could therefore only have the effect of stemming the tide of English visitors to French health stations. The Frenchman who cannot be accused of indifference to his pecuniary interests would then claim loudly a return to the present *régime*, which is in accordance with the liberal principles that should prevail in every civilised country.

May 5th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Serum Treatment of Scarlet Fever.

A PAPER on the Treatment of Scarlet Fever by Dr. Marmorek's Anti-streptococcic Serum has been read before the Berlin Medical Society by Professor Baginsky, who said that streptococci are often found in scarlet fever, especially in complications and in the septic form of the disease. Dr. Marmorek has not discovered the specific antitoxin for scarlet fever, but he has found that the serum of animals immunised in the usual way by virulent cultures of streptococci has immunising effects on animals submitted to experiment and a beneficial influence in streptococcic diseases, such as erysipelas and cellulitis. It is inoperative against the special virus of scarlet fever, but Dr. Marmorek believes that it is useful in the streptococcic complications of that disease, if given in repeated and sufficiently large doses till the temperature becomes normal. He has in Paris used this treatment for ninety-six cases of scarlet fever in which streptococci were found. Loeffler's bacillus being also present in seventeen of them. The first injections for the children were 10 c.c., but the quantity was afterwards raised to 40 and 80 c.c.; in one instance of pneumonia as much as 90 c.c. (equal to 3¼ fluid ounces) were successfully given. The antitoxin had a specially favourable influence on inflamed lymphatic glands, otitis, and tonsillitis, suppuration being sometimes prevented. Professor Baginsky then gave an account of the results obtained by himself in the treatment of 57 cases of scarlet fever both with and without complications. Nine of those cases ought properly to be disregarded, partly because the treatment was interrupted by failure in the supply of serum and partly because the patients were actually moribund when the serum was used. The other forty-eight cases may be divided into three groups. In the first, consisting of twenty-seven patients, the treatment was begun in the first stage of the illness, there was a rapid improvement after the injection of from 10 c.c. to 30 c.c., and no complications ensued. Professor Baginsky, however, remarked that mild cases are not rare, even in the absence of any treatment. In a second group the antitoxin was also administered from the beginning, but the results were much less satisfactory. Of sixteen patients six died with general sepsis or septic complications, and the remainder suffered from severe otitis, glandular suppuration, nephritis, &c. It is possible, however, that these unfavourable results may have been due to an insufficient quantity of serum having been used. In the third series, consisting of five cases, the antitoxin was administered, not from the beginning, but during the course of the illness. One of these patients died from otitis with thrombosis of the sinus, in another the submaxillary gland suppurated and had to be opened, while in the three remaining cases a favourable influence on the temperature was probable. Taking the whole series, there were seven deaths among forty-eight patients, or a mortality of 14·6 per cent., a relatively good result compared with the average mortality of this year's epidemic, which has been about 30 per cent. Professor Baginsky was of opinion that it would be premature to form a definite opinion as to the usefulness of the remedy, but that there is sufficient justification for giving it a trial.

May 5th.

[1] Société de Biologie, April 25th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Therapeutics of Cancer.

BEFORE the Associazione Medica Lombarda, in the presence of the leaders of the Milanese School, Dr. Jona read a paper the other evening on "Cura del Cancro." After a brief survey of the recent literature of the subject he subjected to a critical analysis the various attempts to utilise sero-therapy either by inoculating the patient with the toxine of erysipelas or by injecting the blood serum of animals prophylactically inoculated with liquid drawn from carcinomatous tumours. This latter method, according to the instructions laid down by Dr. Richet and Dr. Héricourt, was that adopted by Dr. Jona, who had under his care six persons suffering from that special form of malignant disease. One of these patients—a woman who for six or seven months had laboured under well-defined cancer—was manifestly relieved by the treatment; another—a man afflicted with cancer of the stomach and unable to digest or even tolerate food passed down the œsophagus—had no sooner begun the sero-therapy than he recovered the power of alimentation by the *primæ viæ*, digesting with perceptibly favourable results as many as twelve eggs daily. Two other patients—one suffering from cancer of the tongue and the other from cancer of the rectum—showed distinct improvement after the first injections; but the improvement was not maintained. The fifth and sixth cases, one of cancer of the tongue and the other of the inferior maxilla, remained without response to the treatment. Dr. Jona's paper was distinguished by much caution as well as thoroughness, its writer contenting himself with having made out a case for further experiments to be laid before the Associazione Medica Lombarda.

The Drainage of Milan.

Though the English-speaking residents in Milan are few the English-speaking visitors are very numerous—so numerous, indeed, as to make the sanitation of that mighty *entrepôt* of the Brindisi route a matter of very considerable importance, her water-supply is still defective and will remain so till she follows the example of Florence, of Naples, and, above all, of Rome, and replaces her wells sunk in the subsoil by fresh, pure water brought down in adequate volume

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from the neighbouring hills. Her drainage is at present engaging municipal and, indeed, public attention, and no wonder, considering the quasi-mediæval system that has been allowed to vitiate her health so long. Her mortality in consequence reaches a figure discreditable to a city of her wealth and European importance. No doubt she has shared in some of the benefits of nineteenth century hygiene, and her death-rate is not what it was fifty years ago—viz., about 40 per cent. Still, a mortality ranging from 27 to 28 per cent., excluding the garrison, shows badly beside that of Zürich, for instance, with its 17 per cent., of Geneva with 19 per cent., of Frankfort with 20 per cent., of Lyons with 21 per cent., and of Brussels with 22 per cent. In these circumstances the proposals now before the civic authorities for relieving the population of its sewage on a comprehensive, systematic, and effective scale must be welcomed as a step all too tardily deferred, preceding efforts in the same direction dating as far back as 1866. Within the last seven years 4,966,000 francs have been expended in such drainage as already exists, but twice as much again will have to be laid out before Milan can be safe, not merely for her own inhabitants, but for the travelling public to which she owes not a little of her wealth.

May 4th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Alleged Fatal Injection of Diphtheria Antitoxin.

PROFESSOR PALTAUF has published in the *Klinische Wochenschrift* a highly interesting article showing that the *post hoc ergo propter hoc* argument has been greatly misapplied in connexion with the unfortunate incident in Berlin, when a child died almost immediately after receiving a hypodermic injection of diphtheria antitoxin. There is not as yet any proof that antitoxin serum possesses dangerous qualities, and, on the other hand, it is well known that in a great many cases of sudden death occurring both in children and adults post-mortem examination shows only insignificant lesions. In Vienna, where post-mortem examination is obligatory in every case of sudden death, some important observations have been made on this subject. For instance, Dr. A. Paltauf, brother of the writer of the above article, but now deceased, has pointed out in a pamphlet on the Relation between Sudden Death and the Thymus Gland that during 1887 there were 126 and during 1888 there were 99 deaths of children in Vienna in which post-mortem examination yielded no definite results, enlargements of the lymphatic glands and the spleen and paleness of the skin being the most conspicuous appearances. The late Professor Kundrat also observed these symptoms in rachitic children and believed that rachitis is not only an abnormality in the growth of the bones, but a general disturbance of the animal organism. The above symptoms have also been noticed in adults who have died whilst taking a bath, and therefore a so-called *status lymphaticus* has been suggested as the cause of death in these cases. Instances of death after the use of antitoxic serum have been quoted by Moizard, Quinon, and Alföldi, but none of the cases have been examined in such a manner as to prove the absence of any other disease. One of Alföldi's cases was a child who after having been immunised was allowed to sleep with his brother suffering from diphtheria and died in three days. Professor Paltauf's statistical returns show among 248 cases of prophylactic injection a sickness incidence of 6·85 per cent.—namely, angina in four instances, diphtheria with moderate local symptoms in nine cases, and severe diphtheria in four cases. It is well known that the injection may be followed by exanthemata, pains in the joints, and fever; but there is no case in which death has resulted from these sequelæ. Among 603 cases there were 44 examples of local erythema, 17 of general erythema, and 2 of rheumatic arthritis. The last symptom, which is also the gravest, occurred, therefore, in only 0·33 per cent., and notwithstanding these comparatively unimportant drawbacks there is no doubt that parents will continue to rely on antitoxic serum, by which the diphtheria mortality has been reduced from 40 per cent. to 14 per cent. The good effect of the serum treatment appears from the following statistics. In Vienna there were 1631 deaths from diphtheria in 1893, 1637 in 1894, and 690 in 1895 when the serum treatment came into use; in Trieste there were 394 deaths from diphtheria in 1894 and 272 in 1895; in Prague there were 193 deaths from diphtheria in 1894 and 83 in 1895; in Brünn there were 104 deaths from diphtheria in 1894 and 51 in 1895. In view of these results Professor Paltauf said that it is unjustifiable to condemn a recognised system of medical treatment and to create alarm in the minds of the public on account of a death the relation of which to the injection of antitoxin has not been ascertained. On the other hand, Professor Paltauf's statistics and his inferences therefrom have in the same journal been called in question by Professor Kassowitz, who asserts that the serum treatment was introduced in Trieste in 1894 and was employed in 362 cases from August to the end of the year. Furthermore, during the period from 1889 to 1893, both years inclusive, the annual deaths from diphtheria averaged 142, the actual numbers for each year being 98, 93, 118, 182, and 222, but there were 394 deaths in 1894 and 271 in 1895. Trieste, in fact, has a very high mortality from diphtheria as compared with other large towns, inasmuch as for each 10,000 of the population there died from diphtheria in Trieste 16·9; in London, 5·6; in Paris, 1·7; in Budapest, 4·2; in Munich, 5; in Leipzig, 4·5; and in Berlin, 5·3. In some towns, such as Paris and Budapest, the absolute mortality has decreased since the introduction of the serum treatment, but in London, although the diphtheria mortality was lower in 1895 than in 1893 and 1894, it was nevertheless very high in the last quarter of 1895, during which period there were 836 deaths from diphtheria, whereas there were only 469 in the same quarter of 1891, before serum treatment was in use. In Moscow and St. Petersburg the deaths from diphtheria have even increased, and Professor Kassowitz, therefore, believes that a decrease of diphtheria mortality is not attributable to the beneficial effect of antitoxin serum, neither does an increase in the mortality lead to the conclusion that the serum is injurious.

The Effect of Amyl Nitrite.

At a recent meeting of the Medical Society Dr. Winkler stated that a small quantity of amyl nitrite introduced into the respiratory organs of a narcotised dog produces a decrease of the pressure in the arteries and the characteristic symptoms of cardiac asthma—namely, dyspnœa, with accelerated and deep breathing and œdema of the lungs manifested by crepitant râles. Although the blood pressure is decreased in the arteries it is increased in the left auricle. The decrease of the blood pressure after the administration of amyl nitrite has hitherto been ascribed to its action as a vaso-dilator, but it obviously has an effect on the heart as well as on the vessels.

May 4th.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Medical Department of the Egyptian Army.

IT is now five weeks since the English Government suddenly determined that the time had arrived for Egypt to extend her southern frontier and to embark upon an expedition of which neither the goal nor the cost has yet been foretold. It is greatly to the credit of the English officers forming the Headquarter Staff that without a hitch 15,000 men have now been massed between Wady Halfa and Akasheh. The only difficulty which has transpired so far is the impossibility of providing commissariat transport for men and animals without due preparation. Practically nothing can be bought on the spot, and consequently the men and horses at the advanced post have come very badly off for food. No serious forward movement can be attempted until the army is provided with at least two months' rations and forage, and this is not likely to take place for the next two months. Convoy duty under a broiling sun and working for thirteen hours a day on desert tracks so rough that only about eighteen miles can be traversed daily is the sort of work which has been uncomplainingly endured. Surgeon-Lieutenant-Colonel Gallwey, principal medical officer of the army, is still in Cairo making his final arrangements for the disposition of men and material, but he hopes now to join the Headquarter Staff at Wady Halfa. There are now seven British officers under him all lent by the English army and all of the rank of surgeon-captain. The two seniors have the Egyptian rank of *kaimakan* or lieutenant-colonel, and the

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others are *bimbashi* or major. All medical officers hold military rank only like all other officers. Surgeon-Captain Hunter is the senior medical officer of the expeditionary force and is in charge of Wady Halfa Hospital, which may vary from 140 to 340 beds. Surgeon-Captain Penton is in charge of the Akasheh field hospital of 200 beds, with a section of a movable field hospital ready equipped to accompany any forward movement. Surgeon-Captain Trask is at Sarras with a ten-bed hospital and another movable field hospital. Surgeon-Captain Spong is sanitary inspector of the line of communication between Wady Halfa and Akasheh, and is responsible for all latrines and the conservancy of the various camps and drinking-water supplies. Surgeon-Captain Hill Smith is sanitary officer at Wady Halfa, Surgeon-Captain Whiston is at the general hospital in Cairo, and Surgeon-Lieutenant Dunn is at the Suakin permanent hospital. To work under the English medical officers there are fifty-five Egyptian medical men, two of whom have the rank of bimbashi. These natives get paid £12 a month on joining and this increases up to £35 a month. The following medical posts are now established south of Wady Halfa:—Gemai, Sarras, Railhead, Semneh, Mograt Wells, Wady Atireh, Ambigol (which also has a field hospital for 20 beds), Ambigol Wells, Tangoor, and Akasheh. North of Wady Halfa there are the two permanent hospitals at Assouan and Korosko. The slightly sick or wounded will be treated at the front and returned as rapidly as possible to the ranks, while the severe cases will be gradually evacuated until Cairo is reached. The non-commissioned officers and men of the medical service number 350, including 100 of the medical reserve who have just been called up. The Egyptian army is at all times the healthiest in the world, and the present rate of sick is under 3 per cent. When the regiments were ordered to the front there was no weeding out of weakly men, for all were kept ready for active physical work. This does not apply to the black battalions, where there were many older men engaged for life. Several small innovations are worth mentioning. A bearer company for 100 wounded has been attached to the sections of field hospitals, provided with camel cacolets specially designed by Dr. Graham Bey, who has lately been transferred from the army to the sanitary department. A small bearer company of ten mules will accompany cavalry and camelry. Cotton wool has been obtained from Germany so compressed that it takes up only half the bulk of the ordinary packets. Each English surgeon-captain will be provided with a medicine chest of compressed tabloid drugs similar to those in use on the Congo. Instruments and all appliances have been ordered from London of the newest approved aseptic patterns. Lastly, a six-bed hospital has been sent to Wady Halfa for the use of English officers, of whom there are now 110 serving on the Nile. The diseases most likely to be met with at this season are sunstroke, simple continued fever, diarrhœa, and dysentery.

Cholera at Alexandria.

During the month of March there were only nine cases of cholera reported with nine deaths. In fact, from March 12th to April 1st there was only one case, bulletins were discontinued, and it was quite hoped that the disease had come to an end. But during the first three weeks of April there have been cases almost daily, numbering altogether 45, and of these 42 have died. An English merchant has lately had a slight attack of cholera, but with very few exceptions the disease has from the beginning been confined to the poorest native quarters. Outside Alexandria there has only been one case and that was at Assiout in a man who had just arrived there from Alexandria.

Infectious Fevers.

During the last three weeks there have been 287 cases of small-pox and 54 deaths. The cases have been reported from thirty-four villages in Lower Egypt and about seven in Upper Egypt. During the same weeks there have been 229 cases of typhus fever and relapsing fever with 34 deaths, almost all being from fifteen villages in Lower Egypt. Measles in two villages and at Port Said has furnished 32 cases and 11 deaths.

Cairo, April 22nd.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

The Conference on Federal Quarantine.

THE conference of medical representatives from the colonies of New South Wales, Victoria, South Australia, and Queensland, which was held in Melbourne from Feb. 28th to March 3rd to consider the subject of Quarantine, agreed upon certain resolutions of which the following is an abstract:—

1. That there be uniformity in the laws and practice relating to quarantine throughout the Australasian colonies; that the notification of all quarantinable diseases be made compulsory, and that each colony agree to have constantly in readiness accommodation for the isolation of persons who may be affected with any disease quarantinable in that colony, and to urge the removal of such persons from infected vessels.
2. That all ships coming into Australasian ports be liable to medical inspection for quarantine purposes.
3. That three fully qualified medical men, experts in the diagnosis and treatment of quarantinable diseases, be appointed as federal medical officers, devoting the whole of their time to the performance of their duties, and having their headquarters at Albany, Adelaide, and Thursday Island respectively, and, if found necessary at a later date, a fourth at Palmerston.
4. That a federal supply of calf vaccine lymph, sufficient for the vaccination of say 600 persons, be maintained at each of the ports of Albany, Adelaide, Thursday Island, Palmerston, and Colombo, such supply being available for the master of any vessel having a history of small-pox.

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11. That every person who refuses vaccination be detained until the health authority is satisfied of the inability of such person to spread small-pox, but for no shorter period than twenty-one days.

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14. That the method adopted by the health authority of Victoria in dealing with letters in quarantine be regarded as completely satisfactory—viz., the soaking of the written letters, enclosed in their envelopes and addressed, in a solution of corrosive sublimate in methylated spirit, of the strength of 1 part of the former to 100 of the latter, for a period of twenty minutes.
15. That all dogs imported into Australasia be subject to quarantine for a period of not less than six months, and that such quarantine be in every case performed in the Government quarantine ground only.

These recommendations were submitted to a conference of the Premiers of the respective colonies and were adopted with some modifications, such as that no ship should be relieved from the payment of quarantine expenses; that the experts to be appointed as federal quarantine officers should be at liberty to perform other public duties, that they should be nominated by the colonies in which they were to serve, and that their appointments should be approved by a majority of the contracting Governments. The proposal to hold another conference in twelve months was not adopted.

Disputes at the Adelaide Hospital.

Reference has previously been made to the unfortunate state of affairs at the Adelaide Hospital. The Government has now actually interfered, with very unsatisfactory results. It insisted on the re-instalment of one of the nurses who was one of the principals in the original dispute, and has appointed a new board of management, nominating thereon a practitioner who was removed some two years ago from the local branch of the British Medical Association for alleged unprofessional conduct. The Honorary Staff immediately resigned, as did two of the members of the board. The member to whom exception was taken then withdrew from the position, but the staff have not withdrawn their resignations, and so the matter stands.

Murderous Attack on a Medical Man.

Dr. Cunningham of Talbot, Victoria, has just been made the victim of a most violent attack by a supposed lunatic. On answering a night ring at his door he was felled by a blow from a tomahawk, and his assassin continued to batter his head with this implement. Mrs. Cunningham came to his rescue and drove off the would-be murderer with a pair of tongs. The doctor's skull is severely fractured, and his recovery is still doubtful. It appears that the assassin had his eye removed some years ago at a hospital and has ever since entertained feelings of animosity towards the medical profession. Great sympathy is felt for Dr. and Mrs. Cunningham who have been in the district for many years and are exceedingly popular.

The Toxic Action of the Secretion of the Femoral Gland of the Ornithorhynchus.

Some time ago reference was made to some cases supposed to be due to poisoning by the spur on the hind leg of a platypus or ornithorhynchus, and doubt was expressed as to whether the secretion of the femoral gland of this strange animal was toxic or not. In the recently published transactions of the Linnean Society of New South Wales is a paper on this subject by Dr. C. J. Martin and Mr. F. Tidswell. As a result of their investigations they find that the secretion is poisonous—at least at certain seasons of the year—and owes its toxic properties to proteid constituents in which it resembles the venom of snakes, causing like it intra-vascular clotting in large doses and retarding coagulation in small

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doses. Like snake venom also it produces an almost instantaneous fall in the blood-pressure, capillary hæmorrhages, irritation, and œdema when locally applied, the local effects being more marked than in the case of snake venom.

Pharyngomycosis Leptothricialis.

In the March number of the *Australasian Medical Gazette* Dr. C. Purser records the case of a patient suffering from asthma and also from a sore-throat, the tonsil and mucous membrane below it being swollen and showing a number of white projections which gradually increased in number and size and were removed by curetting. The growths were found to contain an excessive number of the bacillus (leptothrix) buccalis maximus and the leptothrix innominata, and to their excess the condition is attributed.

Health of Melbourne.

The annual report of the medical officer of health for the city of Melbourne for 1895 shows that in general the health of the population has been good, the rate of mortality being 15·1 per 1000, an improvement on the two preceding years. Twenty deaths are ascribed to influenza, as against 8 in 1894. Tuberculosis caused 177 deaths, and the rate of mortality from epidemic disease was extremely low.

Obituary.

George Whitfield Sutherland, B.A. Syd., M.D. Lond., died at Sydney on March 3rd at the early age of thirty-two years. Dr. Sutherland had a most brilliant career as a student, but force of circumstances drove him into a very large lodge practice in Sydney, and to the strain and overwork attaching thereto his early death is mainly attributable.—Charles McCarthy, M.D. Melb., L.F.P.S.G., died at Melbourne on Feb. 24th in his eighty-third year and after a residence of thirty-five years in the colony. He was well known as an authority on inebriety, having been for twenty years medical superintendent of the Northcote Inebriate Retreat, near Melbourne.

Hospital News, &c.

Dr. Cecil Purser has been appointed assistant physician to the Prince Alfred Hospital, Sydney, and Dr. W. H. Crago assistant surgeon to the Sydney Hospital. — Dr. J. R. MacQueeney and Dr. H. M. Maudsley have been appointed consulting physicians to St. Vincent's Hospital, Melbourne.—A new wing at the Eye and Ear Hospital, Melbourne, was recently opened by his Excellency Lord Brassey. The wing is called the Aubrey Bowen wing, in memory of the late Dr. Bowen, who was one of the founders of the hospital and one of its first surgeons, and to whose generosity the institution owes much. The new wing has been built by his widow, who has also built a new operating theatre for the Melbourne Hospital, which will be formally opened in a few weeks.—Dr. Fiaschi, one of the leading surgeons in Sydney, inspired by his patriotic feelings, has left for Abyssinia to serve as a volunteer in the Italian army. The honorary medical staff of the Sydney Hospital passed a unanimous resolution expressing its sense of loss sustained by Dr. Fiaschi's departure.—The committee of the Williamstown Hospital, near Melbourne, having investigated certain allegations made by one of the staff, have come to the conclusion that there is no ground for these allegations and have called upon the gentleman who made them to retract them or resign.

April 4th.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—ELECTION OF EXAMINERS.—The following have been elected examiners of the College:—Examiners in Anatomy: John Barton and Alexander Fraser. Examiners in Surgery: Arthur Chance and William Stoker. Examiners in Physiology and Histology: J. Alfred Scott and Charles Coppinger. Examiners in Biology: J. Alfred Scott and George Burbidge White. Examiners in Pathology: Thomas Myles and Edward H. Taylor. Examiner in Midwifery and Gynæcology: E. Winifred Dickson. Examiners in Ophthalmology: Patrick William Maxwell and John Benjamin Story. Examiners in Dental Surgery and Pathology: Arthur W. W. Baker and R. Theodore Stack. Examiners in Mechanical Dentistry: Shenstone J. Bishop and Charles Wall. Examiners in Chemistry and Physics: J. Dallas Pratt and Edwin Lapper. Examiner in Sanitary Law and Vital Statistics: D. Edgar Flinn. Examiner in Bacteriology: J. Alfred Scott. Examiner in Engineering and Architecture: J. Charles Wilmot. Examiner in Languages: Robert John Montgomery. Examiner in Mathematics, Physics, Dictation, and English Essay: Robert Morton.

Obituary.

WILLIAM LOCKHART, F.R.C.S. ENG.

WILLIAM LOCKHART, who was so well known as a medical missionary in the far East, and whose name is associated with some of the most stirring incidents in the history of our relations with China, passed away on the morning of April 29th at his residence at Blackheath at the ripe age of eighty-four years. Up to the end of the previous week he was full of vigour and in the enjoyment of all his faculties, but on Monday, April 27th, he had a severe attack of vomiting and was found to be suffering from obstruction of the bowel. At a consultation held that night it was found that, owing to his advanced age and the state of the pulse, all operation was out of the question, and he soon afterwards became unconscious and passed peacefully away without any suffering. Mr. Lockhart pursued his medical studies at Guy's Hospital and the Meath Hospital, Dublin, and became a Member of the Royal College of Surgeons of England in 1834 (he was elected to the Fellowship in 1857). He first began practice as assistant to Mr. Wainwright of Liverpool, where he remained for three years, but on the return of John Williams and Dr. Moffat from their missionary journeys he was fired with the desire of becoming a medical missionary and offered his services to the London Missionary Society in that capacity. He was appointed to China, and left England with Mr. (afterwards Dr.) Medhurst, then engaged as a missionary to the Chinese in Batavia. Mr. Lockhart began his work at Macao in 1839, Dr. Parker, an American, having already obtained a footing as a medical missionary at Canton. From Macao he moved to Chusan on its first occupation by the British, and as soon as Shanghai was opened up, in 1843, he moved on to that city and founded a hospital there which was most successful from the first, the Chinese patients soon reaching the large number of 10,000 in ten months. Mr. Lockhart remained there until 1858, and during the Tai-Ping Rebellion, when the rebels had taken possession of the city, which was invested by the Imperial troops, his hospital, which stood in an isolated position outside the city walls, lay between the two contending armies exposed to the fire from both sides. Under these trying conditions he steadily pursued his work among the sick and wounded, the shells on several occasions bursting within the building. The last shell which entered the hospital burst upon the floor of the hall crowded with patients, on the very spot from which only a few moments before a wounded patient had been removed. The French troops having joined the Imperialists, Mr. Lockhart volunteered for the perilous errand of entering the city in order to try to persuade the rebels to surrender. In company with his friend Mr. Wylie he safely passed the rebel outposts, and for several hours used his endeavours to induce them to surrender to avoid further bloodshed. The commanders, however, while listening to his proposals, declined to yield the city, which they afterwards evacuated and burned. Mr. Lockhart always described this burning of the city of Shanghai as the most impressive sight he had ever seen. He returned to England in 1858 leaving the hospital under efficient superintendence for the further extension of its sphere of usefulness, and he had the satisfaction of knowing that it is at the present time the most important hospital for Chinese in China; the early picturesque Chinese structure has been replaced by a very substantial modern building with a hundred beds and a large out-patient department.

During his short stay in England stirring events again took place in China. Mr. Lockhart's brother-in-law, Mr. Parkes (afterwards Sir Harry Parkes, Her Majesty's Minister to Japan and China), whilst on a diplomatic mission to the Chinese forces under a flag of truce, had been treacherously taken prisoner with his companions, many of whom died after cruel sufferings. As a punishment for this act of treachery Lord Elgin advanced on Peking and destroyed the celebrated Summer Palace, the British Embassy taking up its quarters in the city in October, 1860. Mr. Lockhart having returned to China for this purpose was able, through his position as medical officer to the Embassy, to establish a hospital in the capital in October, 1861, and during the two and a half years of his stay there over 30,000 patients were treated. Sir Harry Parkes well expressed his estimation of the value of Mr. Lockhart's work in China in one of his letters: "The political good which your proceedings must

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have will be very great, and your mission will achieve more than the diplomatic in impressing the masses of Peking in our favour. Your hospital I look upon as the most marked incident in our relations with China that has occurred since the signing of the last treaty, and most sincerely do I pray that you may go on and prosper."

Mr. Lockhart finally returned to England in 1864, family circumstances necessitating his relinquishment of active service in the mission field, and he commenced private practice at Blackheath in the following year. From that time until the end of March, 1895, he remained in practice and his devotion to his professional duties during that period was uninterrupted. In the exercise of his profession he was prompt, skilful, and patient of results. Of keen insight, he was always quick at diagnosis and to the very last always prepared for instant response to the call of duty. His loving kindness and tender cheerfulness endeared him to his patients, amongst whom he was always looked for, not only as the trusted adviser, but as the much-loved friend. During these many years of practice he was able, by economy of time and strict punctuality, to maintain his relations with the London Missionary Society, at whose board and stated committee meetings he was a most regular and valued attendant. He had collected a large and valuable library of works on China unique in its variety and comprehensiveness. This he gave quite recently to the London Missionary Society upon certain conditions, which have been carefully carried out, so that it is available for reference at the Mission House and is known as the "Lockhart Library." In his own neighbourhood he held for many years a seat on the board of guardians of the Lewisham Union, and his influence was strenuously exerted to secure the appointment of a resident medical officer and the erection of the infirmary on its present healthy site. He also took part in other local oganisations, where his experience as a medical man was highly valued.

Mr. Lockhart was universally beloved; he was full of life, brightness, and energy up to the very day before his short illness. The devotion and noble self-denial exhibited during his career as a medical missionary were carried through every relation of later life, and a more thoroughly upright and honourable man in all his dealings it would be very hard to find. In the most trying circumstances of his unusually varied life he always exhibited the utmost fortitude, while his kindness of heart endeared him to all who knew him. He married in 1841 Miss Catharine Parkes, the elder sister of Sir Harry Parkes, who survives him, and with whom he had the happiness a few years ago of celebrating his golden wedding, surrounded by a large and loving circle of sons, daughters, and grandchildren.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The death of the following eminent foreign medical man is announced:—Dr. F. Vulliet, Professor of Midwifery and Gynæcology in the University of Geneva.

THE CONGRESS OF MEDICINE IN WIESBADEN.

(Continued from p. 1258.)

APRIL 10TH.

The Therapeutic Value of Thyroid Preparations.

PROFESSOR EWALD (Berlin) said that the late Professor Schiff of Florence was the first to show that complete excision of the thyroid gland produces grave and even fatal pathological alterations in the organism; he was also the first to suggest the implantation of small pieces of gland and the hypodermic injection of thyroid fluid in order to counteract these symptoms, and his experimental investigations were turned to practical account by Horsley and Bircher, who administered fresh glands as well as thyroid preparations to patients suffering from various maladies. The efficacy of this was soon recognised, but the active principle of the gland eluded observation for some time, and has only recently been discovered by Professor Baumann of Freiburg, who has succeeded in isolating the so-called thyroiodin, an albuminous compound containing a considerable proportion of iodine. The administration of thyroiodin promotes metabolism, and strong injections of it induce a condition to which the name of thyroiodismus has been given, a group of symptoms comprising anorexia, insomnia, cardiac palpitation, and angina pectoris; the nervous system, also, becomes disturbed and albumin appears in the urine, but the pulse is not affected by thyroiodin when given during only a short period. Glycosuria was observed by Professor von Noorden five times in seventeen cases, but Professor Ewald has never met with this complication. The part played by thyroiodin in the animal economy may be described, according to Professor Ewald, as consisting in the constant introduction of a definite organic iodine compound into the circulating blood, where it destroys certain virulent products the existence of which is inferred from the pathological symptoms developed after the removal of the gland. The thyroid fluid, in fact, acts as an antitoxin against some toxines produced by the normal metabolism of the human body. If the thyroid fluid is deficient or absent these toxines accumulate and symptoms of abnormal metabolism make their appearance, whilst, on the other hand, if it is artificially supplied so copiously that the point of neutralisation is exceeded the result is the state of over-action above described, but this toxic effect is of a transitory character and does not detract from the high therapeutic value of the substance. Thyroid preparations when administered for therapeutic purposes should be given in very small quantities, subsequently increased by degrees. The dose should not exceed ten tablets, containing three milligrammes of iodine, and there will be no unpleasant effects. Thyroid treatment is of the greatest value in myxœdema. Of course, there are frequent relapses when the treatment is discontinued, but soon after it is resumed the patient's condition once more improves. It has also been successfully employed in sporadic or endemic cretinism. In lupus and tuberculosis its efficacy is not so obvious. The thyroid treatment of obesity was first suggested in England and has proved very successful. The daily use of from three to five tablets causes a decrease of body-weight ranging from 4 to 5 kilogrammes (from 9 lb. to 11 lb.) in a week, and in some cases a decrease of even 10 kilogrammes (22 lb.) has been observed. The loss of albumin must be compensated by an albuminous diet. Pure thyroiodin produces the same effects as the tablets; by the daily use of minute doses of this substance a man weighing 96 kilogrammes (= 212 lb.) was found to lose 2 kilogrammes (= 4½ lb.) within a week. In epilepsy, acromegaly, and rachitis its success is very doubtful. In conclusion Professor Ewald said that much has yet to be learned regarding thyroiodin; it is, however, in his opinion, a very powerful therapeutic agent.

Professor BRUNS (Tübingen), following Professor Ewald, spoke on the Thyroid Treatment of Goitre, which he has now carried out in more than 350 cases. It was his experiments on the lower animals which led to the discovery that the administration of thyroid preparations causes the swollen gland to decrease and eventually to regain its normal size. Cystic bronchocele and Graves's disease are not amenable to this treatment. His first cases were treated by fresh thyroid glands and the later ones by thyroid tablets, of which not more than two were ever given to adults, while children had only half a tablet or one tablet, and disagreeable effects were thereby avoided. In his practice there have been only three cases in which the heart became so much affected that the remedy had to be stopped. He has used thyroiodin in twenty-four cases and, as far as he can judge from so limited an experience, he believes this substance, newly discovered by Professor Baumann, to be not less efficacious than the other thyroid preparations. Professor Bruns summed up the results of his observations as follows: 1. The great majority of cases of goitre were benefited by the thyroid treatment. 2. About 25 per cent. remained unaffected; in 8 per cent. the enlargement disappeared altogether; in 33 per cent. portions of the growth continued to persist; and in 33 per cent. the decrease, although obvious, was not very great. 3. The highest proportion of successful cases was found among young persons, the obstinacy of the disease increasing with the age of the patient. 4. The good effects of the treatment became visible in from four to six days; in 60 per cent. the greatest decrease was observed within a fortnight, and in 40 per cent. within three or four weeks. 5. Recovery was most probable and most rapid in the hyperplastic form of goitre. 6. In more than 70 per cent. of the cases the enlargement reappeared after the cessation of the treatment, the relapse beginning sometimes in a month, or sometimes in from three to four months, but resumption of the treatment caused the goitre to diminish once more. Professor Bruns has studied the histological changes presented by

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the reduced gland, and has found that the colloid substance is augmented, while the follicles are partly dilated and partly atrophied.

Dr. BLACHSTEIN (St. Petersburg) in the course of the discussion called attention to the association of goitre with diabetes.

Dr. MINKOWSKY (Strassburg) said that the thyroid gland had no influence on the production of glycosuria, for the extirpation of the pancreas in dogs on which thyrectomy had been previously performed is followed by glycosuria.

Professor HEUBNER (Berlin) recommended thyroid preparations for rachitis combined with anæmia.

Professor SCHULTZE (Bonn) gave details of a case of tetanus which had been treated by thyroiodin, but without success. In acromegaly, also, it had not in his experience proved to be of any advantage.

Dr. REHN (Frankfort) showed photographs of children who had suffered from cachexia thyreopriva, but who entirely lost their cretinoid aspect after a course of thyroid treatment.

Professor KAST (Breslau) said that thyroid preparations ought not to be taken except under medical supervision. He believed this warning to be very necessary, for he had known cases where persons suffering from obesity had resorted to these remedies against the advice of their medical attendants and serious complications had resulted which might easily discredit the treatment.

The Uric Acid Diathesis.

Professor VON NOORDEN (Frankfort) said that the following rules should be observed in the treatment of the uric acid diathesis. 1. A plentiful use of water. 2. A special dietary unfavourable to the formation of uric acid; that which is usually prescribed does not obviously lessen the formation of uric acid, and a considerable reduction can only be obtained by such a departure from the ordinary way of living as would present many practical difficulties. 3. The administration of substances capable of dissolving uric acid in the urine, especially potassium and lithium salts, piperazine, and lysidine. 4. Abstention from articles such as mineral acids and food containing nucleins, which have the effect of diminishing the solvent power of urine for uric acid. The administration of alkalies, although theoretically correct, requires some precaution. There is no necessity for rendering the urine alkaline, and there is even no objection to its having a slight acid reaction. The best means of retaining the uric acid in solution in the urine is the administration of carbonates or salts of vegetable acids. Among twenty-one patients who were sufferers from the uric acid diathesis and were treated with carbonates and salts of vegetable acids only two had a relapse in the course of a year, although formerly all of them used to have an attack every fortnight. In some cases from 2 to 4 grammes (30 to 60 grains) of carbonate of calcium are sufficient, but in others as much as 20 grammes (three-quarters of an ounce) is requisite.

Professor ROSENFELD (Breslau) said that as the formation of uric acid calculi depends on the amount of free uric acid present in the urine it is very important to ascertain this amount. The determination may be effected by passing the urine regularly through a paper filter; the uric acid retained on the filter is then dissolved in solution of caustic potash, precipitated by hydrochloric acid, and weighed. Urea increases the solubility of uric acid. A patient with a tendency to uric acid deposits should take from 5 to 20 grammes (from 75 grains to three-quarters of an ounce) of urea daily, and his diet should also be carefully regulated. Any increase in the allowance of animal food or in the amount of sugar or fat that is consumed causes a more copious formation of uric acid. Butcher's meat should therefore be replaced by other albuminous substances, such as peptones, casein, or aleuronat, this last being a vegetable albumin, sometimes used as a substitute for bread. The effect of this treatment is to bring about a great reduction in the amount of the uric acid.

APRIL 11TH.

Hepatic Colic of Nervous Origin.

Hepatic neuralgia is not very rare, but is often confounded with gall-stone colic; it has even happened that in a case of neuralgia a surgical operation has been performed owing to wrong diagnosis. According to Professor Fürbringer, in neuralgia the pain is principally localised in the substance of the liver, whilst in gall-stone colic it is of a more diffused character. The duration of an attack varies from ten minutes to four hours. At the end of an attack vomiting is frequent, just as in gall-stone colic, and jaundice has also been observed. The regularity of the attack and the connexion with menstruation are valuable diagnostic symptoms. The disease being a visceral neurosis due to hysteria or neurasthenia the treatment should consist of a strengthening diet, together with a cautious use of appropriate anodynes.

Gouty Affection of the Heart.

Professor SCHOTT (Nauheim) said that the heart diseases associated with gout were first described by Fothergill. Many writers still deny that there is a connexion between gout and heart disease, but Professor Schott has himself observed stenosis of the aorta and myocarditis, as well as sensory and motor neuroses of the heart, which were all undoubtedly due to the gouty diathesis. Cardiac complications often happen in secondary gout, where the stomach, kidneys, and nervous system are affected. The association of gout with anæmia, chlorosis, diabetes, and chronic lead-poisoning sometimes proves disastrous to the heart.

Other Papers.

Considerations of space permit only a passing reference to the other papers read at the final meeting of the Congress, the principal of them being those by Professor OTT (Prague) on the Amount of Albumin in Pathological Fluids, by Professor LEUBUSCHER (Jena) on the Connexion of Heart Diseases with Affections of the Nervous System, by Professor UNVERRICHT (Magdeburg) on the Treatment of Tuberculous Pneumothorax, and by Dr. BLUM (Frankfort) on Enemata of Oil in Gall-stone Colic.

Medical News.

UNIVERSITY OF DURHAM: FACULTY OF MEDICINE.—At the Convocation held on April 25th the following gentlemen were recommended for the degrees indicated below:—

Degree of M.D. for Practitioners of Fifteen Years' Standing.—Ernest Blacker, M.R.C.S., L.R.C.P., Francis Wheeler Brown, M.R.C.S., L.S.A., John Davies, M.R.C.S., L.S.A., Benjamin Thompson Lowne, F.R.C.S., L.S.A., Robert Mackinlay, L.R.C.P. Edin., L.F.P.S. Glas., Charles Edwin Matthews, M.R.C.S., L.R.C.P., and William Samuel Mavor, M.R.C.S., L.R.C.P.

Degree of M.D.—Burdon Cox, M.B., B.S. Durh., Henry King Dawson, M.B., B.S. Durh., Ebenezer William Diver, M.B. Durh., Frank Hawthorne, M.B., B.S. Durh., Joseph William Leech, M.B., B.S. Durh., Charles Newton Lovely, M.B., B.S. Durh., Henry John Mathews, M.B. Durh., Robert William Morgan, M.B., B.S. Durh., Ogden Watson Ogden, M.B., B.S. Durh., and Samuel Short Whillis, M.B., B.S. Durh.

Degree of M.B.—Honours—Second Class: Vincent Burrow, M.R.C.S., L.R.C.P., St. Mary's Hospital; Edward Harvey Sutcliff, St. Thomas's Hospital; Thomas Streatfeild, M.R.C.S., L.R.C.P., University College Hospital; George Hedley Tomlinson, M.R.C.S., L.R.C.P., and Frank Laughton-Smith, M.R.C.S., L.R.C.P., Mason College, Birmingham; and Thomas Brice Poole, M.R.C.S., L.R.C.P., and Frederick William Rowland, M.R.C.S., L.R.C.P., Guy's Hospital.—Pass List: Percy Luke Armstrong, Leslie Davidson, William Thomas Harkness, Hugh Meyrick Meyrick-Jones, M.R.C.S., L.R.C.P., Herbert Newsome, and William Hunter Richards, College of Medicine, Newcastle-upon-Tyne; John Dee Shapland, B.A. Cantab., University College Hospital; Charles Henry Dickens and Lewis William Richards, M.R.C.S., L.R.C.P., St. Thomas's Hospital; Edward Walter Joscelyne, L.S.A., St. Mary's Hospital; and Charles Holmes Joy and William Henry Whitehouse, Mason College, Birmingham.

Degree of B.S.—Percy Luke Armstrong, Leslie Davidson, William Thomas Harkness, Hugh Meyrick Meyrick-Jones, M.R.C.S., L.R.C.P., Herbert Newsome, and William Hunter Richards, College of Medicine, Newcastle-on-Tyne; Vincent Burrow, M.R.C.S., L.R.C.P., St. Mary's Hospital; Charles Holmes Joy, Frank Laughton-Smith, M.R.C.S., L.R.C.P., George Hedley Tomlinson, and William Henry Whitehouse, Mason College, Birmingham; Thomas Brice Poole, M.R.C.S., L.R.C.P., and Frederick William Rowland, M.R.C.S., L.R.C.P., Guy's Hospital; Lewis William Richards, M.R.C.S., L.R.C.P., St. Thomas's Hospital; and Thomas Streatfeild, M.R.C.S., L.R.C.P., and John Dee Shapland, B.A. Cantab., University College Hospital.

Degree of D. Hyg.—Arthur Edward Thompson, M.B., B.S. Durh.

Diploma in Public Health.—Walter Reyner Brunton, M.B., M.R.C.S., L.R.C.P.

In the third examination for the degree of Bachelor in Medicine under the new regulations the following candidates have satisfied the examiners:—

Second-class Honours.—Albert Gathorne Widdowfield Pearson, College of Medicine, Newcastle-upon-Tyne.

Pass List.—Percy Holgate, Walter Herbert Lister, John Lowry, and William Simpson, College of Medicine, Newcastle-upon-Tyne.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At the April sittings of the examiners in

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Glasgow the following candidates passed the respective examinations, those marked with an asterisk (*) passing "with distinction":—

First Examination: Five Years' Course.—*John Campbell Douglas, Greenock; John B. Conner, Greenock; William A. Ogilvie, Cam, buslang; Charles M'Donnell, Limerick; Edward Michael M'Swiney-Limerick; John Thomas Bradley, Clare; Percy J. Bateman, Cork; Gerald S. Coghlan, Longton; John George Grant, London; and *DanielMichael Donovan, Cork.

First Examination: Four Years' Course.—Frederick George Henderson, Dinapore, India; Louis R. St. Romaine, Calcutta; Alexander E. Crabbe, Aberdeen; John R. Dodds, Darlington; and Charles K. Darnell, Rugby.

Second Examination: Five Years' Course.—*Henry Stewart Anderson, Dunmurry; Alexander Macgregor, Glasgow; William Hutton, Greenock; John Dick, Greenock; Robert W. Jubb, Lowestoft; *Richard Steward, Northfield; James M. Inverarity, Dundee; James Dunlop, Glasgow; William Carey, Glasgow; Thomas D. Bird, Woodford; Harry G. Ogilvie, Jamaica; William J. Aiken, Tyrone; James T. O'Connor, Cork; and Edward H. Harrison, Belfast.

Second Examination: Four Years' Course.—Charles F. Spinkes, Cheshire; Robert M. Quin, Portadown; Tom J. Lumley, Northumberland; Richard E. Roberts, Carnarvonshire; Frederic Lilley, Belfast; James H. Stuart, County Antrim; Mary Ann Handson, Lincolnshire; John Boyd, Kilrea; Michael L. Neylon, Victoria; Farris N. Jaboor, Syria; John G. Gibson, New Cumnock; Montague V. M'Kechnie, Witton Park; Ellis Owen Jones, Carnarvon; James H. Fleming, Avondale; Christopher R. White, Jamaica; and John L. M. Govan, Woolwich.

Third Examination.—Andrew M'Credie, Stranraer, and James M'Glynn, Tyrone.

Final Examination, and admitted Licentiate of the three Coöperating Colleges.—George Henderson, Coatbridge; Ernest Edward Crowther, Luddenden; David Smith Henderson, Coatbridge; James Morrison, Belfast; Patrick James Calnan, Cork; Mark O'Brien, Ballinacollig, County Cork; William Herbert Richardson, Manchester; Annie Christina Sutherland, Bo'ness; Charles Ayton Marrett, London; Daniel Villesid, Belfast; Daniel Morrissy, Passage West, County Cork; Arthur John Pollard, Headingley, Leeds; and Alfred Hamman, Knutsford, Cheshire.

FOREIGN UNIVERSITY INTELLIGENCE. — *Halle:* Dr. Schwartze has been promoted to the position of Honorary Professor of Otology.—*St. Petersburg (Military Medical Academy):* Dr. Boris Verkhovski has been recognised as *privat-docent* in Otology and Rhinology.—*Tübingen:* Dr. W. Küster has been recognised as *privat-docent* in Physiological Chemistry.—*Vienna:* Dr. Leopold Müller has been recognised as *privat-docent* in Ophthalmology.

CHEMISTS' AND DRUGGISTS' EXHIBITION. — The editor of the *British and Colonial Druggist* informs us that in consequence of the success of the practical exhibition of pharmaceutical products and the products of the drug, chemical, and allied trades, which he arranged last year, he is arranging a similar exhibition for next August.

THE annual meeting of the Metropolitan Nursing Association was held on Tuesday last at Grosvenor House under the presidency of the Earl of Strafford. The report gave evidence of much useful work, the number of cases nursed during the year having been 1468. The income for the year was £1890, and exceeded by a little more than £200 the annual expenditure.

HUNTERIAN SOCIETY.—A meeting of this society was held on April 22nd. Mr. Targett gave a Lantern-slide Demonstration of the Changes which occur in the Joints in Charcot's Disease and Syringo-myelia, and pointed out that the lower extremity was chiefly affected in the former disease and the upper extremity in the latter. — Mr. Eve showed specimens of Distortion of the Foot with Trophic Changes in the Joints and Hands from Peripheral Neuritis. — Mr. Cotman brought forward a patient who had an Unusual Condition of the Ankle-joint following a sprain of a year ago; there was an increase in the swelling.—Mr. Charters J. Symonds mentioned the case of a patient who with distinct symptoms of Locomotor Ataxy had Four Perforating Ulcers on his feet, in one of which he had removed the carious head of a metatarsal bone, with successful healing of the ulcer in a fortnight. Curetting of another ulcer had failed, the joint not having been entered. In another patient he removed the head of a carious metatarsal bone with success. He does not consider it always necessary to amputate. The cases may be left alone for long periods.—Dr. Fortescue Fox attributed difference of joints affected in Charcot's disease and in syringo-myelia to the pressure of body weight in the former and to the liability to injury and to degenerate changes of shoulder-joint in the latter, suggesting thus a certain parallelism between syringo-myelia and traumatic or local arthritis.—Dr. Horrocks referred to a case where the removal of a band pressing on the cauda equina in a case of spina bifida occulta had removed symptoms in the feet.—Mr. Targett replied.

THE ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, VENTNOR.—A dinner in aid of the funds of this institution was held on April 29th in the Whitehall Rooms of the Hôtel Métropole. Sir Richard Webster, Q.C., M.P., was in the chair and was supported by a large and distinguished company. Donations to the amount of £1800 were announced.

THE ROYAL AMATEUR ORCHESTRAL SOCIETY.—A very successful afternoon concert was given in the large room of the Queen's Hall, Langham-place, on May 2nd by the Royal Amateur Orchestral Society for the benefit of the funds of St. Thomas's Hospital. The members of the orchestra played the "Overture from Oberon," the "Overture from Tannhäuser," the "Ungarische Rhapsodien, No. 1," and other pieces with the skill for which they are renowned. Madlle. Irme Sethe (violin), Madame Fanny Moody, Mr. Andrew Black, and Monsieur Sapellnikoff also assisted and were well received. As the room was crowded, every seat having been taken before the day of the performance, we hope that the hospital will receive a considerable sum as the result. Much credit is due to Dr. Toller and those engaged in the preparation of the entertainment.

THE DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—An ordinary meeting was held on April 22nd, Dr. P. H. Pye-Smith, F.R.S., President, being in the chair. Dr. Robert J. Carter, Mr. J. Jackson Clarke, and Dr. C. H. Thompson were elected members of the society. The following cases were exhibited:—By the President: A Symmetrical Pustular Eruption resembling that produced by an Iodide (an unknown medicine having been taken previously to admission into hospital) in a male patient aged fifty-two years, who was suffering from aortic valvular disease.—By Dr. P. S. Abraham: (1) Lichen Planus having unusual Characters on the Legs and Forearms of a Female. (2) Multiple Subcutaneous Tuberculous Nodules in a Girl aged three and a half years; (3) Extensive Dermato-syphilis of Nodular Form of Ten Years Duration in a Woman aged fifty-three years; and (4) Dermato-syphilis of Squamous Form in Two Females aged sixty and forty-three years respectively.—By Mr. L. A. Bidwell: A Boy aged eight years with Persistent Œdema of the Upper Lip of Three Years' Duration commencing with Ulceration inside one Nostril and at the Angles of the Mouth.—By Dr. A. Eddowes: (1) Xerodermia in a Boy specially to illustrate the limitation of the efficacy of thyroid extract as a treatment; and (2) a Girl with Peculiar Œdema of the Right Ear and Cheek, sometimes accompanied by Swollen Eyelids.—By Dr. T. D. Savill: Keratosis Follicularis in a woman aged fifty-eight years.—By Dr. Stowers: (1) Lichen Planus Hypertrophicus in a woman aged sixty-four years; (2) a Papulo-tubercular Dermato-syphilide of Universal Distribution in a woman aged thirty-nine years; and (3) an Unusual Facial Eruption due to the apparent coexistence of Acute Sebacea and Dermato-syphilis.—The President, Dr. Abraham, Mr. Bidwell, Dr. Bowles, Dr. A. Davies, Dr. Eddowes, Mr. Hitchens, Dr. Pegler, Dr. Savill, Dr. Stopford Taylor (Liverpool), and Dr. Stowers took part in the various discussions. It was announced that the annual general meeting and conference would be held on Wednesday, May 20th, full particulars of which would be sent to each member.

THE DIFFUSION OF SMALL-POX.—There were registered in the metropolitan area last week two deaths from small-pox. The deceased persons belonged respectively to Holborn and Newington sanitary districts. The previous deaths from small-pox in London were 2 registered in the first week of March. The cases admitted to hospital last week were only 3 in number, against 5, 4, and 8 in the three preceeding weeks. On Saturday last there remained in hospital only 13 cases of the disease, as compared with 51 and 33 on the corresponding Saturdays of the two previous months. The only other registered death from small-pox in the thirty-three large towns was one at West Ham. There have been several cases recently in Sussex, chiefly in common lodging houses, and in each instance prompt measures of isolation have prevented the spread of infection. Among the cases was one in a tramp from Gloucester, who was staying in a public-house in the hamlet of Hermitage, near Emsworth, and who had the disease in a mild form. The landlord and two other persons have since been attacked, but have been isolated and are now convalescent. A vagrant lad is under treatment in an unoccupied cottage

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at West Grinstead, in the Horsham rural district. At Gloucester there are signs of waning in the epidemic, the cases in the week ended April 30th having been only 130 as compared with 211, 201, and 168 in the three preceding weeks, while the decline is still maintained. We sincerely trust that the city will shortly be free from its terrible infliction. The fall chronicled was to be expected in view of the activity of the local authorities in carrying out vaccination and revaccination throughout the place. The Gloucester School Board have decided to keep the schools closed until the end of the present month. At a recent special meeting of the Malmesbury Town Council a report was presented by the sanitary officials showing that the case of small-pox found in the place was of mild form in a vaccinated youth, that the patient had been removed to hospital, and that all persons who had come in contact with him had been isolated. No cases have since appeared, and the patient is himself convalescent. A case has occurred at Chew Stoke in the Clutton Union, Neath. In Yorkshire 3 cases have occurred in the North Bierley district. Three men who had been lodging in Bradford fell ill with small-pox, one of them having come from Gloucester. They were removed to hospital, one to Schole Moor Hospital, where he died, and two to Bierley Hall Hospital. The brother of the deceased, who attended his funeral, contracted the disease, from which he also died.

Parliamentary Intelligence.

CURRENT NOTES.

The London Water Question.

In the House of Lords on Thursday, April 30th, there was a long debate on the motion for the second reading of the Government Bill for the establishment of a new water authority for London and the adjoining counties. Lord Tweedmouth moved an amendment to reject the Bill merely on the ground that it takes away the powers of the London County Council, but the House by 98 votes to 27 passed the second reading.

Poor-law Officers' Superannuation Bill.

This Bill is now in so advanced a position and has met with so much favour at the hands of the Government and the House of Commons that it has every prospect of being passed into law before the end of the present session. Its consideration by the Grand Committee on Law occupied a single sitting, and the only amendment of any consequence made was one moved by Mr. T. W. Russell, Parliamentary Secretary to the Local Government Board, providing that resignation as well as dismissal on account of fraud or grave misconduct shall carry with it forfeiture of all claim to a superannuation allowance.

Infant Life Protection Bill.

The Select Committee of the House of Lords on this Bill continues to meet twice a week for the examination of witnesses. Their lordships are quickly bringing together a large body of evidence in favour of extending the present system of registration to persons who take in a single child at a time and continuing the supervision until the child reaches the age of five years. They have examined several officials of the London County Council connected with the administration of the Infant Life Protection Act, several coroners, Mr. Rudolf, Secretary of the Church of England Waifs and Strays Society, and others. A Bill entitled the Safety of Nurse Children Bill has been introduced by Lord Herschell and referred to the committee for their consideration. The promoters of the measure are the National Society for the Prevention of Cruelty to Children.

Midwives Registration Bill.

The promoters of this Bill obtained a place for its second reading among the orders on Wednesday, May 6th, but the Government, in virtue of a recent resolution, put business of their own in front of it and consequently it was not reached at a period of the sitting when it could be discussed. The result is that there is little or no chance of the Bill being discussed this session. The petition of the British Medical Association against the Bill was presented to the House on Tuesday, May 5th.

The Ingredients of British Cigars.

Mr. Gilliat called the attention of the Chancellor of the Exchequer to a statement that in the East of London yellow chestnut leaves were largely used during autumn in the manufacture of British cigars.—The Chancellor of the Exchequer replied that the horrible suggestion had no better basis than a newspaper paragraph. Under the official supervision which exists at present no such operations as those described could be carried on by any licensed manufacturer, and there was no reason to suppose that they were practised by persons not holding a licence.

HOUSE OF COMMONS.

FRIDAY, MAY 1ST.

The Case of Dr. Herz.

In the course of a debate in Committee of Supply on a vote for certain miscellaneous legal expenses, several members called attention to the case of Dr. Herz, complaining that the proceedings against that gentleman had been unduly prolonged and that a great deal of unnecessary expense had been incurred.—Dr. Clark insisted that what had occurred had amounted to persecution.—Sir Matthew White Ridley said, in his reply, that he was quite conscious that the case had cost a great deal of money, although it had been called for partly under our treaty obligations with the French Government and partly by merciful consideration for Dr. Herz himself.—Mr. Lloyd George: Why has the prosecution not been withdrawn?—Sir M. White Ridley: It is for the French Government to withdraw it. We simply fulfil our treaty obligations to France.—Mr. Lloyd George: I do not believe that any treaty compels us to persecute a man who is suffering from heart disease and is on the brink of death by placing a policeman at his door.—Sir M. White Ridley: There is no policeman at the door; he is solely in charge of his own doctor.

MONDAY, MAY 4TH.

Insanitary Barracks.

Mr. Colston asked the Under-Secretary of State for War if he was aware that for the past two years and upwards the sewage from the Le Marchant Barracks, near Devizes, had, owing to a complete breakdown of the sewerage system provided there, been discharged in a crude state into the Kennet and Avon Canal about a mile from the town, and that the canal flows downwards from that point through the town and supplies the water for a public bathing place for the inhabitants; and whether, having regard to the serious danger to health and the annoyance that had arisen, he would forthwith take such measures as were necessary to abate the nuisance.—Mr. Brodrick replied that the measures contemplated in the reply made to his honourable friend a year ago were duly carried out, but from the nature of the subsoil and other circumstances they had not been successful. The case was not quite so bad as represented in the question, for no actual sewage passed to the canal from the barracks, as the latrines were on the dry earth system. The general officer commanding had been given full authority to take any necessary measures and no efforts would be spared to provide a full remedy for the existing admitted evil. The coöperation of the local authorities was needed and had been invited.

BOOKS, ETC., RECEIVED.

ALCAN, FELIX, Paris.

Manuel de l'Enseignement des Enfants Anormaux. Par Drs. Hamou du Fougeray et L. Couëtoux. Preface du Dr. Bourneville. 1896.

Traitement des Maladies des Femmes par l'Électricité. Par Dr. L. R. Regnier. Preface par Dr. Labadie-Lagrave. 1896.

BAILLIÈRE, TINDALL, AND COX, King William-street, Strand, London.

The Diagnosis and Treatment of Diseases of the Rectum. By William Allingham, F.R.C.S., and Herbert W. Allingham, F.R.C.S. Sixth edition. 1896. Price 12*s.* 6*d.*

On Extraction, with Notes on the Anatomy and Physiology of the Teeth. By W. D. Woodburn, L.D.S. 1896. Price 5*s.*

BELL, GEO., AND SONS, York-street, Covent-garden, London.

Biological Experimentation: Its Functions and Limits. By Sir Benjamin W. Richardson, M.D., F.R.S. 1896. Price 2*s.* 6*d.* net.

CASSELL AND COMPANY, London.

Surgical Diseases of the Ovaries and Fallopian Tubes, including Tubal Pregnancy. By J. Bland Sutton, F.R.C.S. Illustrated. New Edition. 1896. Price 21*s.*

A System of Surgery. Edited by Frederick Treves, F.R.C.S. Vol. II. Illustrated. 1896.

CHAPMAN AND HALL, Henrietta-street, Covent-garden, London.

A Compendium of General Botany. By Dr. Max Westermaier. Translated by Dr. A. Schneider. Illustrated. First Edition. 1896. Price 8*s.* 6*d.* net.

Handbook for the Bio-chemical Laboratory, including Methods of Preparation and Numerous Tests arranged alphabetically. By John A. Mandel. First Edition. 1896. Price 6*s.* 6*d.*

CHURCHILL, J. & A., Great Marlborough-street, London.

Sterility. By Robert Bell, M.D. 1896. Price 5*s.*

CORNISH BROTHERS, Birmingham.

A Course of Practical Chemistry for Medical Students, as prescribed by the Conjoint Board, London. Arranged by C. F. Baker. 1896. Price 2*s.* 6*d.* net.

DIGBY, LONG, AND CO., Bouverie-street, Fleet-street, London.

Boer and Uitlander: The True History of the late Events in South Africa. By Wm. F. Regan. With original portraits, map, and plan. 1896.

EYRE AND SPOTTISWOODE, London.

Official Copy. University of London. The Calendar for the Year 1896-97. Part I. Charters, Regulations, Lists, &c. 1896. Price 3*s.*

GRIFFIN, CHAS., AND CO., Exeter-street, Strand, London.

Foods: Their Composition and Analysis. By A. Wynter Blyth, M.R.C.S. Illustrated. Fourth Edition. 1896. Price 21*s.*

KEGAN PAUL, TRENCH, TRÜBNER AND CO., London.

Character as Seen in Body and Parentage. By F. Jordan, F.R.C.S. Third edition. 1896. Price 2*s.* 6*d.* net.

LONGMANS, GREEN, AND CO., London.

Occasional Papers on Medical Subjects, 1855-1896. By W. Howship Dickinson, M.D., F.R.C.P. 1896. Price 12*s.*

The Essentials of Chemical Physiology. By W. D. Halliburton, M.D., F.R.S. Second Edition. 1896. Price 5*s.*

Quain's Elements of Anatomy. Edited by Edward A. Schäfer, F.R.S., and Geo. D. Thane. In three volumes. Appendix. Superficial and Surgical Anatomy. Tenth edition. 1896. Price 6*s.* 6*d.*

MALOINE, A., Paris.

Nouveaux Elements d'Ophtalmologie. Par H. True and E. Valude. Tome premier. 1896.

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PUTNAM'S SONS, G. P., Bedford-street, London.

No. 32 State Charities Aid Association of New York: Handbook for Hospitals. By Abby H. Woolsey. Third Edition. 1895. Price 3s. 6d.

SAUNDERS, W. B., Philadelphia.

Obstetric Accidents. Emergencies, and Operations. By L. C. Boislinière, A.M., M.D., LL.D. Illustrated. 1896.

SWAN SONNENSCHEIN AND Co., London.

Analytic Psychology. By G. F. Stout. In two volumes. Vols. I. and II. 1896.

THE RESMAN PUBLISHING COMPANY, Adam-street, Strand, London.

Archives of Clinical Skiagraphy. By Sydney Rowland, B.A. Camb. 1896. Prices: Archives, 4s. net; Portfolio, 2s. net.

The Year-Book of Photography and Amateurs' Holiday Guide; Vol. XXXVII., 1896 (The Photographic News, 22, Furnival-street, London, E.C.); price 1s.—Monatsschrift für Geburtshülfe und Gynäkologie; Band III., Heft 4; April, 1896 (Williams and Norgate, Henrietta-street, Covent-garden, London).—An Address on some of the Limitations of Medicine; by Jas. F. Goodhart, M.D. Aberd., F.R.C.P. Lond.; reprint (John Bale and Sons, Great Titchfield-street, Oxford-street, London, 1895).—The Conservative Value of the Play Impulse; by Irving C. Rosse, M.D.; reprint (Damrell and Upham, Washington-street, Boston, 1895).—Dress and Health: An Appeal to Antiquity and Common Sense; by Chas. M. Jessop, M.R.C.P. Lond. (Elliot Stock, Paternoster-row, London, E.C., 1896).—Medical and Surgical Report of the Presbyterian Hospital in the City of New York; Vol. I., January, 1896 (The Knickerbocker Press, New York).—Scientific Memoirs by Medical Officers of the Army of India; edited by Surgeon-Major-General J. Cleghorn, M.D.; Part 9, 1895 (Office of the Superintendent of Government Printing, India, Calcutta, 1895).—Transactions of the American Climatological Association for the Year 1895; Vol. XI. (printed for the Association, Philadelphia, 1895).—Handbuch der Laryngologie und Rhinologie; von Dr. P. Heymann; 1. Lieferung (1-1) (Alfred Holder, Wien, 1836).—Ueber Traumatische Entstehung Innerer Krankheiten; von Dr. Richd. Stern; Erstes Heft (G. Fischer, Jena, 1896).—Philip's Handy Volume Atlas of London, 1896 (Geo. Philip and Son, 32, Fleet-street, London, E.C.); price 5s.—Royal University of Ireland Examination Papers, 1895: A Supplement to the University Calendar for 1896 (printed at the University Press by Ponsonby and Weldrick, Dublin)—Dod's Parliamentary Companion, 1896 (Whittaker and Co., White Hart-street, London, E.C.); price 4s. 6d.—Willing's British and Irish Press Guide, 1896 (published at 162, Piccadilly, London, W.); price 1s.—Amicus Medici; Prescription Form and Letter Case (Daniel Macfarlane and Co., Edinburgh).—Transactions of the Obstetrical Society of London; Vol. XXXVIII., for the year 1896; Part I. for January and February (published by the Society, 20, Hanover-square, W.); price 5s.—The Journal of Physiology; Vol. XIX., No. 4 (C. J. Clay and Sons, London; 1896); price 8s.—The Glasgow Medical Journal; May, 1896 (A. MacDougall, Glasgow, and H. K. Lewis, London); price 2s.—Henderson and Birkett's Medical Visiting and Account Book (Henderson and Birkett, Booksellers, Gateshead.—Magazines &c., for May: Strand Magazine, Boys' Own Paper, Girls' Own Paper, Leisure Hour, Sunday at Home, Ludgate Magazine, Westminster Review, Contemporary Review, Friendly Greetings, Light and Leading, Architecture.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BENSON, J. R., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Surgeon to King's College Hospital.

BOND, C. S., M.B., B.C. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer for the Infirmary, Parish of St. Luke, Chelsea.

BOSTOCK, A. S., M.R.C.S., has been reappointed Medical Officer by the Westhampnett Rural District Council.

BURRIDGE, H. A., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Surgeon to King's College Hospital.

CARMICHAEL, D., M.B., C.M. Edin., has been appointed Medical Referee in the Boddam District for the Prudential Assurance Company.

COUCH, J. G., M.R.C.S., has been reappointed Medical Officer of Health for the Madron and Ludgvan Urban Sanitary Districts.

DARLEY, A. R., M.D., B.Ch. Dub., L.M.R.C.P. Irel., has been appointed Medical Officer of Health for the Daventry Rural Sanitary District, vice W. J. F. Churchouse.

DOCHARD, A. T., M.B., C.M. Edin., has been reappointed Medical Officer of Health for the Whitefield Urban District.

ENHARDT, C. C. J., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Surgeon to King's College Hospital.

EVANS, ARTHUR H., L.R.C.P. Lond., M.R.C.S., has been appointed Senior House Physician to Westminster Hospital.

EWAN, JOHN ALFRED, M.A., M.D. Edin., Senior Assistant Medical Officer, Dorset County Asylum, has been appointed Medical Superintendent of the Asylum about to be built for the Kesteven Division of Lincolnshire. Meantime the patients are to be housed in temporary buildings.

GRIFFITH, WM., M.B., C.M. Edin., has been appointed Consulting Physician to the Pembrokeshire County Infirmary.

HARGREAVES, W. H., M.R.C.S., L.R.C.P., has been appointed Obstetric House Physician to Middlesex Hospital.

HAVARD, D., M.D. St. And., L.R.C.P. Lond., M.R.C.S., D.P.H. Eng., has been appointed Consulting Physician to the Pembrokeshire County Infirmary.

JACOB, F. H., M.R.C.S., L.R.C.P. Lond., has been appointed Resident Assistant House Physician to King's College Hospital.

JOLLY, S. A., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Acton Sanitary District of the Brentford Union, vice F. Francis resigned.

LANSDOWN, G. H., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Physician to King's College Hospital.

LARKING, A. R., M.D. Durh., M.R.C.S., has been appointed Medical Officer of Health for the Chesham Urban Sanitary District, vice J. F. Churchill, resigned.

MACKENZIE, J., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Kirby Sanitary District of the Basford Union.

MACHALE, P. J., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer for the Lahardane Dispensary District, Mayo.

MACQUEENEY, J. R., Dr., has been appointed Consulting Physician to St. Vincent's Hospital, Melbourne, Australia.

MATSIE, J. P., M.B., C.M., L.F.P.S. Glasg., has been appointed Medical Officer to the Bilston Hospital.

MAUDSLEY, H., M.D., B.S. Lond., M.R.C.P., has been appointed Consulting Physician to St. Vincent's Hospital, Melbourne, Australia.

PAPILLON, T. A., F.R.C.S. Edin., has been appointed Ophthalmic Surgeon to the Hastings, St. Leonards, and East Sussex Hospital.

PLAYFAIR, E., M.B. Lond., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Accoucheur to King's College Hospital.

PLUMMER, SELBY W., M.D., B.S. Durh., has been appointed Honorary Surgeon to the Durham County Hospital.

PRICE, H. P. J., M.R.C.S., has been appointed Consulting Physician to the Pembrokeshire County Infirmary.

RANDALL, W., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health, Bridgend.

REID, D. A., M.D. Edin., M.R.C.S., has been appointed Consulting Physician to the Pembrokeshire County Infirmary.

RICHMOND, JAS., M.B. Oxon., M.R.C.S., D.P.H. Camb., has been appointed Medical Officer of Health for the Perry Bar Urban Sanitary District, vice J. B. Welch, resigned.

ROWELL, GEORGE, F.R.C.S., has been appointed Senior Anæsthetist to Guy's Hospital and Demonstrator of Anæsthetics in the Medical School.

SAUNDERS, E. A., M.R.C.S., has been appointed Consulting Physician to the Pembrokeshire County Infirmary.

SINIGAR, H., M.B. Lond., M.R.C.S., L.R.C.P., has been appointed Assistant Medical Officer to the Birmingham Workhouse Infirmary.

STANLEY, ARTHUR, M.D. Lond., M.R.C.S., L.R.C.P., has been appointed Assistant Medical Officer to the North-Western Hospital of the Metropolitan Asylums Board.

THOMAS, ROBT. STANLEY, M.A., M.B., B.C. Cantab., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Medical Officer to the Exmouth Dispensary.

TRIBE, P. C. B., M.R.C.S., L.R.C.P. Lond., has been appointed Resident Assistant House Accoucheur to King's College Hospital.

WAINMAN, BENJAMIN, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Hunslet Workhouse, vice Shirley.

WILLIAMS, WM., M.B. Lond., M.R.C.S., has been appointed Consulting Physician to the Pembrokeshire County Infirmary.

WOODFORDE, W. T. G., M.D. Lond., has been reappointed Medical Officer for the Berks Combined Medical District by the Eghan Rural District Council.

ERRATUM.—In our issue of the 11th ult. it was announced in error that Dr. E. Hawkins had been appointed medical officer of health for Sunderland. Of the six *selected* candidates Dr. Hawkins was one, but Dr. H. Scurfield was ultimately appointed.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ANCOATS HOSPITAL, Manchester.—Resident Junior House Surgeon. Salary £50, with board and washing.

BRISTOL EYE INFIRMARY.—House Surgeon. Salary £60, with board and residence.

BUCKS COUNTY LUNATIC ASYLUM.—Assistant Medical Officer at this asylum, situate at Stone, near Aylesbury; unmarried. Salary £100 per annum, with board and furnished apartments in the asylum.

CHICHESTER INFIRMARY.—House Surgeon. Salary £80 per annum with board, lodging, and washing.

COUNTY ASYLUM, Dorchester.—Senior Assistant Medical Officer, unmarried. Salary £150, rising to £200.

COUNTY BOROUGH OF GATESHEAD.—Medical Officer of Health for the Borough. Salary £300 per annum, rising by annual increments of £25 to £350 per annum, and an additional salary of £50 per annum as Medical Officer of the Corporation Hospital for Infectious Diseases. The appointment will terminate on the expiration of twelve months. Applications to the Town Clerk, Town Hall, Gateshead.

GLAMORGAN COUNTY ASYLUM, Bridgend.—Junior Assistant Medical Officer. Salary £130, rising £10 a year to £150 if approved, with board (no beer or wine), lodging, and washing.

HORTON INFIRMARY, Banbury.—House Surgeon and Dispenser. Salary £60 per annum, with board and lodging.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Assistant Resident Medical Officer. Salary £50 per annum, with board and residence.

KENT COUNTY OPHTHALMIC HOSPITAL, Trinity House, Maidstone.—House Surgeon. Salary, with furnished apartments and attendance in the hospital, but without board, for the first year £125 and £150 after the first year.

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LONDON THROAT HOSPITAL, 204, Great Portland-street, W.—Non-resident House Surgeon, for six months. Salary at the rate of 25 guineas per annum.

RANGOON MUNICIPALITY. — Health Officer. Salary Rs. 600 per mensem, rising to Rs.1000 per mensem by annual increments of Rs. 50 per mensem. Applications to Messrs. Ogilvy, Gillanders, and Co., Sun-court, 67, Cornhill, London, E.C.

ROYAL SOUTH HANTS INFIRMARY, Southampton. — Assistant House Surgeon for six months. Gratuity of £10 will be given if found satisfactory.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, West Strand.—House Surgeon. Also Clinical Assistants for six months.

ST. ANDREW'S HOSPITAL FOR MENTAL DISEASES, Northampton.—Junior Assistant Medical Officer, unmarried. Salary £150 per annum, with board, furnished apartments, and washing.

STAMFORD, RUTLAND, AND GENERAL INFIRMARY, Stamford.—House Surgeon, unmarried, for two years. Salary £100 per annum, with board, lodging, and washing.

THE NEW HOSPITAL FOR WOMEN, 144, Euston-road, London.—Two fully qualified medical women as House Surgeons.

THE ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London, E.C.—House Physician, for six months. Salary at the rate of £40 per annum, with board, lodging, and laundry.

THE GENERAL HOSPITAL, Birmingham.—Assistant House Surgeon, for six months. Residence, board, and washing provided.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury.—Resident Medical Superintendent, for one year. Salary £105 a year, with board and residence in the hospital. Also House Surgeon for six months, unmarried. Salary £20, with board and residence in the hospital.

VICTORIA CHILDREN'S HOSPITAL, Park-street, Hull.—Resident House Surgeon. Salary £50 per annum, with board and laundry.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's-road, Chelsea, S.W.—Assistant Physician to the Out-patients for five years. Also House Physician to the In-patients for twelve months. Honorarium £50, and board and lodging in the hospital provided.

Births, Marriages, and Deaths.

BIRTHS.

BLACKLOCK.—On May 1st, at Daisy Bank, Prestwich, Manchester, the wife of John Blacklock, M.D. St. And., of twin sons.

EDGE.—On May 2nd, at Tudor House, Maidenhead, the wife of Arthur Edge, M.B. Lond., of a daughter.

GRANT.—On April 30th, at 8, Upper Wimpole-street, W., the wife of Dundas Grant, M.A., M.D., F.R.C.S., of a son.

HARRIS.—On May 4th, at Sussex-place, Southampton, the wife of A. Wellesley Harris, M.R.C.S., L.S.A., D.P.H., of a son.

HEY.—On May 4th, the wife of H. Darwin Hey, M.R.C.S., L.R.C.P., of Eastfield, Faringdon, Berks, of a daughter.

HURRY.—On April 29th, at Abbotsbrook, Reading, the wife of Jamieson B. Hurry, M.A., M.D. Camb., of a daughter.

MARTIN.—On April 27th, at Bermondsey-square, S.E., the wife of F. G. Clifton Martin, L.R.C.P., M.R.C.S., L.S.A., of a daughter.

WATT.—On May 2nd, at Millbrook, Plymouth, the wife of J. Leslie Watt, M.B. Aberd., of a son.

MARRIAGES.

MICHELS—SCHOELL.—On May 5th, at St. Mary's German Lutheran Church, Cleveland-street, Ernst Michels, M.D., F.R.C.S. Eng., to Hildegard Maria, younger daughter of the Rev. C. Schoell, D.D.

NAPIER JONES—RUSSELL.—On May 1st, at the Church of St. Mary and St. Helen, Neston, Cheshire, by Rev. J. O. Young, M.A., assisted by Rev. Canon Turner, vicar of Neston, Philip Napier Jones, M.R.C.S. Eng., L.R.C.P. Lond., son of the late Major E. Monckton Jones, 20th Regiment, to Annie McLeod, youngest daughter of the late David Russell, M.D., of Neston.

POWELL—GERAGHTY.—On April 28th, at St. Munchin's R.C. Church, Limerick, by the Very Rev. Dr. Shanahard, P.P.V.G., H. F. Powell, J.P., L.R.C.P. & S.E., &c., Nenagh, to Margaret (Maggie), eldest daughter of Michael Geraghty, of Bellefield, Limerick. No cards.

RENTON—HOLMES.—On April 29th, at the Parish Church, Cheltenham, Robert Renton, M.B., C.M. Edin., to Ella Annie, youngest daughter of the late George Holmes, Bennington, Cheltenham.

RICHARDS—TA'BOIS.—On April 30th, at St. Peter's, Highgate-hill, Richard Walter Richards, M.D., of Dolgelly, to Edith, youngest daughter of Frederick William Ta'Bois, of Swains-lane, Highgate.

WILLIAMS—SWIRE.—On April 16th, at St. Andrew's Church, Southport, by the Rev. Henry Evans, B.D., vicar of Pembrey, assisted by the Rev. Grantley C. Martin, M.A., vicar of St. Andrew's, and the Rev. Robert Williams, M.A., vicar of Dolyddelen, Walter Ebner Williams, M.B., C.M. Glasg., of Portmadoc, to Maud, fifth daughter of the late John Swire, A.K.C., Pembrey, South Wales, and niece of Mrs. Hardy and the late Frederick Hardy, M.D., F.R.C.P., Southport.

DEATHS.

DARLING.—At The Hawthorns, 13, Merchiston-place, Edinburgh, on the 1st inst., after a short and severe illness, Janet A. Walker, beloved wife of T. Brown Darling, M.D.

FLANAGAN.—On April 30th, at Portsmouth, James Flanagan, R.N., Deputy-Inspector-General of Hospitals and Fleets (retired), aged 61.

HEALD.—On April 26th, at Hingham, Robert Heald, M.R.C.S., aged 45.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 7th, 1896.

Date.		Barometer reduced to Sea Level and 32° F	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radiation Vacuo.	Maximum Temp. in Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
May	1	30·17	N.	44	40	102	54	40	...	Cloudy
,,	2	30·34	N.E.	46	41	100	53	41	...	Cloudy
,,	3	30·41	N.E.	50	46	106	61	44	...	Cloudy
,,	4	30·43	N.E.	46	42	108	63	38	...	Cloudy
,,	5	30·31	S.W.	52	45	109	66	43	...	Cloudy
,,	6	30·26	E.	51	47	100	63	46	...	Cloudy
,,	7	30·32	N.E.	52	48	110	64	46	...	Hazy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (11th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.).

TUESDAY (12th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (13th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY (14th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Great Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (15th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.) Gt. Northern Central (2.30 P.M.).

SATURDAY (16th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (11th).—MEDICAL SOCIETY OF LONDON.—8 P.M. General Meeting for the Election of Officers and Council.—8.30 P.M. Dr. A. McLane Hamilton (New York): The Connexion of Auto toxis with certain Common Forms of Insanity.

SOCIETY OF ARTS.—8 P.M. Mr. J. Swinburne: Applied Electro-Chemistry. (Cantor Lecture.)

TUESDAY (12th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. W. Edmunds and Mr. C. A. Ballance: Observations and Experiments on Intestinal and Gastro-Intestinal Anastomosis. (Illustrated by lantern slides.)

SOCIETY OF ARTS.—8 P.M. Mr. W. B. Gardner: Wood Engraving as Compared with other Reproductive Art, and its Future as a Fine Art.

WEDNESDAY (13th).—LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Report of the Morbid Growths Committee on (1) Myxoma of Vocal Cord shown by Dr. Bond; (2) Myxoma of Vocal Cord shown by Dr. St. Clair Thompson; (3) Tuberculosis of the Septum shown by Dr. W. Hill. Cases and Specimens: Dr. B. Baron: Obstruction of Larynx due to a Web.—Dr. F. Semon: (1) Case of Thyrotomy for Epithelioma of the Larynx; (2) Case of Periodical Tracheal Bleeding.—Dr. Bond: (1) Boy with Uncontrollable, Intermittent, Laryngeal Cry; (2) Man, aged forty-five, with Tubercle of Larynx.—Dr. H. L. Lack: (1) Case and Microscope Specimen of Healed Tuberculous Laryngitis in a Female; (2) Case and Microscope Specimen of Lupus affecting only the Pharynx in a Man aged thirty-four; (3) Case of Healed Suppuration of the Left Frontal and Maxillary Sinuses in a Female.—Dr. H. Tilley: Case and Specimens of Curved Polypi of Frontal Sinuses.—Dr. S. Spicer: Case.—Dr. Brady (Sydney): Instrument.

SOCIETY OF ARTS.—8 P.M. Mr. E. W. Moir: Tunnelling by Compressed Air.

THURSDAY (14th).—SOCIETY OF ARTS.—4.30 P.M. Mr. G. W. Christison: Tea Planting in Darjeeling.

BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover square, W.)—8.30 P.M. Specimen:—Dr. Schacht: Unruptured Tubal Gestation containing Fœtus. Papers:—Dr. Bell (Glasgow): The Treatment of Carcinoma of the Uterus, Certain Forms of Ovarian Disease, and Fibroids of the Uterus by means of Thyroid, Parotid, and Mammary Gland Therapeutics.—Mr. B. Jessett: The Early Diagnosis of Malignant Disease of the Body of the Uterus, illustrated by Museum Specimens.

FRIDAY (15th).—EPIDEMIOLOGICAL SOCIETY OF LONDON (11, Chandos-st., Cavendish-sq.).—8 P.M. Dr. G. Reid: Infectious Sore-throat and Diphtheria.

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LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (11th).—LONDON POST-GRADUATE COURSE.—Roy. Lond. Ophthalmic Hospital, Moorfields, 1 P.M., Mr. W. Lang: Lacrymal Affections.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. E. Law: Examination of the Nose and Throat.

WEDNESDAY (13th).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Beevor.

HOSPITAL FOR CONSUMPTION, &c. (Brompton).—4 P.M. Dr. Habershon: Mitral Stenosis.

LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Payne: Pemphigus.—Roy. Lond. Ophthalmic Hospital, Moorfields, 8 P.M., Mr. A. Q. Silcock: Diseases of Retina, with cases.

THURSDAY (14th).—LONDON POST-GRADUATE COURSE.—Brit. Inst. of Preventive Medicine, Gt. Russell-st., W.C., 3.30 P.M., Dr. Allan Macfadyen and Mr. A. G. Foulerton: Proteid Substances found in Urine in Disease.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Dr. S. Mackenzie: Clinical Lecture.

VICTORIA HOSPITAL FOR CHILDREN (Tite-street, S.W.).—4 P.M. Mr. D'Arcy Power: Meningitis in its Surgical Aspects.

FRIDAY (15th).—LONDON POST GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Examination of Air, Soil, and Water.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL.—4 P.M. Mr. W. Wingrave: On other Diseases of the Throat and Nose.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

VIEWING THE BODY: A QUERY.

To the Editors of THE LANCET.

SIRS,—Will you kindly answer the following question in your coming number? Is it necessary that the coroner as well as the inquest jury should view the body at an inquiry? I am, Sirs, yours truly,

April 30th, 1896. LEX.

*** There is no doubt that the coroner is as much bound to view the body as the jury. The words of the Coroners Act, 1887 (which is a Consolidation Act), Clause 4, are, "The coroner and jury shall at the first sitting of the inquest view the body."—ED. L.

MONTHLY NURSES AND THE ADMINISTRATION OF ERGOT.

MR. A. BRAXTON HICKS held an inquiry at the Albany Hall, Kingston, touching the death of the newly-born child of John Goodwright. The jury returned a verdict that death was due to the carelessness of Nurse Walker in administering ergot of rye without the advice of the medical man. On arriving the medical man found that his ergot bottle was empty and that the mother had symptoms of an overdose: she was in a state of collapse, the extremities were cold, and the breathing was short and quick. She had to be delivered under chloroform with forceps by Mr. Mackeson. At first the nurse flatly denied having given the ergot; subsequently she admitted having done so. Worse still, she had practised other methods for hastening delivery by kneeling twice on the patient, who was found by Mr. Mackeson to be extensively bruised on the abdomen, over the breast bone, and the last three ribs. Such ignorance and such conduct in a nurse with a certificate from Queen Charlotte's Lying-in Hospital is almost incredible. The element of character, too, assumes great importance in the case. It is well that the mother, under able medical treatment, was saved, or the nurse would have found herself in a very serious predicament.

"A NOVEL METHOD OF INTRODUCING A NEWLY-QUALIFIED MAN."

To the Editors of THE LANCET.

SIRS,—It seems to be particularly unfortunate just now, when the members of the medical profession appear to be waking up to the necessity of standing shoulder to shoulder, that cases such as that related by "Vindicator" in THE LANCET of April 25th should occur. It is no wonder that the public take advantage of us, and by reason of our insane rivalries are enabled to deprive us of our just dues. It shows the necessity of some such association as that which the lawyers have, by which a more strict watch would be kept over the action of its members than the General Medical Council is enabled to do. What appears to me to be most important is—first, a reform of the system of election to the General Medical Council, by which all the members should be elected by the general body of the profession; and secondly, that more power should be given to the General Medical Council in cases in which unprofessional conduct, such as advertising, &c., is indulged in. It would be well if members of the medical profession would join such an association as the Incorporated Medical Practitioners' Association, which is now actively engaged in forming branches all over the country and which can, therefore, bring moral pressure to bear on individuals acting as "Vindicator" describes, and, if necessary, will bring the facts of the case before the corporations who may have granted him diplomas or before the General Medical Council. I am, Sirs, yours truly,

Plymouth, May 5th, 1896. GEO. JACKSON, F.R.C.S. Eng.,
President of the Incorporated Medical Practitioners' Association.

A CORRESPONDENT has sent us a filthy pamphlet entitled "An Essay on the 'Self-Restorer,'" published at 175, Wardour-street, and dated 1895. This pamphlet is written in connexion with a rubbishy apparatus called "Dr. Bell's Self-Restorer Belt," and is a particularly filthy and dangerous example of the quack tract. The person trading at this place under the name of Bell was convicted of using medical titles to which he had no right on Jan. 28th, 1896, at Marlborough-street Police-court (*vide* THE LANCET, Feb. 1st, 1896, p. 310, "A Righteous Judgment"), and we recommend any other of our readers whom this beastliness may reach to forward the pamphlet, envelope, &c., to Scotland-yard, with information as to how it was addressed.

THE CHEMISTRY OF THE BLOOD.

To the Editors of THE LANCET.

SIRS,—In Fownes' "Chemistry" it is stated that "myosin paraglobulin and fibrinogen are readily soluble in dilute acids, but by the act of solution they are at once converted into acid albumin, the precipitate formed by neutralisation being no longer soluble in neutral saline solutions." That from "solutions of acid or alkaline albumin, on careful neutralisation, the whole of the proteid matter is thrown down as a white flocculent, frequently gelatinous precipitate. The action of the acid has converted the albumin soluble in water into a substance insoluble in water. The precipitate is very readily soluble in excess of alkali or dilute acid, and can be reprecipitated by neutralisation. It is insoluble in sodium chloride solution." "Large quantities of acid precipitate it immediately." Again, that "lactic acid coagulates casein." It has been stated that drawn blood decreases in alkalinity while coagulating and that coagulation is prevented by addition of acids or caustic alkali. Can you or any of your readers inform me authoritatively whether, when an organ discharges acid—for example, in rheumatism or gout lactic or uric acid—into the blood during life, a similar or analogous precipitation to that above stated does or does not take place, and whether the disease of blood-clotting ever so arises? Has the effect of alkalies in thrombosis, embolism, or paralysis from clot been noted, and could you refer me to any treatises on the point? I am, Sirs, yours truly,

May 5th, 1896. E. L. E.

RHEUMATOID ARTHRITIS.

To the Editors of THE LANCET.

SIRS,—The interesting paper by Dr. Bannatyne, Dr. Wohlmann, and Dr. Blaxall in THE LANCET of April 25th recalls to my mind a point in regard to patients suffering from rheumatoid arthritis which I have not seen noticed—namely, their dislike to any warm clothing or covering. This is the more remarkable because it is directly opposed to what we find in sufferers from all other kinds of rheumatism, who know well the value of swathing themselves in flannel. Two well-marked cases of this occur to me. One is that of a woman aged sixty years who has been bedridden with the complaint for over a dozen years, who lives in a cottage in a bleak village in the Midlands, and whose habitual covering is a sheet and counterpane. The other is that of a woman, who died after many years' suffering in early middle life. She absolutely used to refuse to wear any flannel underclothing, and in the depths of winter would retire to rest without any fire in her room, although, owing to her crippled state, it would sometimes take her over a couple of hours to undress and get into bed. On trying to elicit from patients the reason they dislike warm clothing it appears, as far as I can gather, to be not fear of an increase of pain or of sweating, but a dread that it will bring on faintness or syncope, perhaps because the additional warmth would still further stimulate the already too quickly acting heart and tax and distress it. I am, Sirs, yours faithfully,

May 2nd, 1896. WALTER G. EARLE, M.R.C.S.Eng., L.R.C.P.Lond.

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WANTED, A SUGGESTION FOR TREATMENT.

To the Editors of THE LANCET.

SIRS,—I have a patient thirty-four years old, strong and healthy, who is a van driver; he has a strong, thick, black beard which he has been in the habit of shaving, which habit he has had to discontinue because of the outbreak of a crop of warts. The warts appeared suddenly about eight weeks since; they extend from the angle of the jaw on the right side to the corresponding one on the left side; they are small in size except a few which have outgrown the others, and they are to be counted by the hundred. Can any reader offer a suggestion for their removal? I am, Sirs, yours truly,

May 4th, 1896. PUZZLED.

H. H., M.D.—The newspaper cutting enclosed by our correspondent contains regrettable matter. But in spite of the fact that the personal information purports to have been given in an interview, we consider it probable that the medical man is suffering from a friend's indiscretion, and has not been himself a party to the dissemination of his praises. Such a practice as the medical man in question has enjoyed was certain to bring him into contact very closely with many persons quite ignorant of medical etiquette, any one of whom might have assisted in the publication of the offending paragraphs from the best of grateful motives.

TOO MANY PARTICULARS.

To the Editors of THE LANCET.

SIRS,—I would like your opinion in the forthcoming issue of THE LANCET on the merits of the following case. A patient of mine died from catarrhal croup who presented all the symptoms of asphyxia; that is, in my opinion, the child died from deficient oxygenation of the blood due to the obstruction in the larynx. Accordingly I filled up my certificate as follows: "Primarily, catarrhal croup; secondarily, carbonic acid poisoning." This certificate I gave to the parents, and on presenting it to the registrar it was refused and they were told to go to the police. The police directed the people back to me and I gave them a detailed letter to the registrar explaining the cause of death. This he also rejected, and the police then had to communicate with the coroner, who on reading the certificate and letter issued an order for burial. My death certificate was thrown about the police office, whence I afterwards took it and gave it to my solicitor. In consequence of the action of the registrar the rumour has gone forth that, first, I poisoned the child, and, secondly, that my certificates will not be accepted. This has done me a great amount of damage, financially and professionally. The people now, when cases I am attending become serious, call in another doctor in order that the certificate may be all right. I have only been in practice here a little over a year, and my name and reputation are all I have to depend upon.

Section 20 of the Births and Deaths Registration Act, 1874 (37 & 38 Vict., c. 88) says:—

> "In case of the death of any person who has been attended during his last illness by a registered medical practitioner, that practitioner shall sign and give to some person required by this Act to give information concerning the death, a certificate stating to the best of his knowledge and belief the cause of death, and such person shall upon giving information concerning the death, or giving notice of the death, deliver that certificate to the registrar, and the cause of death as stated in that certificate shall be entered in the register, together with the name of the certifying medical practitioner."

The registrar here is not a medical man. I am, myself, a registered practitioner since 1888. I have given the matter into the hands of my solicitor, but I wish myself to be fortified by your great experience.

I am, Sirs, yours truly,

April 27th, 1896. EDWARDUS.

*** Our correspondent went too much into particulars. He gave a sufficient cause of death in catarrhal croup. In using the words "carbonic acid poisoning"—accurate enough in a scientific sense—he gave information which was too much for the recipients, who have to use such judgment as they have in referring certificates to the police or the coroner. They might have acted with more respect to the certifier, but the only revenge we should advise is very scant doses of pathological information in future in his certificates to such an inappreciative registrar. Pearls are only beautiful to the capable eyes.—ED. L.

Sudens.—We have reviewed the periodical in question and have not found the numbers noticed wanting in taste. Its career is already determined.

THE RADNOR WATER CO., OF MONTREAL, CANADA.

THIS company send us further samples from their spring. Having recently examined this interesting water, which is a purely natural one and delicate to the taste, there is no need for further examination, especially as it was the subject of an analysis published in THE LANCET of Jan. 18th last, p. 173.

Ambulance.—It seems to us that B. and C. should meet and determine to be amicable. C. has a right to accept the invitation, but B.'s sense of grievance is not unnatural.

THE PUBLIC ADVERTISING OF MEDICAL BOOKS.

To the Editors of THE LANCET.

SIRS,—A placard, of which enclosed is a copy, has been for some days posted on the wall by the side of the shop window of Messrs. Cornish, booksellers, New-street, Birmingham. The placard is some two feet long and six inches wide, and the letters large and conspicuous. The Royal College of Physicians of London ought to be proud of its Fellows.

I am, Sirs, yours truly,

Birmingham, April 28th, 1896. HONOR.

[COPY.]

NAUHEIM (SCHOTT) TREATMENT OF HEART DISEASE.
BY
R. SAUNDBY, M.D., F.R.C.P.

*** We are confident that this advertisement cannot have come to the notice of Dr. Saundby himself and that he will now take immediate steps to stop such an objectionable parade of his name and his writings. The enterprising tradesman will, we fear, never be brought to see that "Publicitas publicitatum, omnia publicitas" is *not* the motto of the medical profession.—ED. L.

Mr. N. W. Holmes is thanked for his communication.

MEDICAL SOCIETY (COURT FORESTERS' ISLE, NO. 1822).

WE have received from a correspondent a balance-sheet of this medical aid society. It does not contain details of the number of patients attended, number of visits made, &c., so that there is no way of estimating whether the rate of payment is one that should be accepted by the medical officers; but in any case these medical officers, viz., Dr. W. Hoffmeister, Mr. J. B. Hoffmeister, and Mr. B. Watson Paul—should insist upon having the lyric effusion with which it terminates removed. It is discreditable to these gentlemen that their names should be brought before the public in this manner. We append the sinning verses:—

> "Where are you going to, my pretty maid?
> To the Foresters' Hall, kind Sir, she said.
> Why are you going, my pretty maid?
> Oh, I am going to join the Medical Aid,
> It's a first-rate society, kind Sir, she said.
> Who are the doctors, my pretty maid?
> Messrs. Hoffmeister and Paul, kind Sir, she said.
> Then all should join it, my pretty maid!
> Oh, yes, oh, yes, kind Sir, she said."

An Old Subscriber.—The practice is time-honoured. But it is in these days more honoured in the breach than in the observance. In many places the poorer patients look for the sign.

THYROID FEEDING.

To the Editors of THE LANCET.

SIRS,—I should be grateful if any of your readers could give me some information on thyroid feeding by the fresh gland, with especial reference to the following points—(1) quantity for, say, a week; (2) mode of preparation; and (3) dangers of excess, if any, and symptoms of same.

I am, Sirs, yours faithfully,

April 26th, 1896. P. W.

Sufferer has omitted to enclose his card.

ERRATUM.—We regret that the words "senior surgeon, Ancoats Hospital," should have been added to Dr. Martin's communication last week. The correct reading is—late senior house-surgeon, Ancoats Hospital.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*South Wales Daily News, Birmingham Gazette, Huddersfield Chronicle, Eastern Daily Press, Western Morning News, West London Observer, Wolverhampton Chronicle, Craven Herald, Brighton Gazette, Elgin Courant, Kentish Express, Southampton Times, Liverpool Daily Post, Grimsby News, Goole Times, Hampshire Independent, Sussex Daily News, Leyton Independent, Bury Guardian, Stroud News, Arbroath Guide, Bristol Mercury, Highland Times, Salisbury Journal, Birmingham Mail, Yorkshire Post, Manchester Courier, Liverpool Courier, Leeds Mercury, Sheffield Independent, Contractors' Chronicle, Kendal Express, Builder, Ayrshire Weekly News, Times of India, Galloway Gazette, Pioneer Mail, Architect, Sanitary Record, Le Temps, New York Herald, North China Daily Mail, Madras Times, New Zealand Herald, Bombay Gazette, Montreal Herald, Reading Mercury, Mining Journal, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, Hemel Hempstead Gazette, City Press, Hertfordshire Mercury, West Middlesex Standard, Local Government Journal, Surrey Advertiser, Walsall Observer, Walsall Free Press, Penrith Observer, Guernsey Star, Kelso Mail, Cumberland Advertiser, Citizen, Tablet, Electricity, English Mechanic, Building News, Airdrie Advertiser, Whitehaven Free Press, West Cumberland Times, Cape Times, Loughborough Monitor, North Devon Herald, Langport Herald, Thanet Guardian, Lincolnshire Echo, Public Health, &c., &c.*

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The Arris and Gale Lectures

ON THE

PHYSIOLOGICAL FACTORS INVOLVED IN THE CAUSATION OF DROPSY.

Delivered before the Royal College of Surgeons of England on Feb. 17th, 19th, and 21st, 1896,

BY ERNEST H. STARLING,
M.D. LOND., M.R.C.P.,
JOINT LECTURER ON PHYSIOLOGY AT GUY'S HOSPITAL.

LECTURE II.[1]

THE ABSORPTION OF FLUIDS FROM THE CONNECTIVE TISSUE SPACES.

MR. PRESIDENT AND GENTLEMEN,—We have now to consider the second physiological factor which is involved in the production of dropsy. Two ways of absorption have been generally described—viz., absorption by the lymphatics and absorption by the bloodvessels; and we find that at different periods in the history of the subject each of these has in turn been looked upon as the most important, or even exclusive, channel. There can be no doubt that absorption may take place by both these ways. Since the mechanism of absorption by the lymphatics is the more evident and familiar we may consider this way first.

All parts and organs of the body possess a well-developed system of lymphatics. These channels are in direct communication with the tissue-spaces and can be easily injected from these spaces. They are lined by a layer of endothelial cells, which are continuous except at the very point of junction of the lymphatics with the tissue-spaces. The larger trunks possess also an outer wall of connective tissue in which in some situations we find unstriated muscular fibres. All the lymphatic trunks, with the exception of those draining the upper extremity and right side of the head and neck with the adjacent parts of the thorax, converge to join the thoracic duct, which pours its contents into the blood in the angle between the left jugular and subclavian veins. All the larger lymphatics possess numerous valves so arranged that the lymph can only flow in them towards the thoracic duct. It is evident from these anatomical arrangements that any excess of fluid in the connective tissue spaces will make its way into the lymphatics and so finally attain the blood by way of the thoracic duct. There is one point, however, which I think is not sufficiently appreciated, and that is the importance of muscular movements both for emptying the spaces into the lymphatics and for propelling the lymph onwards through the lymphatics. If we have a manometer in the peripheral end of one of the lymphatics of the leg and inject fluid under pressure into the connective tissue spaces of the foot we find that the manometer in the lymphatic rises extremely slowly, so that the pressure in the spaces may be many times the pressure that obtains in the lymphatic. We have now only to flex the foot on the leg once or twice to immediately send up the pressure in the lymphatic to a height equal to or above that in the connective tissue spaces. Our knowledge of the importance of muscular movement for the normal lymph-flow we owe to the labours of Ludwig and his pupils. In all tendons and aponeuroses we find a double system of lymphatics—a deep system, consisting of vessels running parallel to the tendon-bundles and communicating by cross branches, and a superficial network with polygonal meshes in the peritendinous connective tissue. Both networks are in direct communication and either of them possess any valves. The superficial network trains into larger lymphatic trunks provided with valves. Each time that the underlying muscle contracts the deeper system is pressed upon and its contents emptied into the superficial system and so into the valved lymphatic trunks. When the muscle relaxes the fluid cannot get back past these valves, so that the two systems of lymphatics are emptied and ready to receive more fluid from the connective tissue spaces. A similar double system was described long ago by Ludwig and Schweigger-Seidel in the central tendon of the diaphragm, and these writers showed how beautiful injections might be made from the peritoneal cavity by injecting Berlin blue into this cavity and then carrying out artificial respiratory movements. As I have mentioned in my last lecture, it is impossible without such aid as muscular movements or passive flexion and extension of the limb to get any lymph-flow at all from a cannula placed in the lymphatics of the leg or arm. It will be evident to you therefore what an imperfect conception of the normal lymph-flow we obtain from a study of the flow in an animal anæsthetised and secured on its back on the operating table, when during normal existence every breath we draw and every movement or twitch of the muscles helps to pump lymph from the extremities into the thoracic duct and so into the blood.

Much more difficulty exists with regard to the absorption of fluid from the connective tissue spaces by the bloodvessels, and this question has been the subject of many investigations. Many years ago Majendie devised a number of ingenious experiments in order to show that poisons introduced into the serous cavities and connective tissue spaces of the limbs were absorbed not by the lymphatics but by the bloodvessels. These researches have been continued and extended of late years by Ascher in the case of the connective tissues of the lower limbs, by Tubby and myself in the case of the pleural and peritoneal cavities. We found, for example, that after injecting methylene blue or indigo carmine into the pleura the dye-stuff appeared in the urine within five minutes, whereas the lymph presented no trace of blue for another twenty minutes or even two hours. It is evident then that in this case the dye must have been taken up by the bloodvessels and not by the lymphatics, and that this vascular absorption takes place with extreme rapidity. In a later series of experiments Leathes has shown that after introduction of various salt solutions into the serous cavities an interchange of constituents takes place directly between the blood and the injected fluid, so that the latter in a very short time becomes isotonic with the blood plasma. Now in this mode of absorption by the bloodvessels the so-called absorption really consists in an interchange between blood and extra-vascular fluids—an interchange apparently dependent entirely upon processes of diffusion between these two fluids. So long as any difference in composition exists between intra- and extra-vascular fluids so long will diffusion-currents be set up tending to equalise this difference. This power of interchange between blood and tissue juices is probably of great importance in the normal metabolism of the tissues. Supposing, for example, that a tissue cell is storing up in itself a large amount of calcium or secreting it away from the tissue fluids into the lumen of a gland duct, it is evident that the percentage amount or partial tension of the calcium salts in the fluid surrounding the cell will be diminished. Diffusion currents will therefore be set up, and there will be a flow of calcium from the blood to the lymph until the normal calcium tension is restored. We must conclude, therefore, that for the ordinary metabolic activities of the tissues no lymph-flow at all is necessary, the cell being able to obtain all its diffusible food stuffs from the blood by means of diffusion even through a stationary layer of lymph.

These experiments, however, have no direct bearing upon the absorption of dropsical fluids by the bloodvessels. In the case of dropsical fluids the exudation resembles in all points blood plasma, the only difference between the two consisting in the fact that the dropsical fluid is rather poorer in proteids than the plasma. Here, as we have fluids almost identical on each side of the endothelial wall of the vessels, no conditions are present which would favour the setting up of diffusion currents. As a matter of fact, we may say that diffusion currents bring about an interchange of constituents between the two fluids, but can under no circumstances effect a total absorption of fluid. We have therefore to inquire whether, under any circumstances, an absorption of dropsical fluids or of isotonic salt solutions can be carried out by the bloodvessels. We may arrange the experiments upon this point under three headings.

1. In the first set observations were made on the absorption of isotonic salt solutions and blood serum from the pleural and peritoneal cavities. Orlow, working under Heidenhain's direction, found that such fluids were absorbed rapidly from the peritoneal cavities of living animals, while

[1] Lecture I. was published in THE LANCET of May 9th, 1896.

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the lymph-flow from a cannula placed in the thoracic duct showed no (or only slight) increase in no way comparable to the amount of fluid absorbed. He concluded, therefore, that the absorption was affected by the bloodvessels, and was dependent on the vital activity of the cells lining the serous cavities or of the endothelial cells of the capillaries. Leathes and Hamburger confirmed these results, but showed that they could not depend on any vital activity of the endothelial cells, since absorption took place with equal rapidity even when poisonous solutions of sodium fluoride were made use of. The great objection to these experiments is that they do not prove conclusively absorption by the bloodvessels. It is still possible that the fluids had been taken up by the sub-serous lymphatic network and had not reached the thoracic duct during the experiment. This is an objection raised by Cohnstein, who concludes from very similar experiments that these fluids are carried away solely by the lymphatics. It might be thought that this question could be easily decided by observing whether fluids were still taken up from the serous cavities after ligature of both thoracic ducts. I have made a number of experiments of this description, but have failed to get decisive results. It is true that after ligature of both thoracic ducts as well as of the right innominate vein isotonic salt solutions were taken up fairly quickly from the serous cavities. In none of these cases, however, could I be certain that the lymph was absolutely shut off from the blood. As a rule I injected on three succeeding days several hundred c.c. salt solution into the peritoneal cavity, the last injection containing carmine granules in suspension. On killing the dog two days after the last injection the peritoneal cavity was generally found to be empty, and carmine granules could be traced along the glands of the anterior mediastinum, showing that, in spite of the ligature of both thoracic ducts, there had been a passage of lymph upwards and through the chest. We must, therefore, look to other methods to decide this question.

2. There are a whole series of experiments made by other observers which to my mind prove conclusively the power of the bloodvessels to take up fluid from the tissue spaces. If an animal be bled several times it will be found that the blood obtained in the later bleedings is more watery than that obtained at the beginning of the experiment. Now this diminution of total solids in the blood seems to be due chiefly to a dilution of the serum; the serum contains less solids than before and is increased in volume relatively to the blood corpuscles. I may here quote some observations which show this point.

Dog, 11·4 kilos. Solids of serum = 7·72 per cent. Dog then bled to 220 c.cm. Thirty minutes later solids of serum = 7·14 per cent.

In another experiment the solids of the serum were at first 6·98 per cent.; after bleeding to 200 c.cm. = 6·57 per cent.; after further bleeding to 100 c.cm. = 6·37 per cent.

In a smaller dog (6·5 kilos.) withdrawal of 150 c.cm. blood reduced the solids of the serum from 7·77 per cent. to 6·47 per cent.

It must be noticed that this attempt to regulate the amount of the circulating blood by bringing it up to its normal volume is carried out with great rapidity, so that even while we are bleeding an animal we find that the later portions of blood are more dilute than the earlier portions. That the fluid which is added to the blood in these cases is derived from the tissue spaces is shown by Barlow's experiments. Now this dilution of the blood takes place even when the thoracic duct is tied or when the lymph is conducted away by placing a cannula in the duct, so that it cannot be due, as was formerly thought, to an increased lymph-flow into the blood.

3. In order to be absolutely certain of the power of the bloodvessels to take up isotonic solutions and dropsical fluids from the tissue spaces I have carried out a series of experiments in which I led defibriated blood through the bloodvessels of amputated limbs. In each case I had a double set of transfusion apparatus and sent one-half of the blood many times through a limb which had been rendered dropsical by the injection of isotonic salt solution, while at the same time fluid was flowing at the same pressure through the other limb, which was not dropsical, and thus served as a control. In each case the blood was analysed and its hæmoglobin estimated before the experiment and from both limbs after the experiment. It was invariably found that, whereas the blood which had passed from twelve to twenty-five times through the sound limb had become rather more concentrated, the blood which had passed through the œdematous limb had taken up fluid from this limb. I may here quote one of these experiments as an example:—

—	Total solids.	Percentage of HbO_2.
1. Blood before experiment	21·2%	100
2. After twenty passages through normal leg ...	21·4%	103
3. After twenty passages through œdematous leg	20·5%	96·5

We must conclude, then, that isotonic salt solutions and dropsical fluids may be taken up by the blood circulating through the capillaries and that this process may occur fairly rapidly. In the last lecture we saw how any excess of intra-capillary pressure, such as accompanies plethora, causes an increased transudation from the capillaries, so that the volume of circulating fluid is diminished. Now we see that, on any diminution of capillary pressure taking place, as after bleeding, the fluid in the tissue spaces goes back into the vessels to make up for the volume of circulating fluid lost. This wonderful balance between capillary pressure and lymph production or absorption is, I think, well illustrated by Lazarus Barlow's observations. While not agreeing with my views on lymph-production, this observer has shown that the slight plethora produced by wrapping up the limb in Esmarch's bandage causes an appreciable increase in the transudation in other parts of the body, so that the specific gravity of the tissues of the upper limb, for instance, falls, while the specific gravity of the blood rises. The reverse is the case when circulation is restored to a limb which has been kept anæmic for an hour or two. Here there is considerable hyperæmia of the affected limb produced, and corresponding anæmia of other parts of the body. We find then that absorption as well as transudation through the capillary wall is determined by the intra-capillary pressure. When the pressure rises transudation is increased, when the pressure falls absorption is increased. We have seen that the dependence of transudation on capillary pressure is susceptible of a fairly simple mechanical explanation (filtration hypothesis). We have now to discuss the mechanism of the absorption process.

Is absorption effected by the active intervention of the endothelial cells or are there physical factors at work which will serve to explain it? An explanation of absorption which will strike anyone who investigates this problem is the possibility that absorption may take place in the same manner as lymph production—i.e., by a process analogous to filtration. From the work of Ludwig and Noll we know that the pressure in the lymphatics is extremely low; but the experiments I mentioned earlier in this lecture show that there may be a considerable pressure in the tissue-spaces without communicating itself to the fluid-filling lymphatics. Landerer, who has written a whole book on the subject of tissue tension, places the pressure in these spaces at a high level, from one half to three-quarters of the capillary pressure. It is evident that if this were the case and the capillary pressure suddenly sank 50 per cent. the pressure in the extra-vascular spaces would be higher than that in the capillaries and a backward filtration of lymph might occur. A series of mechanical experiments by Klemensiewicz would seem at first sight, however, to show that such a backward filtration is impossible. Klemensiewicz points out that if fluid be passing at a given pressure through a permeable tube contained within a rigid tube transudation will occur until the pressure of the transuded fluid is equal to that of the fluid flowing through. At a certain point in the experiment the pressure of the transuded fluid will exceed the pressure at the outflow end of the tube. The tube will collapse and the flow through it be stopped. He imagines that the same sequence of events occurs in the living body in the presence of a considerable transudation. Arteries, capillaries, and veins are bathed in the transuded fluid. The fluid transuded from the capillaries will, if a free outflow for it be absent, after a time attain a pressure near that ruling in the capillaries and higher than that of the venous pressure. The veins will therefore collapse, venous obstruction will be produced, and the capillary pressure and transudation will be higher than ever, so that we have a vicious circle of events tending continually to increase the œdema of that part. Now, Klemensiewicz's objections are true only under one condition—i.e., that the venous tubes should run

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freely through the lymphatic spaces of the tissues. If, however, we consider a system in which the inner tube is connected at various points in its circumference to the outer tube by strands of inextensible fibres, it is apparent that a rise of pressure in the space surrounding the inner tube will only serve to extend this tube still further. No collapse will take place, but a back filtration will be possible. Now, if we cut sections of injected connective tissues we find that the capillaries are bound to surrounding parts by radiating fibres which might possibly prevent their collapse under high extravascular pressure. In the larger veins, on the other hand, the arrangement of the fibres of the adventitia is circular and not radial, so that a high extra-vascular pressure would apparently cause collapse of the veins. From these anatomical facts one would conclude that a backward filtration is possible provided that the extravascular pressure be raised only in the region of the capillaries. If, however, the pressure be freely propagated through the tissues so as to affect the larger veins draining them we shall have collapse of the veins and increased edema. Here, as in so many other cases, we cannot get a decisive answer to our physiological questions by purely anatomical investigation, but must have recourse to physiological experiment.

The question that we have immediately to decide is whether an increased tissue tension augments or leaves unaltered the flow of blood through the tissues or whether it causes venous collapse and so diminishes the flow. In the former case a back filtration would be possible and in the latter case impossible. I have investigated this point in various regions of the body, the connective tissues of the leg, the tongue as a type of muscular tissue, and the submaxillary gland as a type of glandular tissue. In all these cases I have found that a rise of tissue tension above the pressure in the veins causes collapse of these veins, a rise of capillary pressure, and a diminished flow of blood through the part. In these regions of the body, therefore, absorption of lymph by a backward filtration is impossible.

Hamburger, finding that serum and isotonic fluids are absorbed from the peritoneal cavities that had been dead some hours, concludes that the life of the endothelial cells can have nothing to do with the process and ascribes the absorption to processes of capillary and molecular imbibition, so that the absorption of fluids would be analogous to the taking up of fluids and gases by animal charcoal. Though these factors probably coöperate to a certain extent in the distribution of the fluid through the tissues surrounding the serous cavities, it is evident that they would be much more pronounced in dying and disintegrating tissues, and could with difficulty explain the taking up of fluids by the bloodvessels. They would certainly not explain the wonderful balance which exists between the intracapillary pressure and the amount of fluid transuded from or absorbed by the bloodvessels. What, then, is the explanation of this absorption? The explanation is, I believe, to be found in a property on which much stress was laid by the older physiologists and which they termed the high endosmotic equivalent of albumin. It must be remembered that the older physiologists used animal membranes in their experiments on osmotic interchanges. These membranes permit the passage of water and salts but hinder the passage of coagulable proteid. The application of semi-permeable membranes to the measurement of osmotic pressures showed that the osmotic pressures of salts and other crystalloids are enormously higher than those of colloids such as albumin, and it has therefore been supposed that the osmotic pressure of the proteids in the serum being so insignificant must be of no account in physiological processes. The reverse is, however, the case. Whereas the enormous pressures of the salts and crystalloids in the various fluids of the body are of very little importance for most physiological functions, the comparatively insignificant osmotic pressure of the albumins is of great importance and for this reason. It has been shown that bodies in solution behave in most respects like gases. Now there can be no difference in pressure between two gases in a vessel which have no partition between them or only divided by a screen freely permeable to both gases. In the same way if we have two solutions of crystallised substances separated by a membrane which offers free passage to the water and the salts on either side there can be no enduring difference of the osmotic pressure on the two sides, especially if a free agitation of the fluids on both sides is kept up. The pressures on the two sides will be speedily equalised, and then any flow of fluid from one side to the other will cease. Now the capillaries in the living body represent such a membrane. Leathes has shown that within 5 minutes after the injection of sugar or salt into the bloodvessels the osmotic pressures of the blood and lymph have become equal. Supposing, however, that we have on one side of this membrane a substance to which the membrane is impermeable, this substance will exert an osmotic pressure and will attract water from the other side of the membrane with a force proportional to its osmotic pressure. This attraction of fluid must go on until all the fluid has passed through the membrane to the side where the indiffusible substance is.

Now the capillaries of the body are almost impermeable to proteids. In consequence of this impermeability the fluid which is transuded from the capillaries under pressure contains very little proteid. From what I have just said it follows that the proteid left in solution within the capillaries must exert a certain osmotic attraction on the salt solution outside the capillaries. It is easy to measure the value of this attractive force. If we place blood-serum in a small thistle funnel over the open end of which is stretched a layer of peritoneal membrane soaked in gelatin, and immerse the inverted funnel into salt solution which is isotonic or even hypertonic as compared with the serum, within the next two days fluid will pass into the funnel and will rise in its stem to a considerable height. I have found that the osmotic pressure of the non-diffusible portions of blood-serum measured in this way amounts to 40 mm. Hg. Now you will see at once the importance of this fact. Although the osmotic pressure of albumin is so insignificant, it possesses an order of magnitude comparable to that of the capillary pressures, and whereas capillary pressure determines transudation the osmotic pressure of the proteids of the serum determines absorption. Moreover, the osmotic attraction of the serum for the extravascular fluid will be proportional to the force expended in the production of this extravascular fluid, so that at any given time there must be a balance between the hydrostatic pressure of the blood in the capillaries and the osmotic attraction of the blood for the surrounding fluids. With increased capillary pressure we shall have increased transudation until we get equilibrium established at a somewhat higher point, when there is a more dilute fluid in the tissue spaces, and therefore a higher absorbing force to balance the increased capillary pressure. With diminished capillary pressure there will be an osmotic absorption of salt solution from the extravascular fluid until this becomes richer in proteids, and the difference between its osmotic pressure and that of the intravascular plasma is equal to the diminished capillary pressure.

Here, then, we have the balance of forces necessary to explain the accurate regulation of the quantity of circulating blood, according to the conditions under which the animal may be placed, and it seems unnecessary to invoke the aid of vital activity to explain the process. Certain corollaries of this mode of explanation agree well with observed facts of experiment. Thus, the more impermeable the capillary the smaller will be the amount of proteid exuded with the lymph. A higher capillary pressure will therefore be needed in its production and there will be an equally high force tending to its reabsorption. A rise of capillary pressure will only increase the amount of lymph in the extravascular spaces to a certain extent, but will at the same time cause this lymph to be more dilute, so that there will be a corresponding rise in the force tending towards absorption. In consequence of this sequence of events considerable alterations of capillary pressure may be produced in impermeable capillaries, such as those in the limbs, without causing any appreciable increase in the lymph-overflow from the limbs. On the other hand, where the capillaries are very permeable very little pressure will be required to cause a transudation, since no work is done in the concentration of a proteid solution, and we find, as a matter of fact, that capillaries where the pressure is lowest—i.e., in the liver—are also those which are the most permeable. Here, moreover, the absorbing force will be insignificant, since there is very little difference in the percentage of albumin between liver blood and liver lymph.

This osmotic difference between blood plasma and tissue fluid will not serve to explain the absorption of proteids by the bloodvessels and would certainly not explain the absorption of serum from the serous cavities. It is difficult, however, if not impossible, to prove that serum or proteid is absorbed by the bloodvessels. In some of my transfusion experiments I

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have rendered a limb œdematous by means of serum, and in these cases have obtained no evidence at all of absorption by the bloodvessels. There is no doubt that serum may be absorbed from the pleural and peritoneal cavities, but the absorption of these fluids is very much slower than the absorption of salt solutions, and is in fact so slow that the whole of it can in most cases be effected by the lymphatic channels. A slow absorption of serum from tissue spaces by means of the bloodvessels is also physically possible. As the cells of the tissues feed on the proteids of the fluid the serum will tend to become weaker and weaker, so that the watery and saline constituents corresponding to the proteid used up can then be absorbed by the bloodvessels in the way I have indicated.

The physical process which I have described above as causing the absorption of lymph by the bloodvessels must be in action at all times in the body and must, therefore, be a predominant factor in the process of absorption. I have not been able to absolutely exclude the absorption of proteids by the bloodvessels, but, in the absence of direct experimental evidence that such an absorption does occur, the physical factors I have described in this lecture suffice to explain the phenomena of absorption observed both under normal and under pathological conditions.

An Address
ON
THE CAUSE OF MALARIA.

Delivered at the Grant Medical College, Bombay, on April 4th, 1896,

BY SURGEON-LIEUTENANT-COLONEL E. LAWRIE, M.B. EDIN.,
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GENTLEMEN,—The subject of malarious fever is one which belongs more properly to the physician than to the surgeon, but everyone in India, whether he practises medicine or surgery, is constantly called upon to deal with malaria and its effects. Moreover, it is notorious that for more than a year the whole of the medical profession in India has been smarting under a series of insults and slurs, which I shall take this opportunity of showing are wholly unmerited, that have been cast upon us by the *British Medical Journal*. This journal has been conducting a campaign on its own account against the sanitary services in India in which the microscopic "parasite" of malaria has so far been its biggest gun. Statements have appeared from time to time that the "parasite of malaria is the greatest discovery in pathology." "If there is one thing certain in pathology it is that a living parasite is present and can be invariably found in malarial blood." "It is by far the most important of the animal parasites affecting man." "Eyes sharp and trained as those of Virchow and Frerichs completely failed to recognise it lying patent under their very noses." "The investigation of these bodies is the principal business and main duty of the Indian physician." "It has been entirely, or almost entirely, neglected by the profession in India." Men who write of Laveran's bodies as "pets," "beasts," "brutes," or (save the mark!) "bugs" have been extolled in the *British Medical Journal* as scientists in terms of the highest praise, while senior men of the calibre of J. M. Cuningham, Bryden, Rice, Marston, D. D. Cunningham, Crombie, Sanders, and a host of others, whose names alone call up feelings of respect and admiration throughout the length and breadth of this land, have been as freely reprobated. In short, a reign of terror has been established which must soon make it impossible for the profession to hear more than one side of any of the great medical questions of the day. The journal has gloried in "bombshells" and "hard-hitting" apparently unmindful of the fact that two can employ these offensive weapons. It is just possible, though highly improbable, that the designation of the present honoured head of our service as "Surgeon-Major Cleghorne" is a printer's error, but it is quite impossible that anyone in Calcutta or in India could have written of the "Offices of the Indian Government Council." There are no such offices. If the cause of malarious fever is—as the *British Medical Journal* asserts it is—an animal parasite living in the blood, even then our profession in India does not deserve the hard things that have been said about it in view of the many members of the profession whose work and writings stamp them as ardent searchers after truth on plasmodist lines; but if, on the other hand, malarious fever is not due to a parasite in the blood, a *fortiori* if it is not primarily a blood disease, the *British Medical Journal* stands discredited in its self-imposed task of regenerating the medical services of this country, and we may reasonably demand to be left alone and to be allowed to manage our own affairs, sanitary or otherwise, in future.

[Surgeon-Lieutenant-Colonel Lawrie here exhibited a patient from Hyderabad suffering from enlargement of the spleen and malarious fever.]

The patient was admitted into the Afzul Gunj Hospital on Feb. 1st, 1896. Four months before admission he had fever daily, sometimes with and sometimes without ague; after twenty days he took quinine and recovered; six weeks later the fever returned, and he has had it off and on ever since. At times it is regular quotidian and at others it is irregular and of no pronounced type. Since he has been in hospital he has had fever for forty-two days out of fifty. Between Feb. 1st and 15th the fever gradually decreased from 105° to 99° F., with four complete intermissions. For the next nine days it did not go above 99°. On Feb. 25th it came on again with ague and has continued up to date. The spleen is tender and enlarged and can be felt below the left costal arch. His temperature has been taken every hour in the rectum: his blood has been examined every day under the microscope, and he has had no quinine. The point to which I desire to call attention is the condition of the patient's blood. Laveran's bodies have been found at every microscopic examination, and the black line on the temperature chart indicates very roughly the proportion of these bodies found daily. At a glance it can be seen that their number does not bear any constant relation to the temperature. It must be clearly understood that by Laveran's bodies are meant all those genuine abnormal cells found in the blood in cases of fever produced by malaria, and not such cells as are depicted in the pictures of THE LANCET and the *British Medical Journal* of Feb. 15th, 1896. These are not correct representations of Laveran's bodies. Some of them appear to be drawn from the imagination; others, especially the rosette forms, are caricatures of vacuoles and crenating or disintegrating blood cells. [Surgeon-Lieutenant-Colonel Lawrie here exhibited an enlargement of the drawings which had been made by one of his students, and compared them with the drawings from life of Laveran's bodies.]

In the pictures from THE LANCET and the *British Medical Journal* the representations of the three different varieties of "parasite," the quotidian, tertian, and quartan, of the first part of the first day are all exactly alike. The pictures of the "parasites" of the second part of the first day and of the second, third, and fourth days might be anything. Most probably they are crenating red cells. It is not stated whether the drawings of the "parasites" of the second, third, and fourth days are intended to represent one and the same body in different phases of its existence, or whether they are pictures of bodies seen at different times and assumed to be one body in different stages. Whatever they are, with one exception none of them are correct representations of Laveran's bodies any more than the picture I now show you of the man with his arms and legs extended is. This is taken from Marchiafava's book, Plate 2, Fig. 6, and it discredits the whole of the drawings in that work. No one who has studied Laveran's bodies could pretend for a moment that they ever take such a form as this. The only drawing in THE LANCET and the *British Medical Journal* series which is really at all like a Laveran's body is the crescent in line B, and even in this the granules are depicted in the wrong place. They are never situated as they are in this drawing, on one side of the cell only. All the drawings in THE LANCET and *British Medical Journal* are stated to be copies from the plates in Marchiafava's and Mannaberg's book, and I am not aware that Marchiafava or Mannaberg or Golgi ("the talented Italian" of that devoted worshipper of parasites and foreigners, Dr. Patrick Manson), or Bignami or Celli, or Gassi, or Felletti, or any of the Italian observers have any claim to confidence which can weigh for a moment against the established claims of the great and immortal

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irchow and Frerichs, who failed to discover the parasite in alarial blood, or that they have any claim at all except at which is founded on their description and pictures of gus parasites of malaria.

It is not surprising that the theories of malarious fevers unded on the assumption that Laveran's bodies are animal arasites living in the blood are fantastic and fine-spun. verything, the very nomenclature of malarious fever, has een disturbed and recast by the clinical plasmodists in rder to meet the new pathology, "The Scientific Medicine" f the *British Medical Journal*, based upon a parasite of alaria, distorted and multiplied according to the exuberance f the successful observer's fancy. The fever produced by alaria is assumed to be due to: (*a*) the act of sporula-on of Laveran's bodies at intervals which are stated correspond precisely with the periodicity of the ver; or (*b*) to a poison given off by Laveran's bodies the time of sporulation. No evidence has been lduced in support of the theory that Laveran's bodies porulate, or if they do that the act of sporulation is eriodic, or that it is accompanied by the emission of any oison. The periodicity of the fevers of malaria has been onveniently assumed to bear an intimate relation to the appositious act of sporulation, and obvious inconsistencies ave been got rid of by the introduction of such terms as mixed infection," where two or three generations of arasites are presumed to be at work in the blood together, r "pernicious infection," in which the parasite is so deadly hat it kills the patient before it has time to sporulate or to o anything else but capture and penetrate the red cell. The ld term "quotidian," which still, I hope, conveys an ntelligible and practical meaning to everyone, has been iven a new interpretation, so that it no longer signifies an ntermittent but a continued fever.

The anæmia of malarious fever is considered by the clinical lasmodists to be due to the destruction of the red cells y Laveran's bodies, which devour them or eat them up, or some other plausible way demolish them. The excre-entitious products of the parasites in the blood and the orpses of those that die there in harness are further assumed y the plasmodist to be got rid of by the phagocytosis of the hite blood-cells or of the macrophages—the large nucleated ells of the spleen—or by the phagocytosis of the endo-helial cells of the bone marrow and of the cerebral blood-essels. Lastly, all this microscopic mass of excrement and f Laveran's defunct bodies has to be got rid of; and it is ssumed, in a most amusing way, that the phagocytes and nacrophages throw it out in the spleen, which must be, ccording to the plasmodists, a mere dust-hole, where it ccumulates until it gives rise to the enlargement of that rgan characteristic of malaria. For scientific medicine the hapter on Phagocytosis in Mannaberg is one of the most musing in the book. It ends with a hint that the useful-ess of the macrophages is at times marred to some extent ecause they occasionally over-eat themselves so tremen-ously that they burst and let all the spores they have evoured loose again before they have had time to digest hem. Time compels me to pass on; I must therefore leave he picture of the disappointed macrophage, all his obliging ndeavours to benefit the patient rendered nugatory by his wn amiable and well-intended greediness.

The bodies we have found in this patient's blood consist f: (*a*) intracorpuscular cells containing dark pigment-like ranules; (*b*) extracorpuscular cells also containing darkly igmented granules, sometimes "swarming" and occasionally eveloping ciliary or flagellated pseudopods (flagella); c) free granules, occasionally "swarming"; and (*d*) semi-unar or spindle-shaped bodies called crescents. These odies are different or varying phases of one and the same ell. The intracorpuscular body or cell becomes the extra-orpuscular body by bursting through or incorporating with tself the envelope of the parent cell. The crescent, the novement called "swarming," and the development of lagella are readily accounted for without the necessity of egarding Laveran's bodies as parasites in the blood. Before roceeding to consider in detail the exact nature of Laveran's odies and in order to facilitate the study of their meaning t is necessary to dwell for a moment on facts which are nown and which I have observed with regard to the hysiology of the blood. It is because these facts have een lost sight of or disregarded that the parasite theory of alarial fever has flourished to the almost inconceivable xtent it has. The physiological and biological state-ents I am about to make are gathered principally from Lister, Pettigrew, Landois and Stirling, and Drummond, supplemented by observations we have made in Hyderabad. If these observations are occasionally strongly stated it is because I wish to emphasise the lines on which I consider investigation should proceed in future and not because I wish to force other people to accept them. Healthy blood contains two kinds of cells, the red and the white. The red cells convey gases to and fro between the lungs and the tissues. Their functions are urgent and all-important and admit of no interruption or relaxation. Hence, among other marvellous qualities, they possess an elasticity which is absolutely perfect; nothing stops their career, and they dash through the narrowest channels, round the sharpest corners, and past obstacles of any and every kind without the smallest check or hindrance. The mobility, energy, and outward activity of the red cell give it the stamp of what Drummond calls "maleness"; it is an organism principally concerned with nutrition. The white cells are very different from the red. When fully developed they appear to me to be filled with granules which are minute living protoplasmic cells, and many of them contain large clear spaces, hitherto regarded as nuclei, which must, in my opinion, either be fertilising or nutrient areas; most likely they hold reserves of protoplasm, I throw it out as a hint to the profession that they supply the blood and all the tissues each with the particular kind of protoplasm and young protoplasmic cells suitable for its own special requirements. They incorporate in their own being the two main activities of all living things, nutrition and reproduction, and their internal activity or passivity and the fact that they teem with young cells and granules indicate that they are the female, in the sense of being the maternal, cells of the blood. The white cells are never in a hurry like the red; they loiter about in the capillary system and stick to the walls of vessels and pass through them, shedding their contents either in the blood or in the tissues. The white cells have special movements of their own, which consist of varied activities of their protoplasm. These cause the cell itself to change its shape and position, and they produce intracellular movements of the granular contents which are seen sometimes moving slowly and at others actively "swarming" with the identical movement described by Laveran in connexion with his malaria bodies as that of the "disturbance of boiling water." The white cells of the blood further have the power of throwing out pseudopods, processes which, if threadlike or filamentous, are called cilia or flagella, and these protoplasmic offshoots can be detached and lead for a time an independent existence. The ordinary forces of the circulation—the heart and the elasticity of the vessels—are not sufficient to account for the whole of the movement of the blood in the capillaries, and it seems, therefore, highly probable that both the intracellular circulation called "swarming" and the evolution of "pseudopods," which is a primitive force of the circulation, are what Pettigrew long ago described as those occult forces which regularly assist in the peculiar circulation of the blood-cells and of the blood-plasms in the capillary system.

A most important point bearing on the origin of Laveran's bodies is the source from which the blood-cells are derived. They are largely manufactured or elaborated in the spleen or liver. In man the red cell is not nucleated, but in the human embryo it is nucleated, and it is also nucleated in the frog, and in the frog the nucleus is clearly the intracorpuscular stage of the white cell. Fig. 1 shows a red and a white cell of frog's blood copied from Landois and Stirling's book, and it is evident that the white cell is identical with the nucleus of the red. I was led to make an examination of the blood of the frog by an accident. In accordance with letter No. 3278 from the Government of India Foreign Department to the Resident at Hyderabad, covering a paper by Dr. Patrick Manson on the Nature and Significance of the Crescentic and Flagellated Organisms in Malarial Blood, the medical officers serving under the orders of the Resident at Hyderabad were directed to make observations on the "organisms of malaria," and were specially enjoined to pay particular attention to the life history of the "parasite." At the time this letter was received in my office we had been working for several months at the microscopic appearances of the blood in malaria, and it appeared to me that before Laveran's bodies could be properly assumed to be parasites they must be shown to have an independent existence outside the human body, and that a likely *habitat* for them if they had such an existence would be the body or the blood of frogs, frogs being known to flourish where

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malaria abounds. The examination of the blood and of the liver and spleen of frogs was undertaken while the animals were alive (anæsthetised). In the blood and in the free protoplasm of the liver and spleen we discovered, to our astonishment, not Laveran's bodies, but their perfect and complete analogues. In the liver and spleen of frogs were found small protoplasmic cells and granules identical with those contained in the white blood-cells in man, "swarming" with the same movement of boiling water which Laveran had discovered in his organisms and which we had discovered in the leucocyte. We also found blood-cells in every stage of development, and the white cell could be traced from its origin as an intracorpuscular body, when it sometimes becomes the nucleus of the red cell and at others becomes a free and independent leucocyte, until it changes into an extra-corpuscular body by bursting through and incorporating with itself the red cell. The white cell in the frog has to serve the purpose of nutrition of a simple, slow, cold-blooded amphibious animal and the processes of its development are correspondingly simple and easy to follow. In man the blood cells are unquestionably formed on the same lines as those of the frog, but the nutritive processes are so complex and the difficulties of examining the blood glands during life are so insuperable that it is correspondingly difficult to follow the stages of the developmental processes. It is a curious fact, however, that wherever difficulty arises in tracing out the analogy between the two assistance is afforded by Laveran's bodies. Lastly, the "swarming" movement of the protoplasm and of the young protoplasmic cells in the spleen of the frog indicates that there is a double circulation in that organ and very probably in the liver also. This view receives confirmation from the discovery of Roy, extended by Schäfer and Moore, of the rhythmic contractility of the spleen. I mention this here because the double circulation in the spleen may turn out to have an interest bearing on the diurnal variations of the temperature in health as well as on the periodicity of malarious fever when those variations are exaggerated.

In the light of the above physiological facts we are in a position to consider the actual value of the characteristic features of Laveran's bodies which have been made the foundation for the belief that they are parasites living in the blood. 1. They are intracorpuscular in one stage of their existence. But the white cells of the frog's blood, which are the analogue of the human white blood cell, are at one period of their existence intracorpuscular bodies and no one would dream of calling them parasites. 2. Laveran's bodies are at another stage of their life extracorpuscular. So are the white cells of the blood. 3. The free body changes its shape and becomes oval or crescent-shaped (Fig. 6). The crescent is supposed to be a parasite and to "devour" the red blood cells. There is nothing remarkable about the change of shape of the crescent. All cells which contain granules tend to become spindle-shaped when the granules collect in the centre of the cell and round again when they spread out to the margin, and the red blood cell of the frog in which the granules of the nucleus are collected in a compact mass in the centre is itself spindle-shaped. The resemblance between the red blood cell of the frog and the crescent is so marked, especially when the latter is changing its shape, that it cannot be accidental. The true semilunar shape which the crescent assumes is certainly very curious and interesting, but it only takes this shape when the granules are collected quite in the centre, and the cell is consequently very markedly spindle-shaped, as a mechanical result of the force of the blood current. If you apply the methylene blue stain to a preparation of fresh blood, first to one side of the cover-slip and then to the other, so as to create currents in opposite directions, you can make the crescent semilunar in either direction in which the ends are wafted by the current created by the stain. 4. The granules in Laveran's bodies occasionally undergo a "swarming" movement which Laveran compared to "the disturbances of boiling water." The same movement was discovered by us in the normal human leucocyte and it can readily be produced artificially. The importance of this "swarming" movement cannot be over-estimated (Figs. 2, 4, 5, 7, 8, and 9). From the moment when we found swarming in the leucocyte it became clear that Laveran's bodies and the white cells are closely allied and that one is no more likely to be a parasite than the other. "Swarming" is confessedly one of the most characteristic attributes of Laveran's bodies; it is a sign of life. The "swarming" movement, therefore—the "boiling water movement" of Laveran—on which the plasmodists rely most confidently for the identification of Laveran's bodies as parasites, if it is conclusive evidence of anything, is merely evidence that they are related to the white cell. The proof is clinched by the discovery of the same swarming movement in the normal protoplasmic cells and granules in the liver and spleen of frogs. The same thing may be said with regard to the development of cilia or flagella in connexion with Laveran's bodies. In view of the elementary truth that ciliary and flagellate varieties of pseudopods are known to be present and to constitute normal forces in the circulation in plants and animals, there does not appear to be any reason why they should be described as signs of parasite life only when they occur in connexion with Laveran's bodies in the fever blood of malaria.

We now see that none of the qualities of Laveran's bodies warrant the assumption that they are parasites; on the contrary, they have their complete analogues in the cells of the blood both of man and of animals; moreover, they are not present in the blood in a considerable proportion of cases of malarious fever of the most fatal and chronic types. They cannot, therefore, be the cause of the fever. If Laveran's bodies were the cause of the fever in malaria the plasmodists would surely have been able before now to isolate them in pure culture and to demonstrate their existence outside the human body. Dr. Patrick Manson states that "the intravenous injection of blood containing this parasite into a healthy individual is followed by the multiplication of the parasite in the blood of the person inoculated, and also by the occurrence of the characteristic fever." There can be no justification for employing intravenous injections of malarial blood in the human subject, but during our investigation we did employ them repeatedly in dogs and in monkeys. When they produced any effect at all it was to give rise to a sharp attack of fever which passed off on the same day, and was not accompanied by the formation, much less by the multiplication, of Laveran's bodies in the blood. According to my experience, which is, however, confined to cholera cases, the intravenous injections of healthy blood or of saline fluid produce similar effects in man. They give rise to ague and fevers, but the symptoms so produced by the saline fluid are most assuredly not malarial. From an examination of a very large number of spleens and livers of frogs, which are always healthy, we have come to the conclusion that frogs are immune against malaria. We therefore fed one of our fever patients for several days on the spleens and livers of frogs and gave him daily subcutaneous injections of frog's serum. This treatment had no effect in arresting the attacks of fever, as it might have been expected to have had if the cause of the disease had been (*a*) a parasite in the blood against which the frog is immune, or (*b*) a defect in the spleen of the same nature as those defects of the thyroid gland which produce diseases which can be remedied by thyroid feeding.

Enough has been said to show that Laveran's bodies are not animal parasites living in the blood. We have dealt with three forms of blood cells: (*a*) those of the frog, in which development is slow and easy to follow; (*b*) those of the healthy human subject, in which development is so rapid that it is difficult to trace except in the way of analogy with the frog; and (*c*) those of the malarious human subject Laveran's bodies which are diseased or degenerate, but in which the development is not so rapid as in the healthy human blood cells, and in which the analogy to normal human blood cells on the one hand, and to frog's blood cells on the other, can be traced without difficulty. A study of Laveran's bodies renders many points in the physiology of the blood clear and distinct. Thus their intracorpuscular stage indicates that the human white blood cell begins life as an intracorpuscular body. The extracorpuscular stage is synonymous with the free and independent existence of the leucocyte. The crescents indicate the spindle shape of the red cells, which is normal in the frog and other lower animals, and the swarming movement and the development of ciliary or flagellate pseudopods afford strong presumptive evidence that the circulatory forces, which are recognised conditions of the circulation in animals and plants, are regularly at work in the capillary system of man. It only remains to state or reaffirm the source of origin of Laveran's bodies and to consider the theories of malarious fever based upon it to the extent to which it is warranted by actual facts. The spleen is undoubtedly the organ mainly concerned in the production or elaboration of the white blood cells, though other blood

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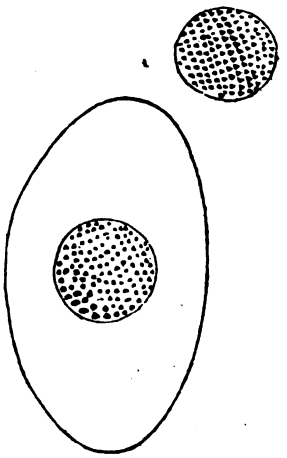
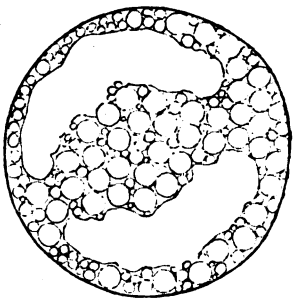
FIG. 1.



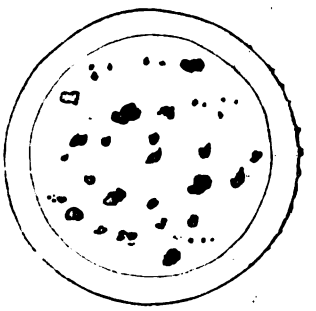
Red and white blood cells of frog (from Landois and Stirling's "Physiology").

FIG. 2.



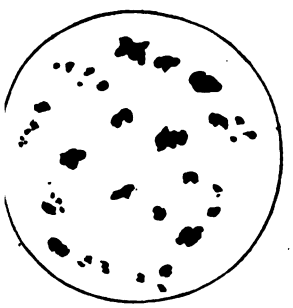
Leucocyte of human blood (diagram).

FIG. 3.



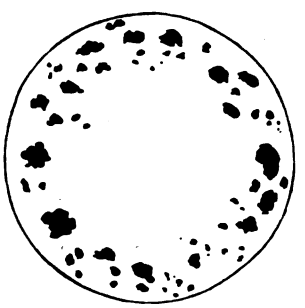
Intracorpuscular body of Laveran (drawn from life).

FIG. 4.



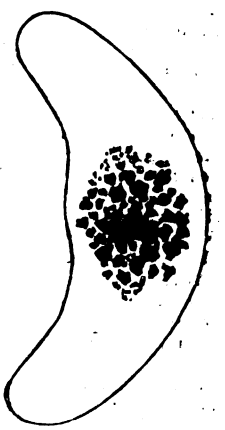
Intracorpuscular body of Laveran; the pigment-like granules are spread about (drawn from life).

FIG. 5.



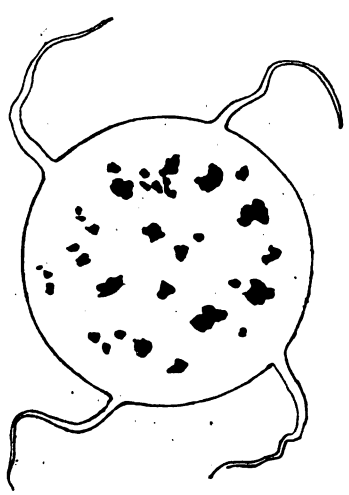
Extracorpuscular body of Laveran; the pigment-like bodies are spread out to the edge of the cell (drawn from life).

FIG. 6.



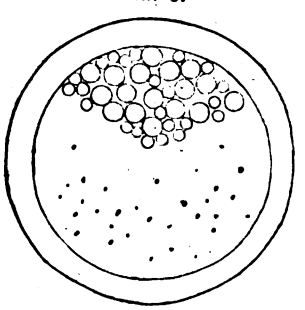
Extracorpuscular body of Laveran: the Crescent. This cell is spindle-shaped because the granules are collected in the centre (drawn from life).

FIG. 7.



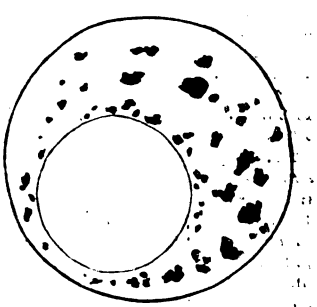
Intracorpuscular body of Laveran, flagellated (drawn from diagram).

FIG. 8.



Cell partially diseased (drawn from life).

FIG. 9.



Cell partially diseased (drawn from life).

Explanatory note on the figures of blood cells and of Laveran's bodies.—The term "Laveran's bodies" has been employed for convenience without reference to the school which claims to have discovered them. The striking points in the above groups of blood cells are: (*a*) the resemblance between the white cell and the nucleus of the red cell of the frog's blood; (*b*) the resemblance between the red blood cell of the frog and the crescent; (*c*) "swarming" was seen in Figs. 2, 4, 5, 7, 8, and 9; and (*d*) in Figs. 8 and 9 the cells are only partially diseased—in Fig. 8 the cell contained a number of healthy protoplasmic cellules, such as are seen in the healthy leucocyte, along with the usual black pigment-like granules which are met with in Laveran's bodies; and in Fig. 9 the cell contains a clear nuclear space like the nuclear spaces in the leucocyte.

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glands may assist in the process. We have just seen that the analogy between Laveran's bodies and human blood-cells as well as those of the frog which are manufactured in the liver and spleen is close and absolute, and in the third place the spleen is invariably diseased in malarious poisoning. From the three facts it is evident that the Laveran's bodies are merely the kind of degenerate blood cells which are turned out by the spleen when it is dragged down from its high pinnacle of evolution by malaria. (Figs.'8 and 9.) The precise manner in which malaria acts upon the spleen can only be determined by future observation. All we know at present is that in certain localities and climates which we call malarious enlargement of the spleen with fever and anæmia is endemic, just as we know that in other localities and climates enlargement of the thyroid gland with bronchocele and various constitutional symptoms, and in others again stone in the bladder, are endemic. Our theory of malarial fever, then, is that it is produced by the action of malaria on the spleen and that the production of Laveran's bodies, which are not found in anything like all cases of malarial fever, is one of the effects of the distempered condition of the spleen of splenitis. Several facts point irresistibly to this conclusion; for instance, congestion of the spleen, characterised by enlargement or tenderness, or both, is the most constant of all the symptoms of malarious poisoning. Secondly, it is the sign on which reliance may most safely be placed in making the diagnosis of the malarial origin of fever, and if it is not present it is generally well to consider the advisability of excluding malaria as the cause. In the third place the only drug which can be trusted to cure enlargement of the spleen from malaria and the fever which springs from it is quinine, and it restores equally those cases in which Laveran's bodies are and those in which they are not found in the blood. Lastly, when Laveran's bodies are present they attest in terms which are unmistakable that the spleen is the organ primarily affected by malaria. The first effect of malaria on the spleen is to disorder its functions, and the patient gets fever, sometimes markedly periodic and sometimes not. It must not be forgotten that the temperature of the blood in health shows regular diurnal variations between 97° and 99° F., which depend to a large extent upon the periodic nocturnal inactivity and the diurnal activity of the spleen. The periodic attacks of fever are amply accounted for by the view that they are exaggerations of the diurnal activity of the spleen. The disturbance of its functions may cause the diurnal variations to be exaggerated daily, quotidian ague, or every alternate day, tertian ague, or every third day, quartan ague. As the disorder of the spleen increases its functions of regulating the diurnal variations of temperature become less clearly pronounced, they are, as it were, lost in the disease, and as a consequence the attacks of fever seldom maintain periodic regularity for any length of time and they become irregular. If the irritation of the spleen is very great, or if it is accompanied by derangement of important organs like the brain, the liver, the stomach, or the bowels, the fever may be irregular or continuous from the onset. As the disease progresses the spleen is no longer able to elaborate its full complement of perfect white cells. It manufactures a certain number of imperfectly developed or abnormal cells, which pass into the blood, and these are Laveran's bodies. The symptoms produced by the presence of these bodies in the blood are easy to understand: they are symptoms of disordered nutrition. Instead of receiving their normal supply of life-giving white cells all the tissues of the body get a proportion of Laveran's barren, innutritious, and not unfrequently lifeless organisms. It is not surprising that a patient who has malarial fever is generally pale and has headache or perhaps severe cerebral symptoms, with indigestion, constipation, and derangement of the liver, or that he feels very ill and becomes thin; the nutrition of every tissue and organ in the body suffers. Finally, when the enlargement of the spleen becomes, as we say, chronic, its functions as a blood-forming organ are entirely in abeyance; even the degenerate cells of Laveran are no longer produced, and the anæmia becomes permanent and profound.

Such is a brief outline of our theory of the action of malaria. We claim for it that it confirms the principles on which our predecessors, who were by no means the ignoramuses they have been made out to be, practised successfully in India. It explains as no other theory will the phenomena associated with acute and chronic malarious fever, and it suggests a long vista of possibilities as regards the action of the spleen and the reaction of the tissues on the blood in such conditions as inflammation, gangrene, septicæmia, leucocythæmia, and anæmia generally. Moreover, it is the only theory which accounts satisfactorily for the action of quinine in enlargement of the spleen and malarious fever. Quinine acts directly as a specific on the diseased spleen and through it on the white cells of the blood, and this teaches us not only its effect in curing malaria, but also its unique action as a tonic and its prophylactic action against cholera and other infectious diseases when they are epidemic.

THE EVOLUTION OF THE SURGICAL TREATMENT OF THE BROAD LIGAMENT PEDICLE.

BY LAWSON TAIT, F.R.C.S. ENG.

A VOLUME which I published in 1891 was devoted mainly to the establishment of severe operative procedures for the relief of diseases of the pelvis and abdomen, especially in women. It dealt chiefly with the leading features of these proceedings in the direction of reducing their primary mortality and establishing them on the basis of giving a reasonable return for the risks run. This in every instance has now been fully accomplished, and if I had confined myself to such themes in my first volume my second would have been ready long ago; but the appearance of the first effort towards the latter has been delayed till to-day, for I have found so much to reconsider in the second division of my task that I have had to decide to wait over and over again till the effort seemed to me to be hopeless, and I felt at last that I should leave it to other hands to accomplish. In the intervening six years the field of surgical literature has been flooded with contributions to abdominal surgery, some good, a few very good, very many indifferent, and the great bulk hardly worth notice. I have waited to see if anyone would take up what seems to me to be the logical method of advance, but I have found none; and the effort which I now begin to-day to produce my second volume and to indicate the lines on which I have improved and still hope to improve the secondary results of our operations may turn out to be a failure as great as any which I have just deprecated. If, however, it have anything like the success which my first volume has met with I shall be pleased indeed, and, in my own opinion, the second will greatly transcend the first alike in interest and importance.

As the whole history of abdominal surgery, in the slow and tardy evolution of its first stages, turned on the treatment of the broad ligament pedicle, so my first efforts in the secondary evolution necessarily start at the same point, and it is, to say the least of it, disappointing to me to see how little the importance of this subject has taken hold of the men who have written most fluently on abdominal surgery and who have brought out the most popular text-books. Mr. Greig Smith's book, for instance, will to its ordinary reader seem sufficiently imbued with my own teachings, yet he says concerning the treatment of the pedicle: "It has always seemed to me that this *quæstio vexata* of ovariotomy has been unduly magnified in its importance. To a surgeon accustomed to deal with amputated limbs the pedicle is comparatively a small matter." If this is the view generally of surgeons accustomed to deal with amputated limbs I hope fervently that no one in whom I have any personal interest will ever fall into their hands for the treatment of an ovarian tumour. Coming from the pen of a man like Mr. Greig Smith it can only mean that while he has written freely and with confidence he has not seen enough ovariotomies to know how wholly different these pedicles can be, and that his comparison of them with the symmetrical and constant incidents of amputated limbs is the most perfect nonsense. Similarly, the experience of one or two cases where chronically overdistended bladders had been tapped for ovarian cysts, or even attempts made to remove them by abdominal sections, will some day cause him to repent bitterly of the following sentences: "I think that the advantages of catheterism before operation are somewhat exaggerated. I am convinced that it is unnecessary and I have never done it." From

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hese illustrations I am persuaded that the creation of abdominal surgery into a special branch of surgery was a rise movement, on the same ground that the development of ophthalmic surgery has upset the advice we used to find in a ew chapters on diseases of the eye—oddly enough, placed at he end of text-books on practice of medicine—that in all ases of strabismus the muscles supposed to be at fault were o be freely divided. It may be useful on one other point to ontinue my criticism of Mr. Greig Smith's text-book, and hat is his expression of opinion that "the operation of Houston of Glasgow (1701) was almost certainly not a com-lete ovariotomy." But apart from the very conclusive fact hat the patient lived afterwards in perfect health for hirteen years—not known in my own experience of in-omplete ovariotomies—Mr. Greig Smith only lays himself pen again to a charge of defective experience. I could not nderstand why Houston should describe his proceedings with such photographic fidelity of detail and say nothing bout his treatment of the pedicle, and I assumed that he nust have divided and tied it and forgotten to mention the act. I did not attach sufficient importance to the fact that Houston had met with one of those singular eccentricities of varian growth with which my own long list is interspersed with a goodly number, and it was not till I began to dig hem out and carefully investigate their details that I saw he probability of Houston's description being perfect even n the absence of allusion to the pedicle and its treatment. The clue is in his words: "I took a strong fir splinter, such s the poor in that country use to burn instead of candles; I wrapped about the end of this splinter some loose lint and hrust it into the wound, and by turning and turning and winding it I drew out about two yards in length of a sub-tance thicker than any jelly, or rather like glue fresh made nd hung out to dry; its breadth was about ten inches. This was followed by ..... several large pieces of membrane which seemed to be parts of the distended ovary. I then squeezed out all I could and stitched up the wound," &c.

When I got a group of my own cases together it was easy o see that Houston's belonged to them, and that they form a group by themselves, having peculiarities of their own, not he least curious of which is the fact that they probably present the examples which occur beyond all doubt of varian tumours undergoing spontaneous cure—examples, owever, so rare that they may be certainly disregarded in ny discussion of treatment. These cases have all the same haracter, and no description can be better than that of Houston's own experience. The cyst-walls are always thin, nd so far as my memory and my notes serve me the tumours re sessile. In three well-marked and entirely similar cases he cyst-walls had given way and the gluey contents were iffused throughout the abdomen. The cyst-walls, or rather heir remains, were isolated by washing out and were then ound to be mere shreds, patches and strings of membrane with attached masses of cystic proliferation, by which only heir inner surfaces could be recognised. These shreds and atches were quite rotten and came away from their very ague attachment in the pelvis on slight touch, and no liga-ures were necessary. In all three drainage-tubes were left n at the close of the operation, and large quantities of the gluey material, more or less in solution, were discharged for ome days. My belief is that in none of these three cases vas the operation really necessary. Had I left them alone he gluey material would have been slowly absorbed and the hreds and patches would have contracted and disappeared nless they had developed malignant tendencies, and there is a suspicion that this did happen afterwards in one of my ases. This is a secondary termination from the risk of which no ovariotomy is free. These three cases are, there-ore, precisely on a level with Houston's, only that I did a little more scientifically and with better tools what he did s effectively with a bit of stick. What is the explanation f them? That question I can only answer by speculation. True pedicle they have none, and it seems to me as if, and t a certain point, the cyst contents have a digestive power ver the cyst walls, and that in time the peritoneal surfaces igest the cyst contents. It may be that when we come to he base of the tumour and pull away the rotten remains we omplete the process by a rough enucleation, but I cannot eally say I saw the base of attachment of these three umours, and Houston did not see his, therefore he said nothing about it; but I saw mine with the eyes of the blind, nd only at my next experience will my eyes be open enough o get a true record of the state of matters. Meantime I ave said of Houston that the earliest known treatment of the ovarian pedicle was probably enucleation. Houston's operation makes a most interesting and picturesque addition to the early history of abdominal surgery, but it has no value at all, although it was published in the stately Transactions of the Royal Society of London, which were read then as now with avidity all over the world. He found no imitators. The first really deliberate and systematic attempt to do serious operations for abdominal disease was that of Ephraim McDowell. McDowell's method of dealing with the pedicle was what he had learned from John Bell in Edinburgh, and which was applied to all arteries and to everything containing an artery down to my own time — the long ligature. In a stump the arteries were tied with a hempen ligature, one end was cut short and the other left long, the series to decorate the suppurating stump for many days, the amusement of the house surgeon and the terror of the patient being their removal by tugging as soon as they would come. Often they never came. How it did not strike someone to try how they would do if both ends were cut short I cannot imagine. But the difficulty set Simpson's ingenious mind to work with his visionary acupressure, and he unconsciously cleared out the long ligature. How the short ligature came into use in general surgery I do not know. In ovariotomy it appeared early in the history, but most unfortunately only for a short time.

In 1822 Nathan Smith of New Haven, Connecticut, did his first case with the short ligature, dropping the pedicle in, and he followed this by a series of cases so successful that it must ever be the amazement of future historians of surgery how his example was not at once followed. His lesson was far more valuable than McDowell's and his action more philosophical, for he argued out the necessity for the short ligature, and he used animal ligatures (pieces of kid glove), in the belief that they would be absorbed—a conclusion most abundantly proved to be correct. His lessons were neglected, for his statements were widely published here, yet the long ligature held sway till the advent of Baker Brown in 1851. He in turn introduced the treatment of the pedicle by the cautery, gaining his idea doubtless from veterinary surgery. A most unfortunate incident occurred soon after this by the invention and introduction of the clamp treatment of the broad ligament pedicle—an incident, according to his own authority, to be laid at the door of Mr. Jonathan Hutchinson. The short ligament was reintroduced and reinstalled almost simultaneously in 1878 by Bantock and myself and has since remained the only method of dealing with the broad ligament pedicle except the cautery and clamp used by Keith to the last. Up to that time we were all astray except Keith, as we used Hutchinson's clamp with varying mortalities, running between the dreadful limits of 25 per cent. and 50 per cent.; Keith alone adhering to Baker Brown's method brought down his mortality and swept the world with his brilliant success. Very soon, however, Keith's record was beaten by the ligature and then it became manifest that the main principle to be followed for success was that of the intraperitoneal replacement of the divided and secured pedicle, and that there was little to choose, so far as promising results were concerned, between the cautery and the short silk ligature. As I watched Keith operate in 1880–81 I became convinced that the cautery was the ideal method of pedicle treatment, but for the tremendous time it occupied and the large amount of physical exertion involved. Keith and I agreed to stick each to his method and after a long series of cases to compare results. But Keith ceased to publish under conditions which made comparison possible and the contrast has never been made. I do not, however, think any other conclusions than those I have indicated could ever have been derived. I have, however, been haunted ever since by the clear, thin line of parchment to which Keith reduced his pedicles, and I have looked at my own, often regretting the dead lump of wet and decomposable tissue I had to leave, girt by a dead and decomposable ligature. But still it is certain that the great bulk of these difficulties were successfully encountered by that wonderful power which living tissue has for removing dead matter, a power for which so many theories have been advanced of late years without leading us much beyond the facts.

I have not yet seen a case in which post-mortem examination made it evident that death was due to the ligature, though I have seen several—some amongst my own cases, I regret to say—where faulty application of the ligature has been the cause of death. If the ligature is so applied that

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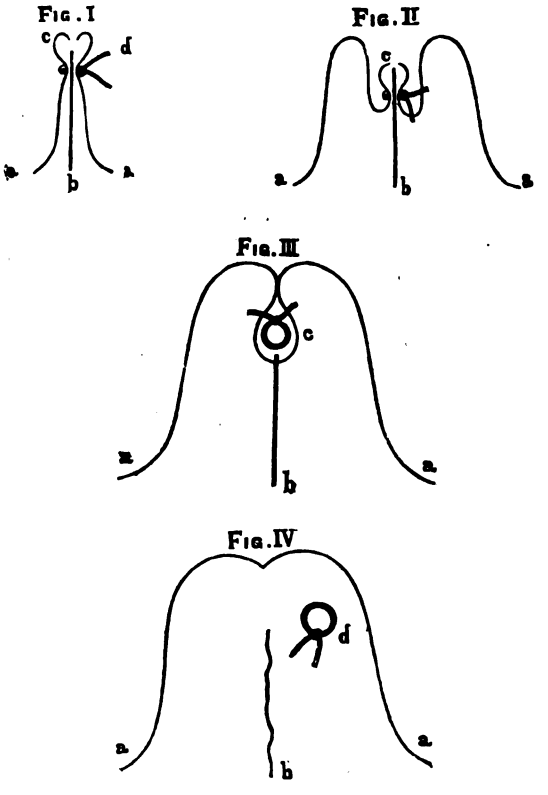
it controls hæmorrhage completely the ligature does not contribute in any way, so far as I know, directly or indirectly, to death. But it has a most unfortunate way of contributing to secondary failure, to incomplete cure, and to persistent and vexatious interference with convalescence. The first of the instances of this kind as being never fatal, but as being the more common and more alarming of the two to be mentioned, is the occurrence of broad ligament hæmatocele. Speaking to Keith about this his answers impressed me with the belief that the accident did not occur in his practice, and he was far too shrewd and anxious an observer to miss it if it had occurred frequently. The users of the clamp certainly did not place its occurrence on record; but with a mortality of 25 per cent. raging round them it is not likely that they would observe it if it did occur; and where it occurred I think death must have been inevitable. I cannot imagine any more certainly fatal combination than a broad ligament hæmatocele and a stinking stump. But still the question stares us in the face, Does the ligature cause or facilitate the occurrence of broad ligament effusion? I confess I strongly suspect that it does, and this is one of the reasons of my present paper. The second incident which tells against the ligature is the occurrence of a number of cases, 3 or 4 per cent., in which the garrotted stump and ligature get the better apparently of the living tissue around them, prevent the tissues absorbing them, cause suppuration, form sinuses which do not heal, but go on discharging till the knot of thread is got rid of, months, it may be years, after the original operation. Sometimes they burrow into sinuses of the broad ligament and are discharged into the rectum and bladder. Quite a group of these latter cases has now occurred where I have removed knots of thread from the bladder contained within a thick deposit of phosphates, some of the ligatures having been originally placed by myself and some by others. How these ligatures travel in this way is a matter of easy explanation, and that is, I think, as follows. Suppose the ligature is placed on the right pedicle it will go (as a matter of fact, three of my own have so travelled) into the bladder, whilst if it be a left broad ligament pedicle to which the ligature has been applied it will more likely get into the rectum. In fact, as I have often had occasion to observe in operating for pelvic abscesses, the bladder seems the road out of the right broad ligament, and unquestionably the rectum is the point of election for the natural evacuation of the left parametric cavity.

The method of inclusion of the ligature is curious and interesting, for it seems difficult to imagine at first sight that a ligature tied inside the peritoneum would, as a matter of course under certain conditions, work its way through that membrane and into an extra-peritoneal district. It happens thus. The ligature (Fig. I., *d*) is tethered to the floor of the pelvis by the vessels and nerves it embraces. The peritoneum (*a*) is raised up and round it and finally over it by the effusion of blood, until a tube of inverted peritoneum (*c*) is made with the ligature at the base (Figs. II. and III.). The mouth of this inverted tube is closed by adhesion at its intra-peritoneal end and opened at the ligature end by the subsequent suppuration, and the loosened ligature drops into the increasing and purulent cavity of the broad ligament (Fig. IV., *b*). Its subsequent journey is a matter of notoriety and of long and protracted suffering for the patient. I could, unfortunately, point to a number of my patients who have been for months and even years undergoing this torture from what I call "a dead ligature." I have made various attempts to relieve them, some I am glad to say successfully, and others I regret to say with failure. But they will get well in time, and none, so far as I know, have died in the process. But for these two reasons I want to get away from the ligature if I can, and after years of experimenting and thought I think I have at last succeeded. But the difficulties have been so great that I have not yet ventured to apply my plan to a living subject. Fortunately, however, for my consistency dead animal tissue is helping me thoroughly, and experiments on animals are unnecessary—for this purpose at least. My constant feeling has been that in the cautery we should find the solution of the difficulty, and it really shows how careful we ought to be in all our experiments in surgery, that it was not till after at least two years' consideration of the subject that it dawned on me that we did not understand how the cautery really works. I do not think that either Baker Brown or Keith understood how they arrived at their certain and magnificent results. I am sure the bystanders did not. Everyone whom I have asked questions has answered: "Oh, yes, sear the stump; barbarous practice, going back to the days before Ambrose Paré." But Keith did not sear the stump. It is true he burnt a piece of it off after securing it with Baker Brown's clamp, and if searing had been the means of his success he would have stopped there. But he went on for about twenty minutes or half an hour rubbing the clamp with his cautery and clearing it with a towel or sponge until the onlookers got weary of the proceeding and thought Keith was finical. What he had done was really this—and I found it out only after much experimenting—that he had seized a transverse strip of the pedicle between the iron blades of his clamp, screwed the blades up tight, and then heated his blades up to cooking point—that is, practically between 180° and 190° F.—and carefully maintained that temperature till the enclosed strip of pedicle was cooked dry into a strip like parchment. Now Keith either did not understand what he was doing, but acted merely by rule of thumb, or he kept his real reason for using the cautery a profound secret. Had he seared the tissue the probability is that either hæmorrhage would have occurred soon after the patient recovered from shock or that the burnt mass would have caused pelvic suppuration—it would not have been absorbed. Having satisfied myself of the validity of this exclusion I set to work to contrive a better method of arriving at the same results, and after many failures I have found it in the method of cooking by electricity. Knowing the resistance of a certain piece of platinum wire I embedded it in a box of silver and isolated it by means of plaster-of-Paris, kaolin, or pipe-



clay. Two such boxes are placed face to face and connected by the necessary binding screws. The boxes are placed opposite each other on a pedicle and are screwed together. An electric current of known strength and under the control of a rheostat or a Kelvin's balance is now turned on to heat the boxes, or, better still, the boxes are heated first and then applied to the pedicle, as this method saves time. The boxes are enclosed in ivory or other bad conductor of heat, to save alike the heat and the tissues for which the heat is not wanted, though this precaution may be dispensed with. The apparatus I now describe will so cook an ordinary pedicle that hæmorrhage will be impossible and suppuration unlikely in the extremest degree in a space of about six to eight minutes. The contrivances shown are rough, but they

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are in process of amendment, and the same principle is being applied to instruments for the arrest of visceral oozing and for parietal and omental hæmorrhage and for the simplification of the operation of total removal of the uterus. Also for operating on hæmorrhoids. I do not advocate my proposals as likely to reduce the primary mortality of operations, I believe that has been done so far as may humanly be possible. But I am quite sure that they or some others on similar lines will go far to secure our secondary results being more satisfactory and encouraging alike to our patients, ourselves, and to the art of surgery. I have no doubt the new electric hæmostat will find many fields of usefulness in general surgery.

The Crescent, Birmingham.

PERINEAL PRESSURE IN CYCLING.[1]

BY ARTHUR CHARLES ROPER, F.R.C.S. EDIN., M.R.C.S. ENG.,

CONSULTING SURGEON TO THE EXETER DISPENSARY; SURGEON TO THE DEVON AND EXETER HOSPITAL; AND ASSISTANT SURGEON TO THE WEST OF ENGLAND EYE INFIRMARY.

FOR the whole of last summer and for an uncertain number of antecedent cycling seasons I have noticed that when riding a cycle any considerable distance, and especially when riding at a good pace, I have found it necessary to dismount and urinate every hour or oftener, and this was obviously not on account of any increase in the amount of urine excreted. When doing this I have found the penis to be cold and shrunken and the scrotum in a similar condition. The return to a normal condition was often accompanied by considerable aching. There was usually a very slight difficulty in passing urine and a difficulty in getting rid of the last few drops, so that if one was unhappily hurried or disturbed in the final stage of this somewhat commonplace operation a familiar and uncomfortable trickle down the left thigh marked the fact that one was in a more or less senile condition. Another thing which I noticed or subsequently called to mind was that I had to micturate oftener than usual at night. I mean that, my usual habit being to empty my bladder before getting into bed and having no further occasion to pass urine before morning, I found that after riding I had to get up once or perhaps twice for this purpose. Many cyclists have complained to me of the foregoing symptoms and I am inclined to regard them as danger signals which should be regarded lest, as in my case, worse befall. In the beginning of last September I took a ride of about thirty miles and had to travel over some very rough roads. First came the frequent micturition trouble, followed by dull aching over the pubes, and by the time I reached home I was in a state of considerable discomfort and had much difficulty in passing urine and pain in the act. A hot bath relieved the retention, but I had to use a morphia suppository to cure the pain, and I was soon forced to the unpleasant diagnosis of cystitis, which I could not and cannot doubt was traumatic in its origin and was probably started by bruising and constant jarring of the bulbous portion of the urethra. To cut a long story short I had a most uncomfortable two months of it. The pain was at times so bad that I had to lie on my bed for an hour or two. I had the greatest difficulty in so arranging my work as to be certain of passing a public urinal every three-quarters of an hour or getting to a patient's house where I could lose myself in the W.C. on my way to or from the bedroom (it was astonishing to me to discover how closely those places are watched; I had never suspected it before); and as to medicines, boracic acid, salol, and benzoate of soda were worse than useless; citrate of potash with hyoscyamus and buchu were useful as palliatives, though uncertain; belladonna suppositories afforded by far the best relief from the strangury, but were of no use unless pushed to absolute dryness of the Schneiderian membrane; and the drug which cured me was arsenic, which my friend Mr. Bruce Clarke prescribed for me about the middle of November, though it was not until about Christmas that I ceased to find the call to micturate very urgent, albeit not unduly frequent. I found on three or four occasions when I was very bad that thoroughly washing out the bladder with hot water and boro-glyceride gave me a day's relief, but my urethra was so tender in front of the triangular ligament that I avoided that as far as possible, only doing it when my urine was alkaline and the mucus unusually abundant.

In order to show the mode of origin of these troubles I will first briefly refer to the anatomy of the perineum. It is a rough triangle, or, as anatomists prefer to call it, a lozenge-shaped space, bounded behind by the coccyx, the edges of the glutei muscles and sacro-sciatic ligament, and at the sides and apex by the pubic arch and symphysis. In the middle line from behind forwards are the rectum and the urethra with its bulb. On either side are the ischio-rectal fossæ, containing the nerves and bloodvessels which are distributed to the rectum and overlying skin, and which run forward to supply the penile and urethral muscles, and are finally distributed to the integument of the penis, scrotum, and perineum. The floor of the perineum is formed anteriorly of the unyielding triangular ligament, which is pierced by the urethra at its posterior part and nearer to the symphysis pubis by the dorsal vein and dorsal arteries and nerves. After the bulb it is with the nerves that we are most concerned, and they are—(1) the inferior pudendal, from the small sciatic, which pierces the fascia lata, curves forward and, running along the ramus of the pubis, is distributed to the skin of the scrotum; (2) the anterior and posterior superficial perineal from the pudic; (3) the muscular branches of the pudic to the transversus perinei, the accelerator urinæ, erector penis, and compressor urethræ muscles; and (4) the dorsal nerve of the penis, the terminal branch of the pudic, which perforates the triangular ligament behind the crus of the penis. We have then between the skin and the bone the inferior pudendal nerve, and between the skin and triangular ligament the bulb, urethra, and superficial perineal nerves, and the accelerator urinæ and erector penis muscles with their nerves. Obviously, then, anything which can exercise pressure between the sides of the pubic arch must compress these structures more or less against the bone and the unyielding triangular ligament, thus accounting by pressure on the sensory nerves of the part and on the motor nerves which supply the muscles of the urethra for the shrivelling and aching of the penis and inability to completely empty the urethra after micturating.

And now let us look at an ordinary bicycle saddle. Could anything be more deftly contrived to exercise this pressure? What is it but a modified wedge which becomes more and more operative as it is softened and stretched by use? Stretched by use! And when it is so stretched, is the modification in its shape a betterment or the reverse? The answer is unhesitatingly to be given, worse, far worse, for then we ride upon what is more or less of a strap, which shapes itself with painful accuracy to the perineal curve, while the concave form which it takes renders it practically impossible to sit back upon it and get good bearings for the ischial tuberosities. Let us for a moment turn our attention to its construction. It is mounted on a spring of some kind or other, or it is merely put on the machine without a spring, the resiliency of the pneumatic tyre sufficing for some riders. It is fixed at the peak only in front and behind by its whole posterior border to a steel plate called the cantle. It is unlike the equestrian saddle in not being supported in its whole length by a plate, technically the "tree." Its ground plan is roughly that of an isosceles triangle suspended between the apex and the base, a bridge, nay, a veritable "pons asinorum," and one that may claim to rival the "pons" invented by that terror of my youth, Euclid, in the amount of discomfort which it has caused.

Now, of course, the parts of our body which are specially adapted for sitting are the tuberosities of the ischium with their surrounding cushions of muscle and fat. It is, however, the bony parts which are intended to carry the weight, and it certainly is not intended that our ischio-rectal fossæ and the delicate structures of the perineum should carry the weight of the body upon a jarring or bumpy road. The transverse diameter of the outlet of the pelvis—i.e., the distance between the ischial tuberosities—is four inches, and at least one inch and a half must be added to this on either side if we are to derive the full benefit from our natural padding, and since we should not find it comfortable to sit on the steel base of our triangle we should have, if we use a suspension saddle, at least seven inches of suspended leather behind upon which to sit, exclusive of the steel cantle. But even supposing that we have a new saddle upon which we

[1] A paper read before the Devon and Exeter Medico-Chirurgical Society, Feb. 21st, 1896.

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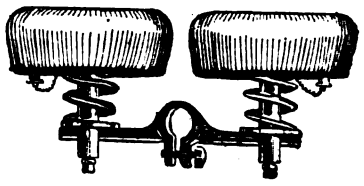
can sit comfortably upright with our tuberosities properly supported, what happens as soon as we begin to drive our machine? Our thigh straightens, our hamstring muscles contract and harden, &c., the edge of the saddle acting as a fulcrum, we are levered forwards until we come to that part of the saddle where no leverage obtains, which amounts to the same thing as that part of the saddle where our tuberosities have no firm bearing. This can be discovered in a moment if you will sit on a table and straighten your thighs. The action lifts you off the table. Thus, then, you are lifted on to the narrow part of the saddle and your body weight is transferred from the back to the peak of the saddle, from your tuberosities to your perineum and ischio-rectal fossa. But this is not the only source of pressure. Men, at any rate when they ride against a wind or up a hill, lean forward in order to present a less opposing surface to the wind or to throw their weight and centre of gravity directly over the pedals, and in this position of leaning forward bring much more pressure to bear upon their soft parts in front. To escape the former difficulty—i.e., the levering of the body forward by the act of pedalling—you may slightly tilt the peak of the saddle upwards, say 5° from the horizontal, and this will keep you fairly in your seat back upon the saddle, but it brings the peak up against the perineum, and when you lean forward you are worse off for apposition of the peak to the perineum than you were with the saddle in the horizonal. Many are the inventions which have been patented in view of this difficulty. A patent agent informed me a short time since that the patents handed in at the Patent Office for bicycle saddles only amount to fifty yearly, and a cycle accessory dealer wrote to me a few days ago saying that he has sixty or seventy saddles illustrated in his list for this season. But they may be divided for our purpose into two classes—saddles and seats; and I propose to go into this question, which appears to bear more upon cycling than surgery, because it is necessary that we should be able to advise our patients upon this subject, and to advise them well we must understand the subject thoroughly.

The first cycle was the hobby-horse, which might be described as a bone-shaker, without pedals, the feet being used as propellers on either side—punting on a bicycle. Obviously the position of the rider must have been hanging over a something which did duty for a saddle by his fork or perineum, and not sitting on his tuberosities. I should imagine that perineal pressure had a good deal to do with bringing this into disrepute. After a long hiatus which was partially occupied by the four-wheeled velocipede came the bone-shaker propelled by pedals on the axle of the front wheel where the saddle was retained, and as cycling has never since ceased the descent of the saddle may be thus briefly traced. Doubtless it was found to be more convenient than the seat of the velocipede, and in my opinion as a practical cyclist it undoubtedly is the best, and until something better and hitherto undiscovered arises the saddle or some modification thereof will remain. In spite of the advertisements of the makers of anatomical seats and the opinions of many eminent medical men I contend that for the work which has to be done on it the saddle-type of seat is the best, though I contend with an equal conviction that the ordinary make of saddle is bad and deleterious. I will take the seat first and will ask you to note that the absence of a peak, something to project between the thighs, means considerable loss to a cyclist. First, the peak keeps him on the saddle and steady, and without it he has to use some amount of force—very little it may be, but still some—to keep him on, and this is noticeable from the aching of the arms or thighs which attends the first efforts on a seat. Secondly, it deprives the cyclist of a considerable portion of one of his means of steering. These means are (1) the handle bar and (2) balance; and it is balance which is rendered easy by the peak of the saddle. I see letters in the cycling press from men who have become accustomed to seats who say that they find them more comfortable than saddles. I cannot claim to have given them a prolonged trial and so do not wish to pose as an authority on them; I have, however, tried those which I here show you and may give you my impressions of them.

1. The Burgess Seat is composed of two pads mounted on separate springs and capable of any adjustment necessary to make it fit the rider. So far as design goes it is ingenious, and one would have thought that the circular shape would have obviated the tendency of the thigh action to lever one off the seats, but I found the same difficulty in all the seats excepting La Sellette Papillon, that I had to use a definite amount of force both of arms and legs to keep on the seat, and any unusual jolt such as would pitch one forward in a saddle pitched one forward off the seat. I think that this seat is well suited to elderly riders who may have prostatic trouble and who do not want to ride fast and are careful in choosing their road. It has one advantage over the next which I

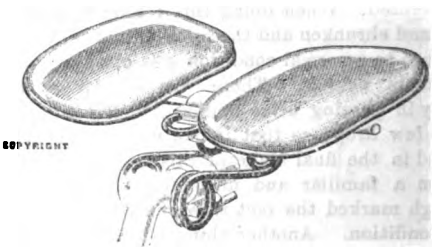
FIG. 1.



Burgess.

shall show you in having no resistance for the thighs to overcome in the act of extension. The seat or seats are made concave on their upper surfaces to take the ischial tuberosities, and I regard this seat as a good attempt at solving a difficult problem. 2. The next seat is the Autapto, which looks like two short thigh-splints distinct and parallel, and each one working on a well-adjusted recovery spring. It follows the thigh up from extension, but the resistance of the spring has to be overcome by the

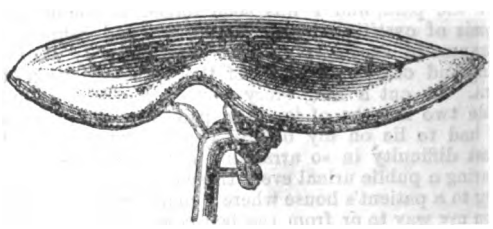
FIG. 2.



Autapto.

muscles which extend. I suppose that it would be arguable that the force thus expended in overcoming the resistance is restored as the spring brings the thigh up again, but this does not seem to me to be quite fair on the extensors, which certainly have the hardest part of the work to do. I found this seat less inclined to throw me forward than the others, as although I was always coming off on one side I was all right on the other. My impression of the Autapto is that it is comfortable and safe, though I must own to a distaste for the extra work which that recovery spring throws upon my hard-worked extensors. 3. La Sellette Papillon is, to my mind, the

FIG. 3.



La Sellette Papillon.

most comfortable of all, and I could be content to ride on it if I had to give up the saddle. It is a well-planned and comfortable seat, and the velveteen covering lends grip to the buttocks and so gives a feeling of security. In a short trial of it I found nothing to make me think it would cause saddle soreness, and I should place it first in the category of seats.

With regard to saddles it will be well for us to start upon this concluding portion of my paper with an idea as to what we want (1) to have and (2) to avoid. We want to have something that we can sit astride of (not hang over) and work our legs without hindrance or discomfort to our

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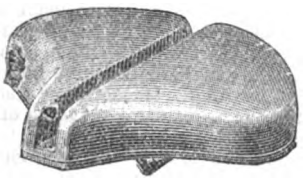
thighs and without levering our tuberosities off the seat and on to the peak, and, further, it should provide means of escape for the soft perineal structures in case a jolt or voluntary alteration of position should tend to put pressure upon them. We want to avoid perineal pressure and anything which tends to riding forward off the broad part or to galling the buttocks or thighs. To meet these requirements I think it will be apparent to you that the surface of the saddle should be a plane and the saddle must be capable of a slight tilt backwards if the rider require such to keep him seated, and, secondly, a groove or opening for the perineum is advisable, though not essential, for in the Brooks' B 90 saddle you will find as comfortable a saddle as you can wish for. Then saddles may be divided into suspension and treed saddles, and for ease and comfort the suspension have my preference. The Sans Bec is misnamed, as it has a beak.

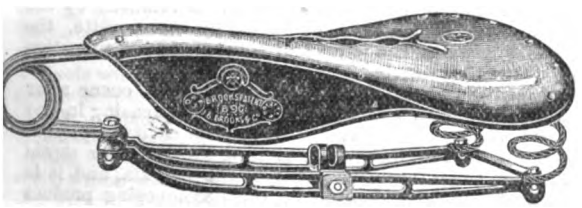
FIG. 4.



Sans Bec.

The peak is, it is true, reduced to a minimum and the sweep for the thighs is good. You will see that it is made on a tree which is perforated for the reception of symmetrical and ingeniously contrived rubber pads, which are placed on either side of a deep but too narrow central furrow. I expected to be comfortable on this saddle, but was not, and I think that the reason was that it was not roomy enough. I should get sore on it. It is a saddle which may be recommended to young men who care more for lightness and speed in riding than for actual comfort, and they need have no apprehension of perineal pressure. Suspension saddles are the various makes which are usually supplied and are usually faulty. There is, however, one which I mentioned just now, the Brooks' B 90,

FIG. 5.



Brooks' B 90.

which is comfortable, and from its length practically safe. Furnished with an elastic, easy, spring, it is most comfortable to ride upon though it will never come into general use, I fear, on account of its size and weight; but to those riders who do not heed these matters it will be found a desirable seat and may be slightly tilted backwards with advantage.

I have worked at this saddle question for some time and have had various wooden ones carved, each with an opening for the perineum, and I have found them not uncomfortable to ride upon. I have, however, a liking for the suspension saddle and have had these two made by a smith and

FIG. 6.

harness maker for my own use. You see that they are long and have an almost absolutely flat surface save only for the slight downward curve of the cantle. The peak has hardly any superior surface, being occupied almost entirely by an opening which runs back from the pommel and is preserved in one case by a metal fork and in the other by a wire. The peak, too, rotates round its horizontal axis and so provides a slight and comfortable amount of play with the thigh action.

This paper will be incomplete to a far more serious extent than it is if I omit all mention of women's saddles. I have had no case of injury to treat, but have been asked about chafing and soreness. As these occurred, without exception, in beginners one must not regard them too seriously. I think, however, that women are less liable than men to damage from pressure. They have not the exposed urethra, and have no prostate to be bumped about. Still they, or those who ride in skirts, have to use a short-peaked saddle, and I think that they would be as much benefited by a groove as men are. They do not ride as fast or as carelessly as men do, and so can somehow do better with a seat than we do. A word of practical advice to any who know of women who are beginning and have a fancy for the seat is that they ride on it as soon as they have learnt to keep on their machine, as the more they get accustomed to the saddle the more difficult they will find it to make the change. In conclusion, let me say that I can recommend no saddle as being universally applicable. I might as well recommend one pair of boots to fit everybody. Each rider has his peculiar method of sitting and pedalling, and each must select for himself a saddle which suits him. I do advise riders to try their saddles before they buy them, and to try them on a ride and not as they do a machine by a few turns up and down the street outside the agent's shop. They should understand thoroughly the right position of the saddle, which is such that they can, at the fullest extension required of the leg, sit properly upon the broad part of the saddle; and to obtain this the saddle must be low enough and far enough back, and probably in riding this position will be assisted by a slight raising of the peak. If the saddle is too high they are obliged to hang over the peak to reach the pedals, and if it is too far forward the leverage of the thighs throws them on to the peak and pommel. A good rule as to the height of the saddle is to see that at the point of greatest extension of the leg the heel can be brought to, or slightly below, the level of the pedal. Given a good saddle properly placed I am confident that only a few elderly riders need fear perineal pressure in cycling.

Exeter.

HÆMORRHAGE DURING THE EARLY MONTHS OF PREGNANCY.[1]

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WHEN I was asked to read a paper at the South-West London Medical Society I thought over the various common obstetric and gynæcological ailments which most concern us as practitioners. In the special departments of medicine, obstetrics and gynæcology, the two symptoms which at once attract a woman's attention are *pain* and *hæmorrhage*. As an isolated symptom in gynæcological cases, pain is more likely to lead a patient to her physician than hæmorrhage. It is this fact which acts so disastrously during the course of uterine cancer, most patients neglecting the early hæmorrhage and discharge, only seeking advice when pain is superadded. In obstetric cases, on the other hand, where a woman believes herself to be pregnant, the onset of hæmorrhage usually induces her to send for professional assistance. I therefore chose Hæmorrhage during the Early Months of Pregnancy as the subject for my paper, and did so with the hope of learning a good deal more from my audience than I can hope to personally impart. I do not propose to discuss the subjects of accidental hæmorrhage or that arising from placenta prævia, for these varieties are best recognised in the later months and are for all practical purposes indistinguishable from other cases of threatened abortion, even if they should cause hæmorrhage in the early months. Cases of hæmorrhage during the early months seem to naturally fall into two groups: (1) where the hæmorrhage is

[1] A paper read before the South-West London Medical Society on May 13th, 1896.

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directly due to the existence of the pregnancy, and (2) where it is due to some condition independent of, but concurrent with, the existing pregnancy. The following may be taken as a rough summary of cases coming under the two classes: (1) threatened abortion, missed abortion, incomplete abortion, moles (apoplectic ovum, carneous mole, hydatidiform degeneration of chorion), decidual endometritis (diffuse, polypoidal, and catarrhal), and extra-uterine gestation; and (2) persisting menstruation, granular erosion of the cervix, adenoma of the cervix, mucous polypus of the cervix, fibroids, malignant disease, and ulcerations (specific and non-specific). As a rule, we should be on our guard against the patient being pregnant in all cases of hæmorrhage between puberty and the menopause. Undoubtedly many mistakes are made from forgetting that a pregnant woman need not necessarily have amenorrhœa. It is very possible for a woman to be pregnant several months and yet to be either regular, or approximately so, or else to have metrorrhagia. So much is this the case that it would be safer to go to the opposite extreme and if a married woman complains of metrorrhagia—irregular hæmorrhages every day or every few days—assume for the time being that she is pregnant until this can be excluded. This mental reservation is often advisable in cases of unmarried women before the menopause, for it must be remembered that they may have special reasons for deceiving us as regards their menstrual history. I will now consider shortly the varieties named above in the first group.

Threatened abortion.—Here hæmorrhage is usually the first symptom, but if the abortion is becoming inevitable pain soon supervenes, the cervix dilates, the ovum begins to protrude, and perhaps the membranes rupture. If protrusion has commenced partial separation must have taken place, and the abortion should be encouraged. Short of actual protrusion, where hæmorrhage is not severe, attempts may be made to prevent the abortion. I need not here speak of this. If the abortion be deemed inevitable a warm antiseptic douche should be given, and if hæmorrhage be slight, and especially if the pregnancy be under twelve weeks in duration, the case should be left to nature. If hæmorrhage be profuse plug the cervix and vagina with gauze and give ergot, or else, as I personally much prefer, put the patient under anæsthesia, dilate up the cervix by the rapid method if the cervix will not yield to the finger, and gently strip off the entire ovum from the uterine wall, if possible without rupturing the sac, using the finger as a sensitive curette, meanwhile keeping the uterus firmly pressed down on to the inside fingers by means of the other hand. After removal of the ovum, douche out the uterine cavity with iodised water, and if hæmorrhage be profuse plug the uterus with antiseptic gauze—a means which I have never known to fail.

Missed abortion.—These cases are not always easy to recognise. A woman misses a period or two, followed maybe by a rather sharp loss, and may then begin to lose a little every day or once a week, or even have gushes of blood approximately every month, and, excusably enough, has no idea that her uterus contains an ovum. In some cases the ovum thus retained is changed, by extravasation of blood into its tissues, so that it becomes an apoplectic ovum, and as such will be considered later. The diagnosis of a retained dead ovum is made chiefly by the fact that one or two periods have been missed, by the presence of irregular hæmorrhages, and by the fact that the uterus is smaller than it should be, dating from the last regular period, and that, moreover, it is not enlarging, but tending rather to decrease in size. It has to be distinguished from subinvolution of the uterus after an early abortion, from incomplete abortion, or from molar pregnancy, and it may at first be impossible to be sure; but fortunately in all these cases ergot may be given, and its influence upon the uterus under these several conditions will go far to enable a diagnosis to be made. If, however, hæmorrhage persist, or the temperature rise, rapid dilatation should be effected under anæsthesia, the cavity explored, a complete diagnosis thus made, and the condition found at once dealt with. Cases of missed abortion, apart from those which result in the formation of moles, most usually occur when the ovum dies, as it were, very slowly, a lingering death from some lack of vitality either in the impregnating spermatozoon, as in cases of syphilis, Bright's disease, diabetes, or lead poisoning in the husband, or from similar or other chronic blood states such as anæmia in the woman. In such cases the uterus becomes tolerant to the presence of the degenerating and eventually dead ovum and may not at once throw it off. In such cases, also, the uterus would be less vascular and consequently less active. On the other hand, when the ovum dies more suddenly, an immediate abortion follows, except where extravasation of blood or decidual endometritis has made the membranes unduly adherent. Sudden death of the ovum is due to high temperature or to blood poisoning, as in acute specific fevers or in cholera &c., or to imperfect aeration of blood in cases of pneumonia &c. The following case shows how serious even a short retention may become.

CASE 1.—A married woman, seen with Mr. Busfield of Clapham, had had two children, the last eight years previously. She had been quite regular, her last period having been fourteen days ago. On April 3rd she began to lose a little blood, and this continued slightly for three days, and during the same period her temperature rose and rigors occurred. Though the history was very misleading Mr. Busfield suspected a missed abortion, and on the fifth day I saw the patient with him. She had then just had a rigor and her temperature was 106° F. Occasional uterine colic was present, but no other discomfort. Under anæsthesia an intact six weeks' ovum was removed, and in one and a half hours her temperature was 103°, in three hours 99·5°, and it was normal next morning. Hæmorrhage was rather free after removal of the ovum, requiring plugging of the uterine cavity with gauze.

The following case had less severe symptoms, but was remarkable from the ovum having died within a few days of reaching the uterine cavity.

CASE 2.—A married woman aged twenty-eight years, who had had one child seven years previously, aborted in March, 1895. She was quite regular till her September period, 1895, when she lost rather profusely, and continued to lose almost daily for the following five weeks, when, finding that the uterus was only slightly enlarged, to be not increasing in size, and that the hæmorrhage was getting worse, I rapidly dilated and found an ovum of about ten days loosely attached to the left cornu. She lost rather freely for ten days, but has since been quite regular. This very early ovum had apparently been conceived about ten days before the September period, had not been thrown off when that period occurred, and had been retained for another six weeks.

CASE 3.—A fœtus [which Dr. Routh showed] had been retained *in utero* for five months, causing metrorrhagia and septicæmia. Finally the uterus was rapidly dilated by Dr. Gibson Berkeley of Camberwell, the fœtus removed by the finger and the sloughing membranes by the curette, the woman doing well. The fœtus had undergone mummification and partial calcification.

Incomplete abortion.—If hæmorrhage or sepsis occur after a presumed abortion and the uterus is not increasing in size the cervix should be rapidly dilated and its cavity explored. True septicæmia in such cases is rare, sapræmia or septic intoxication being the usual cause of the pyrexia, and it is as a rule found that removal of the decomposing product causes the temperature at once to drop and the hæmorrhage to cease. The technique of the operation is as follows. The essentials are (*a*) rigid antisepsis, (*b*) dilatation so as to admit the finger, (*c*) complete evacuation of the uterine contents, and (*d*) anæsthesia is almost an essential. After washing the vulva and vagina with wool soaked in corrosive sublimate solution, seize the anterior lip of the cervix with a vulsellum forceps with blunt teeth like Teale's forceps. If the finger cannot be inserted dilate rapidly with graduated bougies and explore the whole cavity very carefully, especially the cornua, pressing the uterus down from outside. Remove any pieces found adherent with the finger if possible, or with the forceps or blunt curette as may be most convenient, but be careful not to injure the uterus, the tissues of which are very soft after abortion. For hæmorrhage apart from sepsis the curette is hardly ever required and in very rare cases should the curette be a sharp-edged one. If the piece removed be offensive the uterus should be irrigated with 1 in 2000 corrosive sublimate solution. If, as often happens when a piece of placenta is removed, very free hæmorrhage occur, the uterus should be at once plugged with iodoform gauze, a process which in my experience has in these cases never failed to arrest the bleeding. The gauze should be removed in twenty-four hours. Most cases of incomplete abortion are easy to diagnose, owing to the history of amenorrhœa, followed by hæmorrhage, passage of the fœtus, and subsequently more or less continuous losses. Where these points are denied the diagnosis is impossible without an exploratory dilatation, as in the following case.

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CASE 4.—A woman who had been married three years had borne one child two years ago and had never aborted. Her present illness began with rather profuse hæmorrhage six months before, commencing fourteen days after a natural period. Since then she had lost blood daily, with no increase by which a menstrual date could be fixed, though she had had several severe floodings at irregular intervals. She came under the care of Dr. Murphy of Twickenham six months after the first hæmorrhage, and with his assistance I explored the uterus and removed a piece of placenta which had undergone some fibroid change, and had presumably been there for at least six months, though her view of it was that it had been there since her previous labour two years before. If so, it had produced no symptoms for the first eighteen months—a very unlikely alternative.

The following case is one of a rare condition where the placenta and membranes had come away and the fœtus had been retained. It was most probably a case of placenta prævia where the placenta from some accidental cause had become prematurely detached.

CASE 5.—A married woman aged twenty-six years had had three children, the last eleven months previously; two abortions had occurred prior to the birth of the last child. Amenorrhœa occurred from March 1st to May 3rd. She then "flooded" and had severe pain and passed several "pieces of flesh." Since then (six weeks) she had lost blood daily with occasional fœtor. She suffered much from backache, general malaise, and nausea. On examination the uterus was found to be bulky, flabby, and four and a half inches long, and I believed it was a case of abortion with probably a retained piece of placenta and put her on ergot till arrangements could be made for dilatation. In two or three days she had a series of sharp pains and passed a somewhat shrivelled, macerated fœtus of about three months' gestation with no clots, and digital exploration of the uterus proved that the afterbirth had also come away, probably over three months previously.

Molar pregnancy.—The "moles" most ordinarily met with are "blood moles" or "apoplectic ova," which are due to hæmorrhages into the decidua or between the decidual layers. Less frequently "fleshy moles" are found, due generally to hæmorrhages which have become organised or which are complicated with a good deal of diffuse or polypoidal decidual endometritis. These moles may remain *in utero* for many months, usually acting as foreign bodies and keeping up daily or irregular hæmorrhages. Sometimes the uterus becomes tolerant to their presence and menstruation may for a few periods become regular, but sooner or later the mole will be expelled with smart hæmorrhage and some pain, which latter symptom may, however, be almost entirely absent. Apoplectic ova are probably instances of the commonest pathological changes of the early ovum.

CASE 6.—[Dr. Routh showed a specimen of an apoplectic ovum which was expelled seven months after conception.] The woman had not been "unwell" for five weeks, when some hæmorrhage occurred, and doubtless at the same time hæmorrhage also occurred into the envelopes of the ovum itself, leading to the death of the fœtus. At first I diagnosed missed abortion and put her on ergot. All irregular losses then ceased and she menstruated regularly and I thought I had been mistaken, but at the seventh month the ovum was expelled with some hæmorrhage and practically no pain.

CASE 7.—In June, 1891, I saw a patient with Dr. Dodson of Wandsworth with a history of having had no regular period for six months, but she had had for over four months a daily grumous discharge, which for the last four weeks had gradually given place to offensive watery discharge. On examination the uterus was found equal to the size of a three months' pregnancy, and we came to the conclusion that the fœtus had died in the second or third month and was now retained, and had undergone some organic change and was probably a fleshy mole. As, however, the diagnosis was uncertain we gave her ergot on trial, and the hæmorrhages ceased, but in September—i.e., ten months after conception—the mole came away spontaneously.

Hydatidiform degeneration of the chorion—"*hydatid mole.*"—This can only be diagnosed with certainty by the discovery of cystic villi in the discharges, which are mainly watery blood, but it may be strongly suspected if the uterus is a good deal larger than it should be at the date to which we believe the pregnancy is advanced. This is just the opposite to what occurs with apoplectic ova or fleshy moles, where, though we gather that the woman should be three or four months pregnant, we find the uterus about the size of six or eight weeks. These hydatid moles may also remain *in utero* many months. If hæmorrhage be severe the uterus should be emptied, trying to do this with ergot first, and, failing that, by rapid dilatation. If hæmorrhage is slight, and yet the diagnosis is sure owing to vesicles having been detected, we should not be too much in haste to empty the uterus, as twin pregnancy may be present, only one of which is hydatid.

CASE 8.—[Dr. Routh showed a specimen of hydatid mole from a patient who was sent to him by Mr. Stanley Boyd.] She had had constant daily hæmorrhage for two months after two and a half months' amenorrhœa. The uterus was the size of a six months' pregnancy. Rest in bed made no difference, and as the discharge became offensive and the temperature rose full doses of ergot were given and this mole came away, some fragments in addition having to be digitally removed subsequently. Two years later she had a healthy child.

Decidual endometritis.—Next to apoplectic ova the commonest pathological change in the early ovum is decidual endometritis—diffuse, polypoidal, and catarrhal. Of these the catarrhal form is the most frequent, especially in women who have previously had subinvolution and chronic endometritis. Not infrequently one is able to trace a syphilitic taint, which in a few cases has been congenital. In such cases women may lose a little blood-stained or brownish discharge and as a rule do not believe themselves to be pregnant. After a few weeks the discharge may become watery and gushes of clear or straw-coloured water come away, being one form of hydrorrhœa gravidarum. These cases give rise to more mistakes in diagnosis than either moles or the other varieties of abortion already considered, but if a careful bimanual examination be made the diagnosis is not difficult. The uterus is found to be about the size we should expect in a normal pregnancy of the same duration, not larger, as in hydatid mole, and not smaller, as in cases of missed abortion or fleshy mole. The examination is made the more difficult because, owing to the unhealthy state of the uterus, its upper limit cannot always be felt and its intermittent contractions are very transient. If ergot be given incautiously or the uterus be roughly handled the uterus, already holding its contents very loosely, expels the ovum. These cases have also to be distinguished from both subinvolution and fibroids. Most of these cases go on to full term if treated by three or four grains of iodide of potassium thrice daily. This drug seems to be almost a specific remedy, though it is impossible that all cases can be syphilitic. The most typical cases of decidual endometritis occur in small-pox, and, owing to the hæmorrhage, have been called "hæmorrhagic endometritis," but these are exceptional in usually ending in abortion. The following case occurred after the menopause had apparently set in, rendering the diagnosis somewhat obscure.

CASE 9.—A patient aged forty-five who had been married twenty years had had eleven children, the last three years previously. Menstruation was regular till March, 1891, then amenorrhœa supervened till August, 1892, when she "flooded," and had in January, 1893, for over five months lost blood almost daily. Pregnancy of five and a half months was diagnosed, and she was put on iodide of potassium to cure the endometritis. The hæmorrhage soon ceased, occasional gushes of clear water passing painlessly. She was confined on April 15th of a healthy child, but the placenta being pathologically adherent from the endometritis had to be stripped off.

Extra-uterine pregnancy (mainly tubal).—This cause of hæmorrhage must not be omitted, though relatively rare. One or two periods are missed, sometimes only one; then irregular hæmorrhages occur, and possibly a uterine decidua, differing from that of an intra-uterine pregnancy in having no chorionic villi, is passed. Physical examination reveals a sympathetically enlarged uterus and a tumour on one or other side or in Douglas's pouch. Possibly also the patient may complain of pain—the pain of tension—on that side also. The treatment is to remove the tube as soon as the diagnosis is sure. If rupture has already occurred downwards into the broad ligament nothing operative need be done, as the hæmorrhage is necessarily bound down. If rupture has taken place into the peritoneal cavity, and it can be felt to be encysted by pre-existing bowel adhesions which roof over the pouch of Douglas, we may delay operation hoping for permanent arrest of bleeding; but if no *localised* hæmatocele be felt an internal hæmorrhage is evidently going

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on, the abdomen must be opened at once, and the ruptured tube removed.

The second large group of hæmorrhages during the early months of pregnancy consist of those varieties due to conditions concurrent with and complicating the pregnancy.

Persisting menstruation is fairly common during one, two, or three months, and in the last case the uterus would be found to correspond in size to a gestation of three months longer duration than was indicated by the amenorrhœa. Physical examination would distinguish these cases from hydramnios, and the absence of irregular losses would prove them not to be hydatid moles. The most likely mistake to fall into is that the large uterine tumour may at the end of the three months' pregnancy be taken for a fibroid tumour. Time, however, will always clear up the case.

I will now very briefly consider some of the local complications which cause hæmorrhage during early pregnancy.

Granular erosion of the cervix.—Here the hæmorrhage is slight and as a rule only present after coitus.

Adenoma of the cervix.—If a granular erosion has been present before conception there will have been a denudation of the squamous epithelium of the vaginal portion. The coexisting glandular cervicitis is aggravated by the increased vascularity of pregnancy, and the resulting projections of papillary processes look like the tentacles of a blood-red sea-anemone. Such a cervix bleeds freely when touched, and when not touched there is usually a blood-stained leucorrhœa. This condition disappears spontaneously after delivery, and can be held in check during pregnancy by usual local remedies.

CASE 10.—A married woman aged thirty years had had one child four years ago. She aborted eighteen months ago. She had had severe endo-cervicitis and erosion. She had now had amenorrhœa for two months, except that she always lost blood after coitus and had a copious leucorrhœa, occasionally blood-stained. The uterus was found to be retroverted and gravid. The cervix was bright red, bled easily on contact, and was evidently adenomatous. The uterus was reduced and the cervix painted a few times with iodised phenol. She went to full term and did well.

Mucous polypus of the cervix.—A woman may perhaps be suffering from almost daily loss of blood, yet becomes pregnant and continues to lose blood as before. The uterus is found to be enlarged, and, naturally enough, if great care be not taken the diagnosis of rapidly growing fibroid is made, and the mucous polypus, even if noticed, is then looked upon as an unimportant complication.

CASE 11.—A woman aged forty-one years had been married four months. She had slight irregular losses before marriage and more severe and frequent since. She was thought to have a rapidly growing fibroid requiring operation. She was found to be about three and a half months pregnant and had two small mucous polypi hanging from the endocervix. These were burnt off and her child was born in due course.

Malignant disease of the cervix.—I do not know of any case of pregnancy occurring where pre-existing cancer or sarcoma of the body of the uterus was present, but it is possible that some of the cases of deciduoma malignum recently reported may be thus explained. Cancer of the cervix and pregnancy are not nearly so rare, and it is evident that with such a cause of hæmorrhage existing, a mistake in diagnosis may be easily made.

CASE 12.—A woman came to the out-patient department of Charing-cross Hospital suffering from metrorrhagia of some months' duration. This was found to be due to epithelioma of the cervix, already beginning to slough and ulcerate. She had a large uterus, but the question of pregnancy did not occur to me. She was admitted and I removed the cervix as high as the internal os uteri, and even then had no suspicion that she was over two months' pregnant. She disappeared from under observation, but I subsequently heard that she went to full term, that the epithelioma speedily recurred, as it always tends to do during pregnancy, and that during a temporary closure of the hospital she went to St. Thomas's Hospital, and Dr. Cullingworth successfully performed Cæsarean section, the woman dying some months after from the malignant disease.

These few cases and my imperfect comments will tend, I hope, to show how important a careful and cautious diagnosis is in all instances of metrorrhagia where pregnancy is a possible explanation or concurrency.

Manchester-square, W.

THE TOXINE THEORY OF SYPHILIS.

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IN a paper on the Pathology of Syphilis[1] I advanced a working hypothesis deduced from a consideration of the phenomena of the hereditary disease, and I have recently applied it to the question of latency in syphilis.[2] In order to cover the vast array of facts involved it is evident that such a hypothesis must be of elemental simplicity. Reduced to its lowest terms it may be stated thus: (1) syphilis is associated with the growth of a microbe in the organism; and (2) this microbe produces a toxine which is the active cause of the phenomena of syphilis. In the light of modern bacteriology this theory seems almost self-evident; however, until the specific microbe has been discovered, cultivated, and inoculated, and the toxine isolated, it must remain a hypothesis only. I will endeavour to show that, at any rate, it is one that will work. The toxine must be supposed to share the properties of other microbial toxines; for instance, it is diffusible and follows the laws of osmosis, it is irritating to the tissues and causes local inflammatory reaction, it is strongly chemotaxic and attracts leucocytes into the area in which it is present, and when existing in quantity in the circulation it causes symptoms of general toxæmia.

The first thing to consider is the point of original infection, the abrasion or fissure through which inoculation takes place. This is often so minute as to escape notice, and when more extensive—for instance, a torn frænum—the mere fact of its occurrence will put a stop to further exposure to the infection. It is, therefore, plain that only a few microbes can be implanted in the first instance, while the prolonged course of the disease indicates that the infection is a slowly developing one. Hence, although there is no reason why the primary colony should not start growing and forming toxine at once, yet it will be so small, or so sparsely sown with microbes, that the toxine produced will be inappreciable in amount. Chemotaxis will occur from the first, but three weeks may well elapse before sufficient toxine has been developed to cause a cell infiltration dense enough to distend the intercellular spaces and be visible to the naked eye. Thus the primary incubation period is one of apparent latency. When the spaces in which the colony is growing have become sufficiently crowded up with leucocytes the indurated papule, the first sign of syphilis, will result. The induration is the essential feature of the lesion, since ulceration is not invariable; this, however, almost always occurs. I believe it to be due to the degeneration of the invading cells from overcrowding and consequent mal-nutrition for the following reasons. Microscopical examination shows that the walls of the vessels are thickened and their calibre reduced by the presence of round cells—cells, I believe, in the act of invading the colony in response to the stimulus of the toxine; therefore, the blood-supply of the infected area is defective. Further, the surface of the early hard sore presents a whitish colour and is covered with a number of small, irregular depressions; it looks worm-eaten—"vermoulu," as Ibsen has it; these depressions can only be due to the disintegration of collections of cells massed among the fibres of the cutis. Again, when the primary induration consists of several confluent papules, ulceration occurs at several points corresponding to the centres of the several colonies, where the induration would be densest and degeneration most likely to occur; these ulcers ultimately fuse into one large sore. Lastly, when the primary sore is situated on a vascular part, like the lip, very little ulceration generally occurs, although induration may be most extensive. The worm-eaten appearance disappears in a few days and the sore becomes smooth and callous, because, I think, it must form a nidus for saprophytic microbes, whose toxic products will dissolve the superficial layers of tissue, as in other chronic ulcers. When the sore is beneath the prepuce, and the discharge retained, evidence of the presence of such toxic irritants occurs in the shape of acute irritation, suppuration, and possibly phagedæna. In the normal hard sore no suppuration exists because it is formed by disintegration only, as I have tried to show.

Since the primary colony is single, and there is no other

[1] THE LANCET, Sept. 10th, 1892. [2] THE LANCET, Feb. 22nd, 1896.

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source of toxine, this body will diffuse into the blood with absolute freedom; consequently at the margin of the colony it will be instantly washed away and its chemotaxic influence will cease; therefore, the resulting induration will also cease, and thus the characteristic sharply margined induration of the primary sore is accounted for. It is evident that the position of this lesion is unique; never again in the course of the disease can the combination of a single colony together with a total absence of acquired toleration in the leucocytes occur; I think, however, that the solitary gumma occurring years later may occupy an analogous position, and here a similarly dense infiltration is found. As the primary colony grows peripherally into the tissues the induration will accompany it with equal steps, and the consequent ulceration follow after; in this way the sore increases in size. The actual size of a hard chancre will depend, firstly, on the area originally infected, a group of papules fusing into a larger sore than a single one produces, and a larger abrasion—a torn frænum, for instance—resulting in a lesion at first corresponding in outline to the tear and later tending to a circular form; and, secondly, on the rate of growth of the microbes into the tissues. This, again, depends on the resisting power of the individual; a rapid growth indicates weak resistance and a corresponding luxuriance of the secondary foci may be expected; so for prognosis the rate of increase, not the size of the lesion, is of importance.

The microbes in their growth in the primary colony will soon reach the beginnings of the lymphatics, and be carried in the lymph stream to the nearest gland, and thence to the whole group; some falling by the wayside will grow on the walls of the lymphatics, as is shown by the resulting induration; the rest will reach the first gland and grow in it, producing toxine and consequent infiltration and indolent enlargement. Thence the infection will spread to the other glands with a like result. The microbes are certainly present in the glands, since I have seen a hard sore under the nail follow the scraping out of such glands which had suppurated, presumably from a further infection by pyogenic microbes. If the infection can spread from gland to gland it can spread further and in this way reach the circulation. Thus microbes must be continually shed off from the primary glands and be carried by the lymph stream to the blood stream and so be scattered broadcast through the organism. They will ultimately be stranded on the capillary walls, probably at the most distant points of the periphery, such as the looped terminal vessels of the skin and mucous membranes, just the situations where evidence of their presence first occurs. It seems unlikely that more than one microbe would strand at a given point, hence I conclude that the secondary colonies generally start from a single microbe which multiplies indefinitely. The colony will grow through the vessel wall into the surrounding spaces, even penetrating the epidermis, as the contagious secretion of condylomata shows. These secondary colonies will again form toxine, which will diffuse into the circulation. So long as this process can continue no local irritation will arise and the colony will remain apparently latent. This apparent latency, as I have already pointed out, may continue in an infected fœtum for nine months, while the child is born apparently healthy, the explanation being that the toxine diffuses into the maternal circulation. At birth, however, this safety valve is shut off, toxine begins to accumulate, the child falls off, becomes wasted and anæmic, and shortly an outburst of secondary lesions occurs. I believe that a similar accumulation of toxine precedes the evolution of secondaries in acquired syphilis; there is a similar train of general toxæmic symptoms, such as malaise, anæmia, rise of temperature, and loss of weight. When the toxine tension in the blood reaches a certain point further diffusion from the microbic foci will be impeded, the toxine will be retained in the foci and produce local irritation, hence the development of the rash. That the accumulation of a microbic toxine in the blood can cause general and local reaction is demonstrated in the tuberculin treatment of lupus. Here we know for certain that bacilli are growing locally and forming tuberculin, which must diffuse into the circulation, where its presence is known by the general reaction following the injection, which in a healthy person would not occur. By the injection then the general tuberculin tension must be raised, and since all other circumstances remain unchanged the general reaction must be due to this raising of the tension. Since the tubercles are extra-vascular this circulating tuberculin can reach them only by diffusion, and this will be prevented by the presence of the tuberculin already in the tubercles; this local tuberculin will similarly be prevented from diffusing into the blood stream, and so accumulate and be the actual cause of the local reaction. It has been proved by experiment that an injection of tuberculin in a case of secondary syphilis also causes general reaction, and in a case of rupia local irritation similar to that occurring in lupus. Therefore, the toxine of syphilis must be so similar to tuberculin that one body can impede the diffusion of the other. The secondary foci in syphilis differ only in number and size from rupial foci, and as units occupy a similar position to the organism as a whole; it cannot make any difference to them individually whether tension is raised and local diffusion impeded by an injection of tuberculin or by the production of toxine in countless other foci. I therefore conclude that the outburst of secondaries depends on the accumulation of toxine in the blood, and this accounts for the polymorphism of the rash, since all foci above a certain size will share the irritation and be revealed. The older and larger foci will naturally be the most irritated, since more toxine will be produced in them; hence the corresponding lesion will be larger and more active. The youngest colonies will, on the other hand, not produce enough toxine at first to show reaction, but as they grow irritation will develop, fresh lesions appear among the old ones, and as the latter die down the eruption will present lesions in every stage of development and decline. When the secondary outbreak is acute I have sometimes noticed a corresponding irritation in the primary sore which is diffusely indurated, hot, red, and inclined to discharge; indeed, when I see a primary sore in this state I confidently expect to find a marked display of secondaries. The primary sore ceases to grow at this stage, and presently cicatrises and disappears or becomes converted into a scaling patch or mucous plaque. This happens even when the secondaries are evolving. It seems to me that the cells invading both primary and secondary foci must attain after a time sufficient toleration to fall upon the microbes. The acquisition of this toleration may, I suppose, be connected with the formation of an antitoxin. Now, the cells in the primary focus have been exposed longer than those elsewhere, so it is natural that they should be the earliest to acquire toleration and be able to encapsule the microbes and destroy them more or less. Consequently the production of toxine will cease in the primary focus, and the cells, no longer being attracted, will tend to wander back into the blood. So the induration will melt away and the sore be able to heal.

A similar process will follow in the secondary foci in ordinary cases, the tolerant cells will encapsule the microbes and restrain their growth. Toxine formation will largely cease, the invading cells disperse, and the signs of irritation disappear. At the same time the toxine tide in the blood will fall and a period of apparent latency set in. The much less marked cell infiltration of the secondary lesions as compared with that of the primary sore is due, I suggest, to two factors: firstly, the general toleration which the leucocytes must acquire will render them less susceptible, and, secondly, the toxine tension in the foci will not be greatly higher than that in the blood, and its stimulating effect on the cells will thus be minimised. At the same time the toxine will diffuse with difficulty and tend to hang about the foci, hence the induration which exists will fade gradually into the normal skin and not be sharply margined. Although the secondary rash is polymorphic, yet in different individuals different classes of lesions obtain, in one scaling papules of different sizes, in another roseolous patches; one case I remember in which the primary lesion presented no ulceration, and the secondaries were simply macular without the least tangible infiltration, showing that in this individual resistance was such as to prevent infiltration enough to be followed by ulceration in the primary lesion, while in the secondaries it was even less marked. The foci growing in the mucous membranes follow a like course to those in the skin modified by local conditions. There is no reason, I think, why foci should not develop elsewhere, and periosteal pains may indicate their presence; however, since they are small at this stage evidence of their existence in deep situations cannot be expected except in the worst cases. The general enlargement of the lymphatic glands will, I think, be due to the same cause as the primary bubo—namely, the growth of microbes carried from the secondary foci to the corresponding glands. It is not necessary that these foci should ever have been large enough to be revealed, while, on the other hand, they may

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well have died down before the glandular enlargement appears That this enlargement will persist long after the secondaries have so disappeared is quite likely when the structure of the glands is considered, for it is evident that after toleration has been acquired and the microbes encapsuled and destroyed the phagocytes will regain the circulation much more readily from the cutaneous lesions than from the recesses of the glands. The pigmentation of the secondary lesions must, I think, be due to the local action of the toxine on the red corpuscles, just as general anæmia results from its accumulation in the circulation.

(To be continued.)

THE REFLEX INFLUENCE OF ALVEOLAR LESIONS ON THE VOCAL CORDS.

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ONE who has been engaged in the active pursuit of dental surgery for a considerable time can scarcely fail to have met with strange and mysterious cases which in diagnosis and treatment baffle the efforts of the most experienced and skilful practitioner. When commencing this article it was my intention to confine the subject to that of neuralgia in its almost endless and protean forms. A unique manifestation of diseased action lately brought under my notice has, however, decided me to deviate from my original intention; I have therefore to introduce my subject metaphorically in order that it may be more clearly understood by the readers of THE LANCET.

If we take the whole range of musical sounds as exemplified, for instance, in the violin, and find them all in point of tone and quality to harmonise, we then pronounce such an instrument to be of a perfect type and its commercial value almost fabulous. It is not unusual to hear of such a sum as £2000 being paid for an instrument of that description. I was at one time intimately acquainted with a gentleman who had made the theory of music a profound study for many years. Moreover, he was an advanced mathematician and probably made millions of figures in his geometrical calculations of proportion in the different parts making up the entirety of the instrument. His knowledge of acoustics was also considerable, and as the financial position of this gentleman was equal to the enlightenment of his mind he spared no expense in providing for experiments, in the hope of discovering the true and definite principle on which all instruments of this class could be accurately constructed according to the Amati or Stradivarius method. I was on one occasion invited to his house to see a violin he had recently purchased in London and for which he had paid £30. It must not be imagined that the instrument commanded that price for its excellence—just the reverse, for the dealer assured this devoted amateur that it had been used in the Italian opera orchestra for a considerable time, but had suddenly failed in its tone. This fact excited the curiosity of my friend and strengthened his desire to purchase it that he might avail himself of the opportunity to examine the make and shape in a critical manner in the endeavour to find the cause of failure. He commenced by first removing the cover, and on minute examination of that part it was found that a worm had eaten a small hole in the bass bar. This discovery was made known to the vendor and the violin returned with instructions for a renewal of the defective part. When that was done the instrument was restored to its original state and value. In all the intricacies and mysterious working of the human system diagnosis is at all times difficult and successful treatment no less so. I have lately met with a case in practice which seems so analogous to the one just described, although in two different natures, that a narration of it may not be uninteresting.

A clergyman in endeavouring to utter the letter *h* set up a spasmodic action of the vocal cord which took him a few seconds to recover from ere he could proceed with his discourse. This remarkable affection gave rise to much speculation among the members of his congregation as to the cause. Within the past few months an opportunity has been afforded me for an oral examination, and having noticed a great deflection in the right inferior maxilla where the first molar and second bicuspid were formerly situated I interrogated him as to the cause. He informed me that these teeth had been extracted by a non-qualified man, who had removed a large portion of the jaw with them; so much so, indeed, as to injure both the nerve and artery—in the first instance interfering seriously with the neurotic force and in the second disturbing the arterial current. It instantly occurred to my mind that this terrible mischief was the cause of his lamentable malady produced by reflex action on the particular cord; there can be little doubt that the damaged part described had originated the affliction from which he suffered and with little chance of amelioration. Here we have evidence of a bungling mutilation by a non-competent operator, with the unhappy result of destroying the best prospects of a useful life.

Truro.

A RECORD OF THE DEATHS OCCURRING AMONGST 400 ADOLESCENTS BETWEEN JAN. 1ST, 1871, AND DEC. 31ST, 1895.

BY CLEMENT DUKES, M.D., B.S. LOND.,
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IN continuation of my three papers which appeared in THE LANCET of Feb. 15th, March 28th, and May 2nd, 1896, I am able, by the courtesy of the present head-master of Rugby, who is very keen on all questions relating to the health of the school, to place before the profession an account of our mortality during the twenty-five years commencing Jan. 1st, 1871, and terminating Dec. 31st, 1895. During this period the average number of boarders has been 403. The ages range between thirteen and nineteen years. There are eight months spent at school and four months passed at home each year. The deaths during term, therefore, ought to be at least twice the number of those occurring during the vacation, while if allowance be made for the aggregation of so many young people the proportion should be still greater.

1.—DEATHS ARISING DURING TERM.

1. *Pneumonia*.—A case occurred in March, 1875, and death took place between the fifth and seventh days, as usual, from failure of the heart's action.

2. *Pleurisy*.—A case appeared in June, 1877, and death took place at the end of the fifth week suddenly from syncope owing to pleuritic effusion. In those days it was a disputed point as to the value of early tapping. Had this case arisen a year or two later paracentesis would have taken place early before tension occurred and probably a life have been saved.

3. *Scarlet fever*.—A case occurred in March, 1881, and although it was a mild type of fever death took place on the fifth day. I believe that the mother and four children in the same family had previously died from scarlet fever.

4. *Diphtheria*.—A case arose in July, 1883, and death took place from exhaustion. The lad was a great naturalist, and had been searching for some of his treasures in the black mud of a ditch, of which his nails were full.

5. *Typhoid fever*.—This case occurred in December, 1889, and death arose from perforation on the twenty-fourth day. It originated from eating oysters which were sent as a present from home, and which had come from the mouth of the Liffey or of the Mersey.

6. *Cerebro-spinal meningitis*. — This case occurred in November, 1893, at the very onset of an attack of influenza, and death took place on the third day.

7. *Death while running*.—This took place in November, 1892, during a run of about three miles, from disintegration of the blood. The runs are now so safeguarded and classified according to age and physique as to be within the compass of all healthy boys, who can but be benefited by participating in them.

8. *Peritonitis*.—This case occurred suddenly, after a day or two's illness, in July, 1894, and arose in all probability

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from the rupture of a suppurating mesenteric gland; the patient had suffered from mesenteric disease some years previously.

II.—DEATHS ARISING DURING THE VACATION.

1. *Diphtheria.*—A case occurred while on a visit to the Isle of Wight in September, 1887.

2. *Scarlet fever.*—A case occurred in April, 1890, while studying French in Paris.

3. *Erysipelas of head and face.*—This case occurred in 1891 at home.

TABLE I.—*Showing the Diseases causing Death during Term and Vacation between Jan. 1st, 1871, and Dec. 31st, 1895.*

Diseases causing death.	During term.	During vacation.
Pneumonia	1	—
Pleurisy	1	—
Scarlet fever	1	1
Diphtheria	1	1
Typhoid fever	1	—
Cerebro-spinal meningitis	1	—
Erysipelas of head and face	—	1
While running	1	—
Peritonitis	1	—
Total number of deaths which occurred during term and vacation	8	3

TABLE II.—*The Mortality arising amongst 400 Adolescents during the Twenty-five Years commencing Jan. 1st, 1871, and terminating Dec. 31st, 1895.*

Deaths arising from all causes per annum.		Death-rate per cent. per annum.
Term = two-thirds of year	0·32	0·08
Vacation = one-third of year	0 12	0 03
Total for year =	0·44	0·11

In all the previous series of papers the records have related to the *boarders* at school only, as I have no knowledge of the *day scholars* except in so far as individual parents do me the honour to consult me. But in recording the deaths I could not feel it consistent with my duty under any pretext to omit a death in any part of the school, whether in term or vacation. The average number of boarders in the school has been 400, but when the day scholars are included the average is as nearly as possible 435. The two deaths, Nos. 7 and 8, occurred amongst day scholars, and although they were both under my care, yet in strict accuracy they should not be included in calculating the death-rate amongst 400, but amongst 435, which reduces it from 0·08 per cent. to 0·07 per cent. Further, this makes the deaths amongst the boarders at school exactly the same as amongst the boarders at home when the time is taken into consideration. Or, to put it in another form, during a period of twenty-five years, amongst 435 adolescents, 6 died while residing at school, and 5 while residing at home.

It will have been observed, in studying these records which I have had the honour and privilege of placing before the profession, that of recent years some of our *illnesses* have apparently increased, which should not be the case with our extended experience. But the increase is only apparent: it arises from an increase in *numbers* in the school; for whereas during the twenty-five years we have had an average of 435 all told, at the present moment there are 539 boys in the school.

What a privilege it will be for the physician who records the next twenty-five years of medical school work, for with early paracentesis for pleurisy, with certainly antitoxin for diphtheria and possibly antitoxins for pneumonia, scarlet fever, typhoid fever, cerebro-spinal meningitis, and erysipelas, he will scarcely require certificates of death to be placed at his disposal.

Rugby.

SOME REMARKS ON VAPOURS, SPRAYS, AND FUMES.

BY ROBERT LEE, M.D. CAMB., F.R.C.P. LOND.,
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WHEN the great benefits which have been obtained from the inhalation of chloroform, ether, and nitrous oxide are observed it must be admitted that the administration of agents in the form of vapour is a subject of interest and importance. The change of any substance from the fluid state to that of vapour is generally due to the action of heat, and this is also true when the substance is changed from the solid state to that of vapour. When such substances as opium or the leaves of various plants are converted into the form of vapour it is usually necessary to effect the change by the process of combustion—that is, by raising the temperature far above that which is necessary when the substance we are treating is in the fluid state and requires only to be raised to its boiling point—at least, not above it. It is proper, therefore, to distinguish clearly between vapours, sprays, and fumes, for sprays are only changes from the fluid state to one of very fine division of particles, without elevation of temperature; while fumes are the results of slow combustion, which effects not merely a change of condition of material, but a disintegration of components and often some chemical decomposition.

How little this subject is understood is proved by the last Pharmacopœia into which the vapores were introduced. Any criticism of these "vapores" is unnecessary, as their inutility and insignificance are generally recognised. Whenever the physician desires to administer any medicinal agent in the form of vapour he finds it difficult to determine without further experiments how he may best effect it. If he takes that class to which camphor, menthol, benzoic acid, and many other species belong he will have to consider whether they require to be dissolved in water or some more active solvent in order that he may obtain them in such form and strength that allow of their inhalation. If he dissolves one of them in some liquid which he can easily convert into vapour, the question will have to be decided to what extent the substance he has dissolved is affected by the vaporisation of the solvent liquid. In some cases he will find that the active substance is volatilised much below the boiling point of the liquid and in others very little if at all so. Although an oil such as that of eucalyptus floats on the surface of water it is not easy to volatilise it by boiling the water, while such a substance as thymol is volatilised with a rapidity far greater than that of the water which contains it.

These general remarks are made simply for the purpose of directing attention to the need that exists for far greater knowledge than is possessed at present, not of the therapeutic value of various agents, but the mode in which they should be treated in order to have them in such a form that they can be used for clinical purposes.

In regard to sprays the physician is in a better position, as there are various well-arranged instruments which enable him to convert fluids into the form of sprays by the simple action of atmospheric pressure and admixture.

When the question of fumes is considered the strange and vastly wide influence exerted by the smoking of tobacco, opium, and a few other vegetable substances cannot but be attentively regarded. On analysing what is meant by the term "smoking" it is seen that really combustion is promoted by the effort of inspiration and that thus are converted into the form of vapour the active properties of the vegetable substances that are employed. One cannot obtain the active property of opium by volatilisation in such a form that it can be inhaled in the same way that a volatile substance like menthol or camphor can be treated. Opium may be added to water or spirit, but if the solution is heated the liquid does not part with the opium and no effect is obtained by its inhalation. To convert opium into the form of vapour slow combustion must be used, and how this may best be done requires consideration. The same remark applies to many other active medicinal agents—notably datura and stramonium and cannabis indica. I am not dealing with the question of the therapeutic value of any of the substances, but with the best method of combustion. A simple principle has been applied by which this can be easily effected. By

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the action of a jet of air playing in a small tube the combustion of the leaves of plants or of such a substance as opium is promoted and vapour is given off which contains the active properties of the leaves or other parts of the plant which is being burnt. Under the name of the "Zephyron" Messrs. Maw, Son, and Thompson are introducing to the profession an apparatus which acts in the way described, and whether any benefits may be obtained from its use remains to be tested by clinical experiment. The chief value of the zephyron depends on the entire novelty in that a small elastic ball produces the jet of air by which combustion is effected, and there is no necessity to use the heat of a spirit lamp to obtain the force required. It may be well to observe that the inhalation of fumes obtained from smoking is not an easy matter, for these fumes are not as a rule inhaled into the lungs. There seems to be some advantage in administering certain medicinal agents by inhalation over that of introducing them into the system through the stomach by administering them in the solid or liquid form. It is unnecessary to criticise the great benefits obtained by the method of subcutaneous injection, and I will not venture to compare it with the inhalation of fumes beyond remarking that the latter is simpler and more easily effected. Those who have seen the zephyron are favourably impressed with its utility, as it enables the physician to administer fumes to those who are unable to smoke, and even for some who can do so it makes inhalation far easier. Where the leaves of plants are used, as in the preparation of powders or cigarettes for the relief of asthma, there does not seem to be much difficulty in obtaining their combustion by the addition of nitre. The saturation of paper with solutions containing the active properties of drugs has long been adopted in the manufacture of cigarettes, but the fumes given off by this method cannot well be inhaled as they are more or less irritating to the mucous membrane. There is one material which may be used instead of paper for treatment with solutions, and this is the fine wool obtained from peat. It is true that the leaves of many plants may be moistened with solutions, dried, and then burnt slowly. For example, if the leaves of stramonium are moistened with an aqueous extract or tincture of opium fumes are obtained containing the active properties both of stramonium and opium. The leaves of various species of mint yield fumes which can be inhaled without irritation, just as is the case with the pure leaves of tobacco.

In the Materia Medica of the Hindus[1] mention is made of "Dhumapâna or Inhalations." It is stated that "tapers or pastilles made of medicinal substances are set fire to and their fumes inhaled through a tube by the mouth or nose," and that "incenses or tapers composed of various medical substances are also burnt in rooms." It seems, indeed, that the inhalation of fumes is a method of treatment of ancient date, and it is reasonable to think that the practitioner might avail himself of it at the present time with all the assistance given by advance of knowledge. To enter into details, however, is not the intention of the above remarks, which can only be regarded as an introduction to the consideration of a subject of great therapeutic interest.

Gunterstone-road, W.

THE PRODROMAL ERUPTIONS OF SMALL-POX.

BY FRANK ROBINSON, M.D. VICT.,
RESIDENT MEDICAL OFFICER TO THE CITY HOSPITAL, PARK-HILL, LIVERPOOL.

As so much attention is directed to the subject of small-pox at the present moment, the following note on the rashes met with in the initial stages of the disease may prove of interest.

Initial rashes were present in 25 of 220 cases which passed through my hands in the Bradford Borough Small-pox Hospital in the winter of 1893–1894, forming about 11 per cent. of the total cases. These eruptions, which take the form of an erythema or of subcutaneous hæmorrhage, are said to appear on the day preceding or on the same day as the papules of the characteristic eruption. Though described as being of but short duration I found them still present as late as the sixth, seventh, and eighth days of illness, the erythematous form, curiously enough, proving the more persistent. In several cases both erythema and hæmorrhage were met with at the same time. The erythema resembled the eruptions of measles and scarlet fever and was present in 10 cases. The measly form was usually fairly copious in amount, the arms being the favourite site, less frequently the trunks and legs, while the face was but once the seat of the eruption. The scarlatinal variety was most frequently found on the abdomen. The most pronounced case presented two complete zones round the shoulder and pelvic girdles united down the flanks. These erythemata faded to a dull yellow after two or three days, and finally disappeared from the fourth to the ninth day of illness. Elevation of the eruption was never observed and thus a strong point of difference was presented from the eruption of measles and from certain toxic rashes characterised by infiltration into the skin. Any appreciable resemblance to erysipelas was not observed. Subcutaneous hæmorrhage occurred in 18 of the 25 cases, taking the form of numerous petechiæ confined to a comparatively small area of the skin and thus differing in distribution and form from the subcutaneous hæmorrhages of hæmorrhagic small-pox which are individually much more extensive and are generally distributed. The deep purple or black hue of the latter variety was never attained to. While the lower part of the abdomen and the inner aspect of the thighs were the areas most frequently selected hæmorrhage was also to be seen in various situations on the trunk and on the upper arms. It was never met with below the elbows or knees or on the face. The latest date at which petechiæ were still recognisable was the seventh day of illness, careful distinction being made between the initial hæmorrhage and that which may make its appearance later in the course of the illness. These initial rashes appeared to favour no particular age-period, being met with anywhere between the ages of seventeen and forty-eight years. A remarkable point was their relative incidence on the vaccinated and unvaccinated, 23 of the 25 cases having been primarily vaccinated. The proportion in percentage of the vaccinated to the unvaccinated among those showing these eruptions was thus 92 to 8. This was not due simply to the excess of primarily vaccinated cases in the hospital, for their proportion of the total cases was not more than 70 per cent. The occurrence in vaccinated cases being so notable it was natural to look for distinctly favourable results from the collective cases, and this expectation was fully justified. Apart from any consideration of this kind, however, where erythema was present there was a very distinct relation observed between the prodromal rash and the true eruption which materially influenced the progress of the case. The papular rash either did not develop at all on the erythematous areas or did so to a very scanty degree, and as these areas were usually extensive the cases were thus of a mild type. This relation was shown from the opposite point of view in a case where the prodromal eruption was scanty and the true eruption was elsewhere copious. The termination was, however, favourable as in all the erythematous cases. It was somewhat different when hæmorrhage was present. As the parts where they usually appeared were the groin and the lower part of the abdomen, where the characteristic papules were least frequently seen, no influence on the true eruption could thus be said to be exercised. Thus among these cases a severe type of the disease preponderated, but in no case did the illness terminate fatally.

[1] Udoy Chand Dutt, Calcutta, 1877, p. 20.

BIRKENHEAD MEDICAL SOCIETY.—The seventh and last monthly meeting of the session was held in the society's library on May 8th. Due notice having been given the two following resolutions were considered and carried, the first unanimously and the second with two dissentients: 1. That in the opinion of this meeting it is unprofessional for medical men to serve any medical aid society in which touting is carried on, in which there is no wage-limit, and where money is funded by the society at the expense of the medical staff. 2. That in the opinion of this meeting the members of this society should refuse professional recognition of "sixpenny doctors" whether by meeting them in consultation or otherwise. The mover of the second resolution gave the following definition of "the sixpenny doctor"—viz., a medical man who openly or otherwise lets the public know that he will give them advice and medicine for sixpence, and will visit them for one shilling; or any medical man who has in that way commenced his practice.

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A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

LEWISHAM INFIRMARY.

A CASE OF PREGNANCY COMPLICATED WITH A PAROVARIAN CYST SIMULATING EXTRA-UTERINE FŒTATION.

(Under the care of Dr. F. S. TOOGOOD, Medical Superintendent.)

THERE are many cases on record of the complication of pregnancy by ovarian cysts, and in numerous instances the removal of the cyst has not exercised an unfavourable result, and pregnancy has gone on to the full term. The chief interest in this case is the resemblance which it appeared to have before abdominal exploration to a case of extra-uterine fœtation.

A married woman aged twenty-six years, who had not previously been pregnant, was admitted to hospital on Feb. 13th last complaining of abdominal pain. She brought with her a letter from the obstetric physician of one of the large London hospitals stating that he considered her case to be one of extra-uterine fœtation. She regarded herself as being four months pregnant, but stated that there had been some slight discharge at each of the missed periods. There was constant abdominal pain which had increased in severity during the last month. On examination the left part of the lower abdomen was found to be occupied by a soft elastic tumour reaching almost to the level of the umbilicus, which yielded no sounds whatever when examined by the stethoscope and phonendoscope. Per vaginam a rounded elastic swelling occupied the whole of the pouch of Douglas, while the cervix, which was pushed forwards and upwards, was firm, and the os, whilst rather large, was not patulous. It could not be demonstrated that the tumour felt through the abdominal walls was not the pregnant uterus or that there was any connexion between the above tumour and that felt in the pouch of Douglas. The patient was, however, anxious for operation, and on the 20th the abdomen was opened in the middle line and there were found a pregnant uterus and a parovarian cyst about the size of a cocoanut which was incarcerated in the pelvis and was pushing up the lower segment of the uterus. The cyst was removed without difficulty, the pedicle being transfixed and tied with silk and dropped back into the abdomen. The recovery was uninterrupted; she did not abort. The deep stitches were removed on the ninth day and the superficial on the fourteenth day. She got up on the twenty-eighth day, and, having been supplied with a belt, left on the thirty-fifth day, announcing her intention of returning there to be confined. Mr. E. R. Badcock, assistant medical superintendent, supplied many practical hints and assisted at the operation.

MILDMAY MISSION HOSPITAL.

A CASE OF LAMINECTOMY FOR PARAPLEGIA DUE TO SPINAL CARIES.

(Under the care of Mr. E. PERCY PATON.)

THE operator in this case is to be congratulated on not giving the account of the operation and its results when the improved condition of the patient may have appeared to warrant his so doing. The profession is thus enabled to judge of the case as a whole and appreciate it in all its bearings. Many cases have been published in which laminectomy for paraplegia depending on pressure on the spinal cord as the result of caries of the vertebræ has been performed with results which appeared at the time satisfactory, and have, as in this case, fully justified the operation. What is needed, however, is a record of the condition of many of these when some months have elapsed. This case shows the amount of repair which may follow the operation, also a possible reason for failure to obtain a more perfect result, although the condition of the cord as revealed at the necropsy suggests that it may have been damaged beyond recovery before the operation. So many cases of paraplegia due to spinal caries recover after prolonged rest that there is a natural desire to postpone operation as long as possible.

A boy aged eight and a half years was admitted to the hospital on Sept. 13th, 1894, with the history that during the summer of that year he was noticed to have some weakness of the left leg, which caused him to limp a little; but after a short time this improved and he was able to walk about quite well until five weeks before admission, when weakness and stiffness, with contraction of both legs, developed and confined him to bed. On his admission he was found to have a marked angular curve in the lower dorsal region (about the seventh, eighth, and ninth spines), with, however, no signs of pain or tenderness and little, if any, rigidity of the spine. Both legs were drawn up so that the thighs almost touched the abdomen and the heels the thighs. There was almost complete palsy to sensation and motion of both legs as far up as the top of both thighs, with much rigidity of both hips and knees; the knee-jerks were very active and ankle clonus was marked. Micturition and defecation were normal. No signs of psoas abscess were to be found or of suppuration anywhere else, or any signs of further tuberculous disease. During the next week or two an attempt was made to straighten the legs by a light weight and then to keep them so with splints. This, however, it was found impossible to do, as the slightest pressure on the legs produced sores almost at once. On Nov. 1st it was noted that the paralysis to motion and sensation had increased and was now complete to about the level of the distribution of the eleventh dorsal nerve, and that all reflexes had disappeared in both legs, and micturition and defecation were now carried out quite unconsciously. Also, the temperature had begun to be very irregular, but no sign of suppuration could be found. The above condition continued for the next two months without much alteration except for the fact that reflexes returned in both legs, which still remained drawn up against the abdomen. The temperature, however, kept very irregular, and as the patient was obviously rapidly going down hill it was decided to explore the cord by laminectomy. On Jan. 14th, 1895, a vertical incision was made over the seventh, eighth, and ninth dorsal spines and the laminæ of these vertebræ were rapidly exposed, the wound being stuffed afterwards with sponges to stop the bleeding, as recommended by Horsley. This was found very effectual, for on removing the sponges in a few minutes the wound remained dry. Two laminæ were now removed without difficulty by means of a saw and bone forceps. This was made much more easy by the presence of the angular curve. The theca when first exposed did not pulsate, but after a minute or two it began to do so. A careful examination now showed the dura mater to be covered by a moderately thick layer of granulation tissue, which was carefully dissected away. An exploration was then made of the posterior surface of the vertebral bodies with a probe, which resulted in the escape of a small quantity of caseous material, with a little pus, and as no more of this could be found and the patient's condition did not seem to admit of prolonging the operation the wound was closed with deep and superficial sutures, a fine drainage-tube being laid in it next the dura mater and brought out at its upper and lower angles. The patient rallied from the operation well, and the wound healed without any trouble, being dressed for the first time at the end of a week, the stitches being taken out then and the tube partly removed. Subsequently to the operation the general condition materially improved, the temperature being distinctly less hectic, also his appetite and general cheerfulness greatly improved; but with regard to the most important symptoms—namely, the paralysis—there was never any more than a partial improvement in sensation and power of movement in the lower limbs and in his control over the functions of micturition and defecation. On April 22nd a considerable abscess was found in connexion with the left hip-joint, which was opened, the joint being found to be completely disorganised and most of the head of the bone gone. It was found necessary to drain the cavity, which contained a large quantity of caseous masses, thin pus, and small pieces of carious bone. From this time the patient gradually went downhill and died on Dec. 12th, 1895.

Necropsy.—A post-mortem examination was made on

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Dec. 14th, only the region involved in the laminectomy being examined. The wound was found to be soundly healed. The gap from which the laminæ had been removed was found much narrowed, and where no new bone had been laid down from the periosteum the space was filled in by very tough, resistant fibrous tissue, which formed a very efficient protection to the posterior aspect of the cord. On cutting through this scar there appeared to be some apparently recent clot around the theca, while on the right of it and pushing it over to the left was a mass of caseous material, which, on removing about three inches of the cord, was traced to a considerable caseous focus in the posterior part of the body of the vertebra just below the most prominent point of the angular curve. On the anterior aspect of the vertebral column was a similar caseous focus connected with the anterior part of the vertebral bodies. No pus had collected around either of these foci. The piece of cord removed was narrowed at the seat of pressure to a thickness rather smaller than that of an ordinary lead-pencil and its consistency was much tougher than usual, while the membranes around it were very much thickened and covered with thick tuberculous granulations. Unfortunately the piece of cord removed was spoilt for purposes of microscopic examination.

Remarks by Mr. PATON.—I have thought it worth while to record this case, though unsuccessful, as it is a complete one and the cause of failure to improve the paralysis was discovered at the post-mortem examination. This was no doubt due to the fact that the caseous material, which at the necropsy was found to have extended from the back of the vertebral bodies and in front of the cord to its lateral aspect, was already at the operation pressing on the cord in front, but had not extended far enough to be noticeable from its posterior aspect, at any rate, without a much more free removal of laminæ and more extensive interference with the cord itself than was done in this case. It seems difficult to see how a caseous collection in the bodies can be reached from the posterior aspect without damage to the cord itself, though Arbuthnot Lane seems to speak of it as comparatively easy. Chipault advises placing a hard cushion under the patient's shoulders and buttocks while his body lies prone and thus producing a general concavity of the spine backwards. He says that by this means the cord is rendered lax and can be hooked out of the way and so allow the posterior aspect of the vertebræ to be dealt with. Without having tried this device it would seem, however, that the nerve roots would prevent any considerable retraction of cord, even though it could be made sufficiently lax longitudinally. It would also seem that in a very much weakened column such as one has in a case of this kind, to put such an amount of strain on it as the proceeding above described entails cannot be done without considerable risk. The great mistake in the above case seems to me in not having made a sufficiently free opening into the spinal canal, though even had this been done it seems doubtful if much good could have resulted, and the general condition of the patient did not seem at the time to permit it. It is interesting to note at the end of eleven months how securely the posterior aspect of the vertebral canal was closed up with bone and tough fibrous tissue, and this even in a patient whose general condition was very unsatisfactory for sound repair.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—The last meeting of the session was held at the Miller Hospital on May 1st, Mr. Ernest Clarke, President, being in the chair. The President delivered his annual address, the subject of which was the Various Manifestations of Eye-strain upon the Eye itself and the Bearing this has upon Treatment. He showed that the correction of ametropia was the essential part of the treatment of chronic or recurrent diseases of the eye, such as blepharitis, many forms of conjunctivitis, scleritis, iritis, and even glaucoma. He exhibited tables showing that in 200 eyes where cataract was present, in 150—i.e., 75 per cent.—there was astigmatism, and he showed that by correcting the ametropia in incipient cataract the advance of the disease might be averted or retarded.—Mr. Thomas Moore and Mr. Webster gave a demonstration of the Roentgen Rays.—Messrs. Johnson and Johnson exhibited a very fine display of Surgical Dressings and Plasters.—Messrs. Maw, Son, and Thompson showed a large Variety of New Instruments and Surgical Appliances.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Observations and Experiments on Intestinal and Gastro-Intestinal Anastomosis.

AN ordinary meeting of this society was held on May 12th, the President, Dr. W. HOWSHIP DICKINSON, being in the chair.

Mr. WALTER EDMUNDS and Mr. C. A. BALLANCE communicated a paper entitled "Observations and Experiments on Intestinal and Gastro-Intestinal Anastomosis." The object of the experiments was to determine the best method of uniting either bowel to bowel or bowel to stomach. The experiments were made on dogs. 1. Intestinal anastomosis: There were three main methods of uniting two pieces of intestine—namely: (*a*) side-to-side; (*b*) end-to-end; and (*c*) end-to-side. Transverse sections of human small and large intestine and also of dog's intestine were examined microscopically and measured, and it was found that while the intestine of the dog was more muscular than that of man, the all-important submucous tissue was of about equal thickness in the small intestines of man and dog, and somewhat thicker in the large intestine of man. (*a*) Lateral anastomosis: Various methods were tried—namely, Senn's plates, Davis's plates, Littlewood's plates, Mayo Robson's bobbin, Murphy's button, and Halsted's method of suturing. In the case of Senn's plates, Mayo Robson's bobbin, and Halsted's operations the animals did well; with Davis's plates and Littlewood's plates the experiments were not carried to completion. With Murphy's button the dog died from leakage because the button, which had been specially made for use in dogs from actual measurement, was very slightly too large for the dog in question; this, therefore, did not tell much against the button, but it indicated a difficulty that might arise in operations on man. (*b*) End-to-end junction. Of these methods there were tried Paul's tube, Jessett's tubes, and pure suturing both with Czerny-Lembert sutures and by Maunsell's method. The five cases done by the Czerny-Lembert sutures and the two by Maunsell's operation were all successful. By the former method a circular ridge was formed round the interior of the bowel which acted as a diaphragm and contracted the lumen. This circular ridge was absent after Maunsell's operation, but a longitudinal ridge was present at the site of the longitudinal incision, which did no harm. (*c*) Implantation of one intestine into another vertically. The two cases in which this was done (both by pure suturing) were successful. The conclusions arrived at were—(1) for lateral anastomosis Halsted's operation was best: a needle should be threaded at each end of each suture, the needles then had only to be passed in one direction; (2) for end-to-end suturing the most perfect result was obtained by Maunsell's operation, but the conditions would not always allow of its performance; and (3) for certain cases implantation was indicated. There were three main conditions for which these operations were required—namely, artificial anus from any cause, gangrenous hernia, and malignant disease of intestine. The enterotome appeared to have fallen into disuse in the treatment of artificial anus and the extra-peritoneal operation was only applicable to certain cases; the intra-peritoneal operation must therefore be used for the majority. This could be performed either by an end-to-end junction or by implantation or by lateral openings after inverting and closing the open ends. The last was considered the easiest and safest proceeding, especially if the surgeon had not much experience in intestinal surgery; and of the methods of effecting it Halsted's operation was preferred to Senn's. For end-to-end anastomosis (which was the ideal operation) Maunsell's operation was preferred to all those in which recourse was had to mechanical aids, whether of decalcified bone or of metal. The treatment of intussusception, gangrenous hernia, and malignant disease of the bowel was discussed; in the last the new growth should, if possible, be excised at the primary operation. Whether or not an attempt at reunion or anastomosis should now be made depended mainly on whether there was any chronic obstruction or not; if there was any to speak of the reunion should be postponed, because the passage of pent-up

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fæces and the muscular action which this required were unfavourable to surgical repair. 2. Gastro-enterostomy: Operations were performed by pure suturing (Halsted's operation) and also by Paul's method with ivory rings. Both these methods were successful; their relative merits were discussed. 3. Physiological observations: (*a*) In lateral anastomosis the blind ends became shorter and probably would in time entirely disappear; the lateral opening gradually ceased to be lateral and tended to come more and more in the natural direction of the bowel. (*b*) In short-circuiting experiments the partially excluded portion, although not in any way occluded, became shorter and smaller. These short-circuiting experiments suggested a treatment for chronic volvulus; a lateral anastomosis would probably be more satisfactory than an artificial anus, and safer than total excision of the volvulus with reunion of the bowel. (*c*) In implantation experiments it made a difference whether the end of the upper bowel was implanted into the side of the lower or the reverse. In the former the blind end was small because the direction of its natural peristalsis was to expel its contents; in the latter case the cæcum was enlarged for the opposite reason. (*d*) In reversal experiments a length of intestine was completely turned round; the animals lived; the reversed portion diminished in length; there appeared to be some difficulty in the chyme entering the first part of the reversed portion; but the chyme once having entered it seemed to have passed along satisfactorily in the direction opposite to the original peristalsis. (*e*) Certain changes occurred in the mucous membrane in these experiments; above the seat of reunion the valvulæ conniventes disappeared for a time, possibly as the result of pressure. The paper was illustrated by numerous drawings.

The PRESIDENT observed that he had noticed the extraordinary healing powers of the intestine. In one case, probably of intussusception, a great length of bowel came away and the patient recovered. When a post-mortem examination was made some years later it was impossible to see which portion of the gut had separated.

Mr. GREIG SMITH (Bristol) said that he considered there had been no more valuable communication than the one before them made to the profession since Senn's work was first published. One important conclusion to which the writers had come was that it was best to avoid apparatus and he himself, from a different point of view, had arrived at the same conclusion. He based his opinion upon recent statistics which on this point were quite convincing. He considered the Halsted suture incomparably the best, as no infolding was necessary and it possessed great holding power. There was always a tendency for an anastomosis to contract or narrow, and no bobbin, plate, or button gave a sufficiently large opening, but by Halsted's method a very large opening could be obtained. He was convinced from a fairly large experience that resection of intestine for the closure of artificial anus was not now necessary. A sufficiently large external opening should be made through the skin muscles and fascia and then the peritoneum with its fatty layer should be left covering the bowel, which should be delivered through the wound with the handkerchief of unopened peritoneum attached to it. In this way the opening in the bowel could be closed without opening the peritoneum. For tumours of the intestine he preferred an operation of two stages, first delivering the tumour and fixing it out with a skewer and performing enterotomy and then in the second stage resecting the portion of intestine with the tumour. This procedure was troublesome to the surgeon, but had this peculiarity, that the patients all got well. Murphy's button was a marvel of ingenuity. It was said to produce what was euphemistically called pressure atrophy: this latter appeared to him to be very closely allied to gangrene. In two cases where Murphy's button was used he had seen alarming symptoms appear on the third or fourth day suggestive of gangrene of the bowel.

Mr. HARRISON CRIPPS, on the subject of bobbins and buttons as against fingers, repeated some experiences which he had related at the summer meeting of the British Medical Association. Of four fatal cases after the use of Murphy's button two died from causes unconnected with the operation, while the other two died from the button itself. In one the button has passed six inches below the junction and had ulcerated into the peritoneal cavity; in the other the button, which was still *in situ*, was probably too large, for it had caused gangrene of the bowel for an inch and a half on each side of it. He had found end-to-end approximation with Lembert's sutures the best. Of five cases four had recovered, and in the fatal one a double anastomosis had to be performed. He agreed with the last speaker that with apparatus it was impossible to make an opening sufficiently large to allow for subsequent contraction. In conclusion, he alluded to a successful case of gastro-jejunostomy by means of Murphy's button which had recently come under his notice. In using Lembert's sutures he applied them at a little more than one-eighth of an inch from the margin of the bowel, and this, he thought, prevented the infolding which had been illustrated.

Mr. LEONARD BIDWELL mentioned that a temporary fæcal fistula had occurred in each of three cases of Maunsell's operation which he had seen. He asked if Mr. Edmunds and Mr. Ballance had used a second row of sutures in the cases of Maunsell's operation done on dogs. In two cases of gastro-jejunostomy in which Mayo Robson's bobbin had been used there was after-obstruction due to the opposite wall of the jejunum occluding the lumen of the bobbin.

Mr. BRYANT remarked on the much greater thickness of the walls of the intestines in dogs; and a great deal of the ridge or diaphragm which was found after the Lembert suture was, he thought, due to this; one should be, therefore, very careful in applying these results to the human being. Unquestionably in some cases artificial appliances helped the surgeon very much. In one case he would have been unable to have completed a gastro-jejunostomy if he had not had a Murphy's button handy; but in that particular case on the fourteenth day something gave way and the patient died. At the necropsy it was found that the button had not come away and the junction was leaking at the upper edge.

Mr. EDMUNDS, in reply, said it was only because the end-to-end method of suture had proved so unsuccessful that other measures had been invented. The lateral anastomosis by Halsted's method was the best.

Mr. BALLANCE, in reply, said that they were agreed that the fingers were the best form of apparatus to use. In these cases the stitches were not placed far away from the ends of the bowel, and the same ridge occurred also in human intestine after the Lembert suture. They had also met with obstruction of the lumen of the bobbin from approximation of the side of the bowel.

MEDICAL SOCIETY OF LONDON.

General Meeting.—Election of Officers and Council.—The Connexion of Auto-toxis with Certain Common Forms of Insanity.

A GENERAL meeting of this society was held on May 11th, the President, Sir J. CRICHTON BROWNE, being in the chair.

The report of the council was read. It stated that 774 Fellows formed the membership, that the new laws had worked smoothly, and that the finance of the society was now fixed on a firm basis. The library committee reported that progress had been made in the cataloguing of the ancient books, and the house and finance committee stated that the property of the society was in thorough order and repair. A cordial tribute was paid to the energy and ability with which Mr. Hall, the resident librarian, had discharged his numerous duties during the year.

On the ballot being declared it was found that the following gentlemen had been elected to serve as officers and council during the ensuing year:—President: Reginald Harrison. Vice-Presidents: John C. Thorowgood, M.D., Charles B. Lockwood, Constantine Holman, M.D., and A. Pearce Gould. Treasurer: David H. Goodsall. Librarian: William Henry Allchin, M.D. Honorary Secretaries: George R. Turner and Robert Maguire, M.D. Honorary Secretary for Foreign Correspondence: Alban H. G. Doran. Council: John Anderson, M.D., C.I.E., Howard Barrett, William H. Battle, Frederick L. Benham, M.D., Robert L. Bowles, M.D., J. Mitchell Bruce, M.D., Henry H. Clutton, Sidney Coupland, M.D., Sir J. Crichton-Browne, M.D., F.R.S., Sir Dyce Duckworth, M.D., F. de Havilland Hall, M.D., Henry E. Juler, Norman Kerr, M.D., Jonathan F. C. H. Macready, Edward J. Nix, M.D., James W. J. Oswald, M.D., Heinrich Port, M.D., Amand Routh, M.D., Joseph White, and Arthur K. Willis.

At the ordinary meeting subsequently held a paper was

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read by Dr. ALLAN MCLANE HAMILTON of New York, Corresponding Fellow of the Society, on the Connexion of Auto-toxis with Certain Common Forms of Insanity. The following is an abstract of this interesting communication. Dr. Hamilton said that until quite recently the therapeutics of mental disease did not appear to have been seriously influenced by the important researches that had been made during the last decade as far as deranged metabolism was concerned. He had been impressed with the somatic origin of various psychoses, especially those first classified and defined by Kraft-Ebing as acquired and by others ascribed to certain epochs, and he had looked for some more direct and reasonable cause than those ordinarily alleged to exist, reaching the conclusion that in many instances the existence of defective oxidation would explain the clinical features of numerous insanities formerly roughly classified with regard to their mental characteristics as mania, melancholia, and dementia, or still further particularised by names which defined their periodicity or the crisis at which they appeared or the element of hereditary predisposition, although in a few exceptions—notably, hepatic and rheumatismal insanities—the somatic element had been recognised. His desire for more exact knowledge in regard to the pathology and etiology of such every-day disorders as acute mania or melancholy was stimulated by the experience common to most, that where psychic causes existed not only the mental but the physical disturbance was usually quite out of proportion to any cerebral shock or demand upon the brain. It seemed to him that there must be something beneath this, something which had been simply lighted up or induced by the preparatory condition into which perhaps hereditary influences entered to some extent or not at all. With this end in view he had made a series of investigations, the results of which had been based upon experiments on animals and clinical observations conducted in the hospitals and asylums with which he was connected and elsewhere. More than fifty cases of insanity had been observed, which included examples of acute and chronic melancholia and mania; simple delusional insanities, primal and terminal; dementias; paralytic dementias; periodic, puerperal, and traumatic insanities; and the alcoholic and drug psychoses. The variation of the urine and fæces were noted. The experiments were undertaken to determine first whether there was any specific or noso-toxicity of the urine of the insane, and if so its nature; next to discover how important and general was the theory of uric acid poisoning; and, again, whether mental disorders were produced and modified by an autotoxæmia, whether the offending substances were the leucomaines or the intrinsic products of putrescence in the intestines. With regard to the existence of noso-toxosis observations on six patients proved negative and in rabbits the results were neither constant nor characteristic. The resulting effect seemed to depend upon the increased specific gravity of the urine and on the evidences of intestinal disorders and malnutrition. The urine of the paretic was always exceedingly toxic which property was possessed by that of the periodic patient whose urine showed a large amount of indican, while in only one of the other cases of mania in which the specific gravity of the urine was high was any result obtained by the injection. The only interesting psychic manifestation in rabbits which had received the injection of urine from a tabetic patient was a curious condition which led him to believe that hallucinations of vision existed. In respect of the influence of uric acid poisoning he was convinced that it had not as much to do with the genesis of mental disease as has been claimed for it. At his request Dr. E. E. Smith of New York prepared a quantity of hypoxanthin and with this was conducted a series of experiments on rabbits and monkeys. In only one subject were any effects produced. This monkey within five minutes manifested excitement, became restless, its ears became exceedingly congested, and its reflexes were affected by the slightest tap. After a time the irritability was followed by a period of apathy, its pupils were dilated, and the pupillary reflex was lost. These effects passed off in about an hour. It would appear that the intestinal toxalbumins had more to do with the production of disturbances of the nervous system than the leucomaines, which, however, had an effect, though not a marked one. A study of his cases unquestionably bore out the assumption that disturbances of the gastro-intestinal tract were attended by bacterial necrosis and the introduction into the general circulation of certain very virulent toxic agents whose effects were expended mainly upon the nervous system. A sudden and rapid development of incoherence, with mal-assimilation, highly-coloured urine, and delusions that were unsystematised clearly suggested an inquiry into the condition of the organs of digestion, and the first step should be a complete examination of the urine and fæces. It would appear that the ratio of the sulphates between themselves and the urea and the presence of indican in considerable amount were indications of intestinal putrefaction, which no doubt not only influenced the course of various insanities, but that a large increase in the combined sulphates had much to do with the genesis of various psychoses. In his opinion the presence of indican in the urine of the insane had the most significance, for in nearly all the cases that were not simply evolutional it had been discovered in excessive quantities in connexion with the development or as a feature of an exacerbation of an existing mental disorder. An excessive amount might be taken to mean any amount that could be detected in the urine by Jaffe's test. In melancholia the amount of indican depended upon whether the disease was of the stuporous or agitated variety, the quantity not being nearly so great in the former. In such cases the blood corpuscles and hæmoglobin seemed to undergo a decided diminution, which had been observed in other conditions in which anæmia existed in association with the increase in the amount of the combined sulphates and the presence of large quantities of indigo blue. The variations in the hæmoglobin and red corpuscles were closely associated with the absorption of toxic substances, the extent of which was announced by the increase of the combined sulphates, while the physical appearances were those of malnutrition. By far the most suggestive cases in which auto-toxis from intestinal disorder played a part were those of acute excitement, especially where there was rapidly developing incoherence and confusion. The more sudden and active the manifestations when unsystematic delusions or hallucinations were expressed the more positive were the indications of auto-toxis. He referred to the case of a woman aged thirty-seven who underwent an operation for the removal of a uterine fibroid, on the day following which she became restless and her temperature rose to 103° F. She had signs of gastro-intestinal disturbance and developed delusions and terrifying hallucinations of a persecutory nature, with broken and uneasy sleep. Her urine had a high specific gravity (1025); there was no albumin or sugar. The intestinal disturbance continued and was very general. Her incoherence almost amounted to delirium and she was greatly excited and restless. The urine showed a moderately large amount of indican with a lowered ratio of pre-formed and combined sulphates, and the urea was reduced to 11·81 grammes in the twenty-four hours. The administration of naphthaline, preceded by calomel and soda, determined a marked improvement in the mental symptoms, and the urine and stools returned to normal. In another case, that of a young married woman, examinations of the urine and excreta showed a very decided disturbance of gastric and intestinal digestion, and her general symptoms kept pace with the variations in these processes. The regulation of the diet, excluding nitrogenous substances, and thorough intestinal disinfection, together with the administration at regular intervals of calomel purges and a preparation of the red marrow of the small bones of the calf, brought about an almost immediately good result. Undoubtedly many puerperal insanities, especially those of the maniacal variety, were due to fæcal accumulation. Alcoholic insanities as well as other forms, whether acute or chronic variations prevailed, must, he was convinced, be studied with regard to the condition of the intestines. The insanity developing after very acute diseases, especially influenza, was probably primarily dependent upon the intestinal congestion and derangement of the mucous membrane, which was a part of the general disorder elsewhere, though in typhoid fever, where specific intestinal regions were attacked, there was apparently no undue amount of indican in the urine. The practical management of these cases not only included the provision of an absolutely suitable diet, but the use of antiseptics and mechanical means for the purpose of cleansing the gastric tract. It had been shown that the lower bowel was usually the seat of infection: hence the necessity of thoroughly washing out from as high a point as possible, using a long rectal tube. After trying a variety of intestinal antiseptics he had arrived at the conclusion that there was no agent which approached salicylate of soda. In insanity of a toxic nature there was considerable destruction of hæmoglobin and a reduction in the number of red corpuscles. He had had the

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best results with a combination which was a rapid producer of nuclein, consisting of a mixture of a glycerine of the red marrow of small bones with bullock's blood. He formulated the following conclusions: (1) Urines rich in indican contained very little or no preformed sulphuric acid and were toxic; (2) when the sulphate ratio was materially changed it probably indicated auto-toxis in connexion with an increase in the amount of combined or ethereal sulphates; (3) such indications were generally found with acute insanities in which rapidly developing symptoms occurred; (4) fugaceous and changing illusions and hallucinations, unsystematised delusion, confusion, and verbigeration in connexion with insomnia, pallor, intestinal indigestion, constipation, and rapid exhaustion were due to auto-toxis; (5) paranoic states, or those in which concepts were the features, chronic stuporous conditions, and certain forms of dementia had little to do with the formation of intestinal products of putrefaction; (6) various post-febrile, traumatic, alcoholic, or drug insanities were those in which auto-toxis was most constant; (7) the variations in the excretion of combined sulphates kept pace with the changes in the progress of an established insanity, epileptiform attacks being directly connected with putrefactive processes; and (8) the most successful treatment consisted in lavage, intestinal douches, gastric and intestinal antisepsis by means of hydrochloric acid, borax, salicylate of soda, charcoal, guaiacol, or naphthalin in small and repeated doses, and the administration of a combination of the red marrow from the small bones, blood, and glycerine.

The PRESIDENT said that he welcomed Dr. Hamilton, in the name of the society, as a distinguished representative of American medical science, and he referred to the numerous and valuable contributions which he had made on the subject of mental diseases. His able, suggestive, and ingenious paper opened up much new ground, although most of it was of a speculative nature. In 1880 Lauder Brunton had pointed out the resemblance between the languor and dizziness of indigestion and the symptoms of curari poisoning, and had suggested that the symptoms of indigestion might be due to the absorption of peptones or of ptomaines from the intestine. They had only to suppose an excessive absorption of these substances or an imperfect destruction of them by the liver and they might arrive at the realisation of a condition tantamount to delirium with stupor or with simple dementia. These substances were present in great excess in intestinal catarrh and accounted for the melancholia present in that condition. The symptoms of these disorders yielded readily to suitable treatment, such as that in vogue at Marienbad or Carlsbad. It had been shown that an enormous quantity of fungi flourished in fæcal matter and that many varieties of fungi were only found in the fæces of certain animals. There were seventy varieties which were peculiar to the horse, thirty to the dog, twenty-eight to birds, and twenty-one to man. Any change in the quality of the fæces or of their environment might lead to the formation of an excess of poisonous products by certain of these fungi. Mosso had shown that a poison developed in nervous matter after death, and it was a question whether the brain could not form poison in itself during life. The epileptiform seizures seen in the later stages of general paralysis might be due to incipient decomposition of albuminous substances, and so an auto-toxis might be produced. Added to this it was well known that washing out the lower bowel alleviated these seizures. It appeared to him that the subject at present was one more for the laboratory than the wards, but the contents of the paper were worthy of the most careful study.

Dr. A. HAIG directed his remarks to the connexion which he believed to exist between the amount of uric acid in the urine and depression or melancholia. From his point of view the excess of uric acid in the blood caused the intestinal putrefaction, which he thus regarded as a secondary and not a primary factor. Calomel was an efficient agent in clearing the blood of uric acid and salicylate of soda did the same. Patients could be cured by altering the diet alone without recourse being had to intestinal antiseptics. The high blood pressure and the scanty urine present in these cases were both owing to the presence of uric acid in the blood.

Dr. W. L. ANDRIEZEN said that he agreed both clinically and pathologically with the conclusions of Dr. Hamilton. There was no doubt that such a common matter as a delay of the action of the bowels would produce headache, dulness, and depression of spirits in many people otherwise normal. He found this very difficult to understand on Dr. Haig's hypothesis; it was due rather to products directly absorbed from the alimentary canal. Leaving the lower bowel out of consideration and taking the stomach itself a great amount of poison might be produced in that viscus in cases of gastric catarrh. In certain cases of hysteria with dilated stomach, if the stomach were washed out and naphthalin in small doses were given a considerable and rapid improvement would usually follow. In hypochondriacal melancholia similar changes occurred, though longer drawn out. Those cases as a rule did not show hereditary taint, and that, so far as it went, was in favour of a local causation. In anæmia and chlorosis also depression occurred. He could not agree with Dr. Hamilton that all the subacute confusional manias of rapid development were of auto-toxic origin. He had examined instances of the insanities of alcoholism, general paralysis, and epilepsy in which from time to time mild attacks of subacute delirium occurred, accompanied by a slight rise of temperature and a furred tongue. In these cases a considerable excess of indican would be found in the urine at this particular stage. In such instances some might think that the primary cause of the transient disturbance was in the brain, and that the intestinal disturbance was a secondary result. He did not agree with that because of the immediate good result which followed the use of intestinal antiseptics. He considered that sufficient attention had not been paid to a group of insanities like those associated with myxœdema and acromegaly. In the insanity of myxœdema it had been found that treatment by thyroid extract caused a great improvement in the mental as well as in the bodily condition, and the extract appeared to exert a trophic effect upon the red corpuscles. The insanity of acromegaly was associated with mental slowness and depression with subnormal temperature, and in these the administration of pituitary extract did good. The question of the formation of alkaloids in the central nervous system must not be lost sight of; the cerebral lymphatic system was exceedingly complex, and there were marked perivascular changes in many nervous diseases, such as in alcoholic insanity; in these it was probable that the nerve cells were poisoned by retained lymph.

Dr. C. J. HARE said that he could not help being struck by the amount of knowledge which the ancients possessed, and the terms melancholia and hypochondriasis bore witness to the fact that they were alive to the idea of auto-toxis. It was certain that self-poisoning acted as a cause of many diseases other than mental ones.

Dr. THEODORE WILLIAMS said that if auto-toxis from intestinal accumulation were a common cause of insanity then the French nation should suffer much more than the English, for they were notoriously careless as to alvine evacuation.

Dr. DAVID BOWER said that he thought that intestinal trouble was more frequently the result of nervous disease than the cause. He regarded the suggestions for treatment as valuable. In the matter of intestinal antisepsis he thought it more rational to treat the matter as one of drains, in which one would remove the cause rather than conceal the smells.

Dr. HAMILTON, in reply, said he regarded his paper as a suggestive one. He believed that even gout had been given too much credit for its share in the causation of insanity. He believed also that in the majority of cases of acute mania some explanation might be found in the intestines if it were sought for.

CLINICAL SOCIETY OF LONDON.

Case of Malingering in a Boy aged Eleven.—Three Cases of Laryngectomy.—Case Illustrating a Condition of Partial Congenital Dislocation of both Hip-joints Forwards and Upwards.—Fracture of the Neck of the Femur in a Young Subject resulting from Dry Caries of the Bone.—Case of Division and Immediate Suture of the Left Vagus.

AN ordinary meeting of this society was held on May 8th, the President, Dr. BUZZARD, being in the chair.

Mr. LEOPOLD HUDSON related a case of Malingering in a Boy aged Eleven. He showed a specimen of urine coloured to imitate hæmaturia which was brought to the Hospital for Sick Children, Great Ormond street, on Feb. 17th, 1896, together with the boy, who was said to have passed it. The patient had been sent home from a boarding school on

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account of hæmaturia. He remained at home for seven weeks, passing normal urine, but for the week previous to examination he was said to have passed blood in his urine three times daily. Examination of the urine showed absence of blood and albumin, it was acid and of normal specific gravity. Dr. Archibald Garrod made a spectroscopic examination, which revealed absence of the hæmoglobin band. Urine drawn off by catheter presented normal properties. Upon being pressed the boy confessed that he had added red sweets (jargonelle pear drops) to his urine. He had done this in order to be sent home from school, where he said he had been made to clean steps in cold weather without shoes or stockings. His story, however, was found to be false, for later his aunt brought to the hospital a piece of rag dyed with Turkey red dye which had evidently been used to produce the colouration.

Dr. E. WARD (Leeds) described three cases of Laryngectomy. He said that the main feature of the operation, which he had now practised in three cases, was the complete shutting off of the wound from the mucous canals which opened into it. This method in favourable cases resulted in union by first intention throughout the whole extent of the wound. No preliminary tracheotomy was required where it had not already been rendered necessary by urgent dyspnœa. The first part of the operation was carried out on the ordinary lines, the larynx being in preference separated by division of the crico-tracheal membrane and dissection from below upwards, enucleation of the upper part being thus facilitated. In cases of intrinsic disease the opening into the pharynx was not more than a small vertical slit. After the larynx had been removed a large tube was passed from the mouth into the stomach, and the cut edges of the pharynx were carefully brought together over it by closely-set sutures of fine silk, the pharyngeal wound being entirely closed. Then two half-discs of skin were cut out of the edge of the flaps opposite to the tracheal aperture, which was closely stitched to the circular opening thus made, and the skin wound was closed by suture throughout. Drainage-tubes were inserted at each end of the cross incision at the upper part. By this method of closing the wound the trachea and pharynx were completely shut out from it and the trachea was so held open that no tracheotomy tube was required. The œsophageal tube was removed or left *in situ* for feeding, according to the requirements of the case and the difficulty with which it was passed. Case 1.—A man aged sixty-four came with extensive disease of the larynx causing great suffering, dyspnœa, &c., and he was operated on on June 26th, 1893. He had remained well up to the present time and had never worn a tracheotomy tube. The growth proved to be a squamous-celled epithelioma. He was able to speak in a whisper. Case 2.—A female child aged two was admitted on June 2nd, 1894, with urgent dyspnœa for which tracheotomy was at once performed with great relief. The tube was removed on July 3rd, but had to be replaced on the 10th. In October thyrotomy was performed and the larynx was found stuffed with a soft papillomatous growth destroying all its anatomical features. This was scraped and dissected out. She remained in a very critical state for some time, though in November she had much improved. On Jan. 9th, 1895, she was readmitted extremely ill, the growth fungating so luxuriantly that it was sprouting through the tube and blocking it. He performed laryngectomy on Jan. 25th. There was some difficulty in closing the upper part of the pharyngeal wound owing to the smallness of the parts and their deep recession under the chin. The child was quite intractable and refused food, and she rejected what food was introduced by means of the œsophageal tube. She died in a state of collapse sixty hours after the operation. Post mortem the operation wound was found to be in an entirely satisfactory condition and the larynx was again crammed with papilloma. Case 3.—A man aged forty-two was admitted on Aug. 8th, 1895, with dyspnœa and dysphagia of five months' standing. He was extremely ill, with orthopnœa and marked stridor and lividity. There was much swelling of the ventricular bands, with general tumefaction of the whole of the parts, including the epiglottis, the vocal cords being quite hidden. No growth or ulceration could be seen anywhere. On Jan. 21st tracheotomy had to be performed. On Sept. 1st he was unable to breathe, the tracheotomy opening being plugged. The diagnosis was confirmed by a preliminary thyrotomy and Dr. Ward then performed laryngectomy. On the 17th it became evident that one or two of the sutures at the lower part of the pharynx had given way, but by the 21st the regurgitation of food had ceased. The patient's recovery was subsequently uneventful. Dr. Ward claimed for this operation (1) that it would reduce the mortality of the operation itself; (2) that it would considerably shorten the period of healing and convalescence; (3) that it would add immeasurably to the comfort of patients both during convalescence and after recovery; and (4) that it would justify attempts at radical treatment in some cases in which this was at present considered inadmissible.—Dr. FELIX SEMON said he did not consider laryngectomy an unjustifiable operation, but the whole case should be fairly put before the patient and the decision left with him. He protested strongly against the performance of laryngectomy for papilloma of the larynx, an affection which would yield to milder methods of treatment—namely, prophylactic tracheotomy with removal of exuberant papillomatous growth by curette. This would have enabled the child to live towards adolescence. When under partial chloroform narcosis and local cocainisation the growths could be removed by the intra-laryngeal route.—Mr. ARBUTHNOT LANE said that with regard to the first case he had adopted a similar procedure and found it useful—namely, turning the trachea forwards to an opening in the skin and shutting off the pharynx. In a case of papilloma of the larynx in a child aged seven he split the larynx up and removed the warts. There was an exuberant recurrence soon afterwards, and he then gave arsenic internally and pressed it. When he had got up to seven minims of Fowler's solution three times daily the growths withered and the patient got well very rapidly.—Dr. WARD, in reply, said that he was disinclined to attempt complete laryngectomy again in so young a child. He knew of three cases of papilloma of the larynx where tracheotomy with curetting and other local measures had been performed, and at the present time the larynx in each was absolutely blocked up with growth.

Mr. W. ARBUTHNOT LANE related a case illustrating a condition of Partial Congenital Dislocation of Both Hip-joints Forwards and Upwards. He showed a child on whom he had operated successfully for this deformity, with which he was familiar in a much slighter degree and often as a unilateral condition, but he had never before seen it in the same marked degree as presented by this patient. The deformity consisted in a varying degree of outward rotation of the legs, due apparently to a slight forward and upward displacement of the hip-joint from its normal position. In this case when the child lay on his back the feet rested by their outer margins on the floor. On attempting to rotate the thighs inwards it was only possible to do so till the inner margins of the feet became parallel to one another. The same was true of the child in the erect posture. During walking the legs were flung outwards and only very slightly forwards, so that progress was very slow and ungainly. Mr. Lane divided each femur at the junction of the middle and lower third, and after rotating the lower fragment inwards on the upper through an angle of 99° or more he secured them together with wire. The result, as exhibited by the patient, both as regarded locomotion and appearance, was very good. Mr. Lane pointed out that this partial displacement of the acetabulum, though produced during intra-uterine life, differed clinically from the cases of congenital displacement of the hip upwards and forwards where the head of the femur articulated with a new acetabular cavity, the old one losing its form rapidly. He ascribed the cause in both conditions to pressure, in one case resulting in a displacement of the head of the femur, in the other to a displacement of the hip-joint to a slight degree.

Mr. RAYMOND JOHNSON described a case of Fracture of the Neck of the Femur in a young subject resulting from dry caries of the bone. The patient, a boy aged seventeen, fell whilst skating, and presented all the signs of a fracture of the neck of the left femur. It was noticeable that during several weeks before the accident the boy had limped slightly and that his younger sister was the subject of early hip-joint disease. After a period of nearly four months' fixation there was no evidence of repair. Operation was therefore undertaken with the object of either pegging the fracture or excising the separated head according to circumstances. After opening the upper and posterior part of the capsule a transverse fracture through the middle of the neck of the bone was displayed, and as the bone showed evidence of somewhat extensive superficial caries the head of the femur was removed. Two and a half years after the operation the patient was walking fairly

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satisfactorily; the shortening of the limb amounted to two and a half inches. After describing the naked-eye and microscopic appearances of the bone it was concluded that these were antecedent to and not the result of the fracture, and that they were of the nature of dry tuberculous caries. The chief interest of the case lay in the fact that such a degree of bone destruction should occur with so little impairment of function that the boy was able to skate without discomfort although the neck of his left femur was extensively carious. It was insisted that if in a young subject after an injury to the hip, and the symptoms suggested intracapsular fracture of the neck of the femur, the possibility of pre-existing pathological changes in the bone must carefully be borne in mind, even though the clinical evidence of such might be very imperfect.

Mr. MAKINS brought forward a case of Removal of a Secondary Epitheliomatous Tumour from the Neck, in which operation the left vagus nerve was divided just above the centre of its cervical portion and immediately sutured, with no obvious results either immediate or remote beyond the paralysis of the muscles supplied by the recurrent laryngeal branch. With regard to the laryngeal paralysis, the quality of the voice rapidly improved, and two months later the following report was made by Dr. Semon. The left vocal cord stood quite fixed near the middle line and the right joined it in phonation and the voice was almost normal, occasionally slightly hoarse and a little high-pitched. Apparently, after suture of the nerve the adductor fibres had partially recovered but not the abductor. After the partial recovery the adductor fibres had on phonation moved the vocal cord into the phonatory position, and in this position a gradual paralytic contraction had taken place, fixing the cord where it was now seen. It was allowed that the functional activity of the vagus in this case might have been lowered by continuous pressure by the tumour, but it was claimed that the case supported the opinion lately expressed by Boswell Park as to the comparative safety of dividing one vagus if necessary, and also offered some evidence as to the possible recovery of function if immediate suture were performed.—Dr. FELIX SEMON said that the partial recovery of function which had occurred was interesting. In cases in which paralysis of the recurrent laryngeal nerve supervened the abductor fibres suffered first and the present case acted as a kind of corollary to this, showing, as it did, that after complete division of the nerve the adductors recovered first. He referred to the case of a singer who acquired syphilis and a tumour formed in the neck which pressed upon the recurrent laryngeal nerve, inducing complete paralysis. Under appropriate treatment the adductors recovered, but the abductors remained paralysed. The cords at first assumed a cadaveric position, but later, owing to contracture of the unopposed adductor muscles, the affected cord became fixed in the middle line.

OBSTETRICAL SOCIETY OF LONDON.

Adjourned Discussion on Deciduoma Malignum.—Exhibition of Specimens.

AN ordinary meeting of this society was held on May 6th, Dr. CHAMPNEYS, President, being in the chair.

Dr. KANTHACK, at the request of the President, resumed the discussion. In all essential points he agreed with Dr. Eden's criticism. It was necessary to approach a question like this from the point of view not of the specialist but of the general pathologist. It was evident that the "deciduoma" is a malignant tumour. All are agreed upon that point; but some traced its origin to decidual cells, others to syncytial masses, and at least one other authority even to the connective tissue of the chorionic villi. On analysing the published accounts it would be found that, according to their nature, these deciduomas were either sarcomas, in which case they were said to have developed from the decidual cells, or carcinomas owing their origin to the syncytium. It was evident, then, that "deciduoma," apart from its hybrid nature, was a bad term, because it was not inclusive. He wished to suggest two other names to cover the carcinomas—viz., "syncytioma" or "trophoblastoma." He himself firmly believed that the deciduoma was a typical sarcoma, characterised by features common to many forms of sarcoma. It was certain that most of the deciduomas described or shown were sarcomas. He agreed with Dr. Eden that Dr. Whitridge Williams's specimen was an undoubted sarcoma and certainly not a carcinoma. Professor Spencer had described his case as a deciduoma consisting chiefly of syncytial masses, and he had laid great stress on the growth in the lungs. The latter was secondary to the uterine growth and certainly a sarcoma, and not even an extraordinary sarcoma. The uterine growths were curious, but presented nothing incompatible with sarcomas met with in other regions of the body. Mr. Rutherford Morison's case no one could consider anything else than a sarcoma, containing in certain situations large plasmodial cells (syncytial masses). Dr. Hebb's specimen, also, was acknowledged to be a sarcoma, the secondary growths in the lungs showing so-called syncytial masses. The plasmodial syncytial masses are said to be characterised by these three points: (*a*) absence of cell outline; (*b*) deeply staining nuclei; and (*c*) vacuolation. Now he (Dr. Kanthack) maintained that similar plasmodial masses formed by cell fusion occurred in many rapidly-growing sarcomas, and that it was illegitimate to argue from morphological analogy that these plasmodial masses are derived from syncytium. Some writers had described their specimens as sarcoma developed from decidual cells. The latter were connective tissue cells changed under the unknown proliferative stimulus of pregnancy. As Dr. Eden had well said, the decidual cell was not characteristic of pregnancy. It was necessary before calling a large-celled sarcoma a deciduoma that (1) pregnancy must be rigorously proved to have existed (this condition had remained unfulfilled in many cases); and (2) the pregnancy must have existed before the sarcoma appeared.

Dr. CLARENCE WEBSTER (Edinburgh), having expressed his pleasure at being able to attend the meeting, said that as he had seen no specimens of the so-called deciduoma malignum save those shown by Mr. Rutherford Morison and Dr. Spencer, he felt justified in limiting his remarks to certain points which he had noticed in his perusal of various published cases, referring in particular to some embryological considerations in which he was particularly interested. Like many others in this country he had been much surprised at the appearance of this new term. That the disease was of a malignant nature seemed evident; apart from the novelty of the name he did not think there was anything in the clinical symptoms which had not been before recognised in cases of primary malignant disease of the uterus. Nor was the connexion of malignancy with pregnancy or the puerperium anything unknown. The startling element in the new disease seemed to him to be in the pathology and etiology of the condition or rather in the discordant views expressed by writers. Thus the following statements are made as to the nature of the new growths—namely, that it is sarcomatous, that it is carcinomatous, and that it is made up of both sarcomatous and carcinomatous tissue. As to the tissue of origin of the new growth the following are mentioned: (1) maternal: epithelial elements of mucosa, connective tissue elements of mucosa, and muscle of uterine wall; (2) fœtal: epiblastic elements of villi, mesoblastic elements of villi, and combined epiblastic and mesoblastic elements of villi; and (3) maternal and fœtal elements combined. Taking together all the cases which have been published from the microscopical appearances described three distinct types are to be made out: (1) in some the tumour and metastases are composed of cells sarcomatous or carcinomatous in shape; (2) others are composed of cells as in No. 1 along with masses of plasmodial tissue like the syncytium found normally in connexion with the placenta; and (3) others are made up of the above constituents with the addition of villous structures exactly resembling the villi of the placenta as they are found normally or in the condition known as vesicular mole. The nature of the syncytium of pregnancy has been long discussed. Some state it to be formed from the epithelium of the uterine mucosa; others that it is a fœtal structure epiblastic in nature—the outermost layer, in fact, of the early ovum. The fœtal origin cannot now be denied. It has been clearly pointed out in different mammals, especially by Van Beneden and Hubrecht. The maternal origin of the syncytium was advocated in the days when there was no such careful technique in microtomy as is found at the present day. If it can be established that the syncytium found in connexion with these malignant growths is the same as that of pregnancy, and if it also be found in metastatic growths, it must be admitted that whatever be the origin of the other cells in the tumour the syncytial part is due to the malignant development of fœtal epiblast, parasitic on the uterine mucosa resulting from the product

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of conception. However, another question is to be settled before such a conclusion is to be formed—viz., to what extent does plasmodial formation take place in connexion with the growth of sarcomata entirely unconnected with the influence of pregnancy? Dr. Kanthack states that this change is fairly common in sarcomata of different tissues of the body. This is an important point to establish in order to discredit a belief in the development of these tumours in the uterus from the syncytium of pregnancy.

Dr. W. E. FOTHERGILL (Manchester) said that most of the points in the pathology and literature of the subject on which he had any definite opinion had been referred to by Dr. Kanthack and Dr. Webster, with whom he completely agreed. He would like, however, to put in a broad and simple way the points in question. Of the twenty-eight or twenty-nine writers with whose work he was acquainted few agreed in opinion and still fewer used the same nomenclature. Some of them did not make it clear what they meant by cancer and sarcoma, and others did not even make any definite distinction between mother and fœtus. There are doubtless four tissues with which it is logically possible that the growths in question can arise—viz., from connective and epithelial tissue of the maternal decidua and from the epithelial and connective tissue of the chorion. Now malignant new growths arising from the decidual cells (connective tissue) are sarcomata and those arising from decidual epithelium are carcinomata (or epitheliomata or adenomata, as the case may be). Whether caused by pregnancy or any other circumstance most of the growths described are one or other of these or a mixture of both. There is no excuse for applying a new name to these, and the only result of their publication should be to attract attention to pregnancy as a factor somewhat overlooked in the causation of malignant change in the uterus. But if it can be proved that fœtal epithelium or epiblast can live and grow within the maternal tissues we doubtless have to do with a new pathological entity. Marchand raises hopes of a simplification when he says that all the forms recently described and variously named are derived from epithelium, but in another place plunges again into confusion by dividing this epithelium into two kinds, syncytium and the epiblast of the chorion. One observer only, Gottschalk, has stated that the fœtal connective tissue is concerned in the growths under discussion. The question at issue appears to be, Can fœtal epiblast, call it syncytium or what you will, form new growths in the uterus and produce metastatic growths elsewhere? At present there is no proof that this can occur. When it is found the new "chorionic carcinoma" will be welcomed, but not before. When it is recognised it certainly will not be under the deceptive and unnecessary misnomer "deciduoma malignum."

After a few remarks from Dr. LEWERS, Mr. BLAND SUTTON stated that his own views of this question were simple. He was of opinion that a deciduoma is a sarcoma arising in decidual tissue. Concerning other varieties supposed to originate in chorionic villi he preferred to maintain an attitude of active scepticism. Their occurrence was possible, but their existence had not as yet been satisfactorily demonstrated.

Mr. ALBAN DORAN maintained that Mr. Rutherford Morison's case was clearly an instance of the disease which the Germans term "deciduoma malignum," whatever the correct interpretation of that malady might be. Certain authorities seem assured that there was a true deciduoma malignum, but they had not calculated the chance of coincidence of simple sarcoma which occurred in young women with gestation. Yet Apfelstedt and Aschoff recently found vesicular mole tissue forming a secondary deposit in the labium three months after the expulsion of the mole from the uterus. Decidual tissue was hardly more complicated, its diffusion by metastasis was therefore conceivable. There had, on the other hand, been too much eagerness to make out decidual tissue in primary and secondary deposits. Thus, in the *Centralblatt für Gynäkologie* of May 2nd last two cases of deciduoma were reported. The patients were of the ages of thirty-eight and forty-two years respectively. Epithelioma was far more probable in both instances. The first case was described as epithelial cancer over twenty years ago, so that to re-classify it as a deciduoma was hardly scientific. In the second the uterus was removed nearly two years after the expulsion of a vesicular mole and there were no secondary deposits. The society could not admit that the existence of deciduoma malignum as distinct from sarcoma stimulated by gestation had been proved.

Dr. SPENCER thought that whether the disease belonged to the sarcomata or the carcinomata was a matter of slight importance; so also was the name by which it was designated. The really important question was whether they had to deal with an ordinary malignant growth in the uterus or whether they had to do with a malignant growth which developed from the products of conception (fœtal or maternal). He thought all the facts were in favour of this latter view.

Dr. EDEN said he was very glad to find that Dr. Kanthack and Dr. Webster shared the doubt he had expressed as to the identity of the plasmodial masses found in cases of deciduoma malignum with the placental syncytium. The question of identity depended upon one point—viz., whether the placental syncytium possessed any specific characters by which it could be distinguished from masses of nucleated protoplasm derived from different sources. He believed that it did not possess any such characters, and considered, therefore, that the plasmodial masses found in these growths could not be identified as syncytium merely from their microscopical appearances. If experience should prove that malignant growths consisting of proliferating placental villi may arise in the uterus and spread by the ordinary channels of metastasis, such tumours would form a distinct addition to pathology. It was obvious, however, that the term deciduoma malignum was quite an unsuitable designation for new growth composed of placental villi.

In closing the discussion the PRESIDENT did not doubt that the debate, which had brought much special experience tempered with general knowledge and a logical spirit to bear upon the subject, would prove useful. In reading the cases which had been reported he often wondered, as in the case of any other "new" disease, what such cases had been called before. He supposed, but was not sure, that most of them would have been regarded as forms of cancer or sarcoma. The conclusion of the debate seemed to be that the question is far from being settled and that it is yet too soon to add a new disease to the list.

The following specimens were exhibited:—

Dr. LEWERS: Two Uteri removed by Vaginal Hysterectomy for Cervical Cancer.

Mr. ALBAN DORAN: Cystic Myoma of the Uterus weighing over fifteen pounds.

Dr. ROBERT WISE: Placenta, Cord, Fœtus, and Membranes from Abortion of the Fifth Month.

Mr. MALCOLM: Two Solid Ovarian Tumours.

Dr. HORROCKS: Elastic Bags for Induction of Labour.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

The Treatment of Whooping-cough.—Some Effects of Chronic Nasal Obstruction.—Exhibition of Patient.

A MEETING of this society was held on May 1st, the President, Dr. SYMONS ECCLES, being in the chair.

Dr. S. BONTOR read a paper on the Treatment of Whooping-cough. He pointed out that the death-rate from the disease was nearly as great now as it was twenty years ago, and said that although the malady was supposed to have a microbic origin its treatment was not based on that supposition; he therefore suggested the free use of antiseptics, both internally and locally, during the first stage. He considered that the second stage was due to a neurosis produced by the products of the micro-organisms and thought that the treatment should be directed to reducing the number and severity of the spasms and to loosening the mucus in the larynx and trachea. He had found the best method to be the local application of a solution of menthol in liquid vaseline. He had treated forty cases, mostly severe, in this way, with only one death.—Mr. MAYO COLLIER stated that the appearances of the larynx in whooping-cough were simply those of intense vascularity and congestion. He found that the only certain and efficient method of examining the larynx was to apply a spray of menthol in parolleum in which ten grains to the ounce of cocaine had been added.—Dr. CAMPBELL POPE recommended a thorough application of menthol spray to the nasal fossæ and pharynx, since the mucus which was the exciting cause of the spasms was probably formed in the nasal cavities.—Dr. CHAPMAN remarked on the use of the inhalation of chloroform in checking the spasms.—Dr. BURRELL had found small doses of antimony and morphia successful both for ordinary catarrh and for whooping-cough.—Dr. ACHARD recommended the fumigation of the

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room with tar vapour produced by introducing a red-hot poker into liquid tar.—Dr. DOBSON experienced great difficulty in diagnosing whooping-cough from ordinary catarrh in the first stage, but he found that great benefit was derived from a menthol and cocaine spray in the later stages.

Mr. MAYO COLLIER read a paper on Some Effects of Chronic Nasal Obstruction, illustrating its serious effects upon the growing skull, especially on the upper jaw. The inevitable effect of nasal obstruction was the production of a partial vacuum in the nasal chambers, whose walls in the young were unable to support the increase of atmospheric pressure and consequently collapsed. In this way he explained the high palates, irregular teeth, and approximated maxillary bones, and the secondary almost complete obliteration of the nasal cavities. He showed several casts of the jaws of such cases.—Dr. THUDICHUM did not think that the mechanical pressure of the air was sufficient to distort either the septum or the maxillary bones, and considered that the casts exhibited were taken from congenital malformations and that the patients had only just escaped being idiots. He pointed out that hypertrophy of the inferior turbinated bone was the most frequent cause of nasal obstruction and referred to the good effects following its removal.—Mr. MCADAM ECCLES remarked that though adenoid vegetations were so common in young subjects the cases of deformity of the superior maxilla were very uncommon.—Mr. BATTEN had noticed a peculiar form of myopia as a result of chronic nasal obstruction.—Dr. CAMPBELL POPE and Mr. YEARSLEY also made remarks.—Mr. MAYO COLLIER, in reply, stated that the subjects from whom the casts had been taken were in no way mentally deficient, and said that the condition had commenced about the age of puberty. He considered that adenoid vegetations could not cause any distortion of the jaw.

Mr. KEETLEY showed a girl on whom he had performed a temporary Colotomy for Tuberculous Ulceration of the Rectum. He described the method of closing the artificial anus.

PLYMOUTH MEDICAL SOCIETY.

Exhibition of Specimens.—Testamentary Capacity.

A MEETING of this society was held on April 11th, Dr. HINGSTON, President, being in the chair.

Mr. C. RUSSEL RENDLE demonstrated: 1. A condition of Osteoporosis in a Femur and Tibia removed by amputation. 2. A Thyroid Dermoid removed from the coccygeal region of an infant when three hours old. The child was born naturally; the mass, which weighed twenty-six ounces, was attached by a fibrous stalk to the coccyx and a broad base lightly connected to the surrounding parts.

Mr. WEBBER showed a Microscopic Section of Fibroma of the Testis enucleated by Mr. Woollcombe.

Dr. ALDRIDGE read a paper on Testamentary Capacity, which was fully discussed and proved to be of great practical help and utility.

Exhibition of Specimens.

The closing meeting of the winter session of the society was held on April 29th, Mr. J. H. S. MAY being in the chair.

Mr. MAY referred in feeling terms to the great loss the society had sustained by the death of Mr. W. Square, who had filled the presidential chair in 1895, and who, by geniality and goodness of heart, had gained the affection of all the members.—Dr. ALDRIDGE and Mr. C. E. RUSSEL RENDLE also spoke as to Mr. Square's worth and great kindness to all with whom he came in contact.

Mr. C. E. RUSSEL RENDLE showed Sections of the Tibia and Femur removed from a boy aged seven years during excision for tuberculous disease of the knee-joint. There was a focus of disease commencing in the inner tuberosity of the tibia invading the joint through the cartilage. The cartilages on the outer side of each bone were sound.

Mr. LUCY handed round the skiagraph of a Hand and Forearm taken on a Thomas's antihalation plate with a Newton's "focus tube" and one minute's exposure by Mr. Oakley. The trabeculæ of the bones were plainly defined, as was also silk stitching of the coat-sleeve.

Dr. PETHYBRIDGE showed Tube and Plate Cultures of various Micro-organisms from Sea-water and the Intestines of a Fish.

Mr. WEBBER exhibited a section of the Thyroid Dermoid alluded to above.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF STATE MEDICINE.

Domestic Disinfection.—Criminal Responsibility in the Insane.—Village Water-supplies in Ireland.—Parknasilla as a Winter and Spring Health Resort.

A MEETING of this section was held on April 17th, the President, Dr. J. M. REDMOND, being in the chair.

Mr. WALTER BERNARD read a paper on the Necessity for Isolation and Disinfection when Infectious Diseases were being Treated, and he submitted models of portable apparatus for domestic disinfection of articles by heat and fumigation. One was adapted for the sick room and the other was reserved for the overalls worn by the medical man and the nurse. The apparatus was six feet long and thirteen inches wide, and could be carried from house to house. The articles were exposed for a considerable time to the fumes of heated eucalyptus oil and carbolic acid. Mr. Bernard at the same time called attention to the erection of houses, through building societies and other agencies, on polluted subsoil consisting of rubbish and street sweepings. He also said that the people are encouraged by burial societies to make false returns of ages and state of health; and, what is worse, a stone in the sleeve is hidden for the medical man who will not in the death certificate shorten the duration of the illness, so as to make it correspond with the statement of the person insured.

Mr. CONOLLY NORMAN read a paper on Criminal Responsibility in the Insane, first reviewing the history of the law on this subject and tracing the stages by which it arrived at its present position. He then pointed out the injustice and absurdity of the supposed legal tests of responsibility as applied to the insane, since a strict application of the criteria of knowledge of the nature of the act done or of knowledge of right from wrong would lead to all the insane being held responsible, with the exception of low-class idiots and a few acute cases. At the same time, he deprecated anything like an attempt at present to substitute medical for legal definitions in this matter. The knowledge of insanity is still so limited that we cannot define its conditions, and to endeavour to define that which is indefinable is to risk repeating the mischief already done and laying down criteria the validity of which will soon be as disputable as that of the former ones. Owing to a variety of circumstances there is not much, if any, practical injustice done under the present state of the law, however unjustifiable it may be in theory.—Dr. BEWLEY was glad to hear that Mr. Norman could not suggest any definite line upon which the law should be amended and that it was a mistake to define insanity. A little insanity and a great deal of wickedness and a little wickedness and a great deal of insanity merge very much into one another. Medical men are not always the best judges of insanity. They are too apt to believe that criminals are to be treated medically and not punished.—Dr. MCWEENEY wished to know in what position with regard to sanity or insanity Mr. Norman would place habitual criminals who from their very earliest days have a tendency to the committal of crime. When a person comes up for the eleventh or twelfth time charged with robbery, &c., the question should be taken into account whether the power of self-control has become so lowered that it could be said to no longer exist. A considerable number of the criminal population belong to this class, and a very important question is what is to be done with these people. A vast amount of money has to be spent in keeping them from doing harm.—Mr. NORMAN, replying, said that he thought the question as to the insanity of a criminal should be decided by a jury. The chief cause of complaint against medical witnesses arose from the circumstance that one judge wanted nothing but facts and another wanted the witness's opinions. The law regarding a lunatic giving evidence was much the same as that regarding a lunatic making a will. He could give evidence if he understood the nature of an oath and if he had not delusions on the point at issue. He could make a will if his memory was sound and he did not suffer from delusions with reference to his relatives or others that would be benefited by the will.

Mr. EDGAR FLINN read two papers—one on Village Water Supplies in Ireland and the second on Parknasilla as a Winter and Spring Health Resort. In the former paper he laid stress on the difficulty there existed in procuring a really pure and wholesome drinking-water in the smaller Irish

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villages and towns, most of the wells being shallow and liable to pollution from surface and drainage percolation. The contract for the sinking of wells was nearly always placed in the hands of totally inexperienced and incompetent persons, who happen to have friends on the rural sanitary authority, the result being that in the majority of the villages the quality of the water is defective, and in dry seasons the supply is scanty.

Reviews and Notices of Books.

Manual of Gynæcology. By HENRY T. BYFORD, M.D., Professor of Gynæcology and Clinical Gynæcology in the College of Physicians and Surgeons of Chicago, &c. Containing 234 Illustrations, many of which are original. Philadelphia: P. Blakiston, Son, and Co., 1012, Walnut-street. London: Kegan Paul, Trench, Trübner, and Co., Limited. 1895. Price 10*s.* 6*d.*

THIS book has been written with the intention of providing the student with a Manual of Gynæcology sufficient for "study or reference in his college course as well as a guide to him during his first years of practice." The subject matter is divided into ten parts, among which may be specially mentioned Part 7, consisting of five chapters on Genital Tuberculosis, and Part 10, on Ectopic Pregnancy, Pelvic Hæmatocele, and Pelvic Hæmatoma. The author has made use of two kinds of type with the view of simplifying the arrangement—a large type for what he considers to be actually essential and a small type for information on what he considers minor points of detail. On page 47 we notice an illustration of a syringe with an indiarubber tube attached which is recommended by the author for emptying the glass tube used in cases of abdominal section requiring drainage. We think the use of this syringe is objectionable in that occasionally the suction may cause portions of omentum to be drawn into the apertures generally found in the glass drainage-tubes employed. We think a better way is to empty the tube by means of a simple, long, narrow glass tube passed down to the bottom of the drainage-tube. We are glad to see that the author recommends in the section on Catheterisation that the nurse should expose the parts and disinfect them before passing the catheter. As regards the after-treatment of cases of abdominal section the author apparently only advises the patient being placed on her back if a drainage-tube has been used or if there is reason to fear hæmorrhage; in other cases he seems to be of opinion that she may be turned on her side from the first. This is certainly contrary to the practice usually followed and, in some cases at all events, it gives rise to a good deal of pain. He considers that Alexander's operation is the best one for cases of retroversion and retroflexion depending upon relaxation of tissue and unconnected with adhesions. As regards the treatment of carcinoma of the cervix, while the author states that the treatment most generally recommended at the present time is total extirpation by the vagina, he says it is probable that properly performed amputation of the cervix will in the near future be demonstrated to be equally effective for cases in their earlier stages. Many authorities in this country are of opinion that this has been fairly well proved at the present time.

The book is well printed and fully illustrated. Many of the diagrams, however, will be familiar to readers of other works on gynæcology.

A Manual of Pharmacology and Therapeutics. By WILLIAM MURRELL, M.D. Brux., F.R.C.P. Lond. London: Baillière, Tindall, and Cox. Pp. 657. 1896. Price 10*s.* 6*d.*

A SOUND and thorough knowledge of the action of drugs is of such great practical importance that the withdrawal of pharmacology as a separate subject from the examinations of the Conjoint Board should make no difference to the reception of a good text-book on the subject. Dr. Murrell's name is well known as a writer on drugs; in particular, his little work on the Treatment of Poisoning is known to every practitioner as a sound and practical treatise of the greatest value. The present volume maintains its author's reputation for practical knowledge and common-sense. Extraneous and unnecessary matter is for the most part avoided, and the pith of the subject is presented in a blunt and straightforward manner. After an introductory chapter dealing with various preliminary and accessory matters such as adulteration, modes of administration, dosage, tolerance, prescribing, &c., the pharmacology and therapeutics of the principal drugs are described in three sections under the headings of Inorganic Substances, Synthetical Compounds, and Drugs of Vegetable Origin. Its directness, plainness, and accuracy will make this, the main part of the book, very useful to the student. It is concluded by a good synopsis of pharmacological actions, tables of weights and measures, examples of prescriptions (in which the distinction between mixtures and draughts is not very apparent), a series of recipes for the "dainty dieting" of the sick, and a selection of examination papers for the guidance of the student. Misprints are unfortunately of frequent occurrence: such errors as "fibrilliary," "empyrematic," "guiacum," with many others are freely to be met with and should be corrected in the next edition. We have said that the directness and obvious intelligibility of style which characterise the book should commend it to the student. It is a pity that its plainness of speech occasionally degenerates into flippancy. We would also protest against the author's treatment of the subject of massage—a valuable remedial agent of which Dr. Murrell has himself written well elsewhere. Yet of three and a half pages on the subject he has here devoted no less than two and a half to a description which in our judgment is not edifying. It is to be hoped that these pages may be replaced in subsequent editions by a scientific account of the mode of action of massage and its special sphere of usefulness.

The Westminster Hospital Reports. Edited by R. G. HEBB, M.A., M.D. Cantab., F.R.C.P. Lond. Vol. lx. London: J. and A. Churchill. 1895.

THIS volume contains three "In Memoriam" notices, one of Dr. Sturges by Dr. H. B. Donkin, with a reproduction of an excellent portrait; one of Mr. Barnard W. Holt, by Mr. G. Cowell; and the third of Mr. W. H. A. Tebbs, by Mr. S. A. Bull. Mr. P. de Santi contributes a paper on Intubation of the Larynx, in which he discusses its usefulness and defines its scope. Mr. H. S. Fremlin writes on the Bacterium Coli Commune and its differences according to its origin. Dr. R. G. Hebb discusses the Fehling and Phenyl-hydrazine Tests for Sugar. Then follow cases of more or less interest by Dr. A. M. Gossage, Mr. P. de Santi, Mr. W. H. Gossage, and Dr. R. G. Hebb. A case of strangulated hernia is not usually looked upon at the present day (unless there is some unusual complication or pathological curiosity) as worthy of special mention, so we have naturally carefully read those published in some detail in these reports. We hope that few surgeons in the present day would go through the old-fashioned routine treatment described in one of hot bath, opium, and taxis, for a case in which the hernia was "well marked" and when the patient already had vomiting which is described as "fæcal." The description of parts sutured after the operation as "pillars of canal" is not easy to understand, yet it is important that it should be put more clearly, for in another case where a similar procedure was apparently adopted in May a note adds that the hernia had returned in October and produced symptoms of strangulation. Some of the medical cases

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published appear to be of little interest as isolated cases, for instance, "phthisis with hæmoptysis" and "herpes of the mouth." From the careful medical statistical report of Dr. Gossage we learn that in 1893 1166 cases were relieved, 45 were unrelieved or transferred to the surgical wards, and 176 died; whilst in 1894 1130 were relieved, 72 were unrelieved or sent to the surgical wards, and 169 died. From the surgical report for 1893 by Mr. W. Wyndham Powell it appears that 1127 cases were relieved, 12 unrelieved, 5 transferred to the medical wards, and 54 died; from the surgical report for 1894 by Mr. P. de Santi it would appear that 1274 were relieved and 44 died, the general mortality being 3·24, as contrasted with 4·25 in the previous year. Mr. Frederick Moreton gives the reports for the department of diseases of women, from which we learn that the number of deaths in 1893 was 8 and in 1894 7. The reports of the post-mortem examinations for the years 1893-94 by Dr. Hebb may in time become of some value on account of their number, but so many are similar to the ordinary record that they are but slightly useful in their present form and could hardly be employed by anyone anxious to collect statistics without a reference to the original and fuller accounts of the necropsies. The volume ends with accounts of pathological specimens recently added to the museum, of the anatomical collection in the museum, of the proceedings of the Guthrie Society and of the Westminster Hospital United Sports Club. The volume is well printed and bound, but there is no index.

Syllabus of Gynæcology based on the American Text-book of Gynæcology. By J. W. LONG, M.D. Richmond, Professor of Gynæcology and Pediatrics in the Medical College of Virginia, &c. Philadelphia: W. B. Saunders, 925, Walnut-street. 1895. Price $1 net.

THIS little book has been written, according to the preface, with a threefold object; first, to be used as lecture notes; secondly, to enable the student more intelligently to follow and remember the lectures; and, finally, as a convenient reference for practitioners. It is based upon the American text-book of Gynæcology, which, the author patriotically believes, reflects the most advanced gynæcological thought and work. It really consists of a series of tables, and as there are several blank sheets between the tables we presume these are intended for such supplementary notes as may suggest themselves to the student. For our own part, we are inclined to think that the advantage of such a syllabus is to a great extent lost unless the student has evolved it for himself; otherwise it tends to become a sort of cram-book, which will infallibly be a temptation to the less industrious. We think it is a mistake to render the subject of gynæcology or, indeed, any other subject too easy, in the sense of attempting to afford instruction without the necessity of personal effort on the part of the learner.

LIBRARY TABLE.

The Housing of the Labouring Classes and Back-to-back Houses. By H. PERCY BOULNOIS, M.Inst.C.E. London: St. Bride's Press, Limited.—This is a reprint of some papers originally contributed to the *Surveyor and Municipal and County Engineer* and consists for the most part of a number of diagrams showing how the rooms in artisans' dwellings should and should not be arranged. As showing how rooms for the working classes have been, are, and may be planned, the pamphlet should prove of use, but the absence of technical details detracts greatly from its value for practical purposes.

Formulaire des Spécialités Pharmaceutiques à l'Usage des Médecins. (Formulary of Pharmaceutical Specialties for the Use of Medical Men.) Par le Docteur M. GAUTIER et Mons. F. RENAULT. Paris: J. B. Baillière et Fils. 1895. — *Mémento Formulaire de Poche de Posologie et Thérapeutique Infantiles. (Pocket Formulary of Infantile Dosage and Therapeutics.)* Par le Docteur H. DAUCHEZ. Paris: Société d'Éditions Scientifiques. 1895.—English readers of current French medical literature and also those practitioners who are likely to have foreign families among their patients will find both of the above-mentioned little books very instructive. The former of them contains much information on the subject of the numerous pharmaceutical preparations which are known either by the names of the original makers or by various fanciful designations, their approximate composition, dose, and the appropriate dilution of concentrated solutions being described. The selection of remedies used by French practitioners in the treatment of children's ailments contains some useful hints.

JOURNALS AND REVIEWS.

WE always turn with a feeling of pleasure and of anticipation of profit to the *Journal of Comparative Pathology and Therapeutics;* the March number affords ample justification for this feeling. The first paper by Professor Hobday on the Toxicological Effects of Creolin in the Dog and Cat is of sufficient importance to attract considerable attention. It has been very generally accepted that creolin is an absolutely non-irritant and non-poisonous substance, but from the experiments placed on record in this article it is evident that in the case of dogs, cats, and ferrets, at any rate, creolin is an exceedingly irritant substance when applied cutaneously and is capable of producing a paralytic condition, complete prostration, and ultimately death. Professor Hobday concludes that creolin is a narcotic and irritant poison to the dog and cat, and its use in these animals must be watched with the greatest care; that when spread in emulsions over a large area of the body it acts as a powerful irritant, the more refined samples acting more energetically than the less refined; and that it is not so readily absorbed from the stomach, from small wounds, or from the subcutaneous tissues as from a large area of skin surface. Of the toxic symptoms the most important are unsteady gait, especially affecting the hind limbs, and a sub-normal temperature, followed by complete paralysis, prostration, and clonic symptoms of all voluntary muscles, especially well-marked in the limbs, jaws, and eyelids; there is a stage of semi-coma followed by complete coma and death from collapse. Papers on Strongylus Tetracanthus Parasitism by Mr. Henry C. Wilkie, F.R.C.V.S.; on Canine Rabies in India, by Surgeon-Captain J. C. Vaughan, I.M.S.; on Enteritis in the Horse, by Mr. John Pemberthy, F.R.C.V.S.; and on Intestinal Psorospermosis in Lambs, by Dr. J. McFadyean, are given. This latter is accompanied by a series of excellent illustrations which give an exceedingly good idea of the pathological condition described. In an editorial article on the Stamping-out of Glanders it is pointed out that of the whole of the cases of glanders reported in this country 70 per cent. have occurred in London, and Professor McFadyean insists on the fact that it is necessary to do something to stamp out this disease, especially in London. He indicates the inefficiency of the means that have already been tried to eradicate glanders from London stables, and points out that the only possible means of getting rid of it is to regard every animal in a glandered stable as "suspect" and to insist upon the adoption of the mallein test (which is now recognised as being almost infallible) in every outbreak. He points out that in the long run this will be the most economical and satisfactory method, even if compensation for the horse and not a mere £2 for the carcase has to be given, and even if it is necessary to get a special Act of Parliament to carry all this through.

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The initial cost and friction might be considerable, but the ultimate saving would be so enormous that it is well worth considering whether this should not be attempted at once. A number of clinical cases are also reported; a series of abstracts from foreign veterinary journals and a full abstract of Dr. Sims Woodhead's report to the Royal Commission on Tuberculosis complete this number of the journal.

In the *Veterinary Journal* for May the Essay on Immunity is continued, the author treating of Protective Inoculation against Quarter Ill, Pleuro-Pneumonia Contagiosa, and other cattle diseases, devoting special attention to swine plague. An article on Vivisection from the point of view of the veterinarian and the physician is a thoughtful contribution to the question. The number also includes an article on Scientific Breeding which may be of general interest, a number of Reports of Cases, and a protest against a paragraph in the Bill drawn up by Dr. Russell which places entirely in the hands of medical officers of health work which, it is alleged, can only be thoroughly done with the assistance of veterinary surgeons. In the work of the inspection of cattle in dairies it is probable that medical officers of health will be glad to avail themselves of the assistance of a veterinary surgeon. The remainder of the journal is taken up with proceedings of the Royal College of Veterinary Surgeons and the Veterinary medical societies, followed by abstracts from medical journals and reports of Parliamentary proceedings.

Analytical Records
FROM
THE LANCET LABORATORY.

(1) TABLOIDS: (*a*) OXALATE OF CERIUM, (*b*) CAFFEINE AND ANTIPYRIN COMP., AND (*c*) COMPRESSED OX-BILE; (2) SOLOIDS OF COMPRESSED CARBOLIC ACID.

(BURROUGHS, WELLCOME, AND CO., SNOW-HILL-BUILDINGS, E.C.)

TABLOIDS of oxalate of cerium are of obvious convenience for administration in the class of cases in which the salt has been proved to be valuable. Cerium oxalate possesses, it is well known, tonic and sedative properties, and has been prescribed with excellent effect in acid dyspepsia, heartburn, &c., while in many cases it has proved beneficial in the treatment of the vomiting of pregnancy and of sea-sickness. Each tabloid contains five grains of the pure salt. The compound caffeine tabloids contain each one grain of caffeine and three grains of antipyrin, and are designed for use in many forms of neuralgia in which it is not advisable to give antipyrin without the addition of a cardiac tonic. The tabloids readily fall to powder in contact with water. The tabloids of purified ox-bile are keratin-coated, so that they are not dissolved until they reach the alkaline fluid of the intestine. In this way the irritating effect of bile on the mucous membrane of the stomach is avoided. They are prepared to supply any deficiency of bile in the system arising from hepatic disturbance or from obstruction of the biliary ducts. Bile is employed also as an alterative and as a laxative in chronic constipation and as a vermifuge in ascaris lumbricoides. The contents of these tabloids readily respond, we find, to the well-known reactions of biliary constituents. "Soloids" of carbolic acid are prepared in a shape which should be sufficient to distinguish them from a "tabloid" that is intended for internal administration. Furthermore, they produce a distinctive colour when dissolved which sharply marks the resulting fluid from any others that may be in use. Their sale should, of course—as we feel sure is the case—be rigidly restricted to the medical profession. The convenience of pure carbolic acid in this form is evident, since for use, for example, as an escharotic one soloid may be held in cotton-wool and gently rubbed over foul ulcers and suppurating surfaces, while when dissolved in five ounces of water a solution suitable for use as a disinfectant or antiseptic spray for application to the pharynx or larynx and nasal cavities is at once obtained.

IMPROVED BOVRIL (SPECIAL INVALID).

(BOVRIL, LIMITED, 30, FARRINGDON-STREET, E.C.)

Our analysis of this preparation, in the manufacture of which considerable improvement, it is stated, has recently been made, is as follows: moisture, 22·33 per cent.; organic matters, 63·83 per cent.; and mineral matter, 13·84 per cent. The organic matter (63·83 per cent.) was found to consist of albumin, 25·09 parts; peptones, &c., 24·57 parts; and crystalline meat principles, 14·17 parts. We have not examined a preparation containing so high a proportion of soluble albumin. It amounts to one-half of the matters precipitated by alcohol, the other half consisting of peptones; thus at least one-half of the original preparation is directly available as nutrient matter. The albumin is in a soluble state, but is coagulated on adding boiling water, the resulting fluid having exactly the appearance of beef-tea, containing the whole of the important fibrinous and albuminous constituents of prime fresh beef. These are balanced by the important stimulating extractives of beef. It contains in small compass all that is necessary to sustain the vital processes. Its flavour will be readily tolerated by invalids since it is of a pleasant "beefy" character.

"EXCEL" STERILISED MILK.

(THE "EXCEL" STERILISED MILK CO., LTD., 23, VICTORIA-STREET, S.W.)

On opening the bottle this milk was found to be in an excellent state of preservation, although it had been standing in a warm part of the laboratory for over two months. It was sweet and sound to the taste and had undergone no objectionable alteration. Our analysis gave the following results: total solids, 12·48 per cent.; solids not fat, 9·48 per cent.; fat, 3·0 per cent.; and mineral matter, 0·72 per cent. It was free from objectionable antiseptics, and, as will be gathered from the above results, is of uniform and good quality.

MEDICINAL MALT EXTRACT (EDME BRAND).

(THE ENGLISH DIASTASIC MALT EXTRACT CO., LTD., MISTLEY, ESSEX.)

This preparation proved to be a highly concentrated and active malt essence. It possesses a rich malty flavour and acts powerfully upon starch, converting it rapidly into maltose. It is, therefore, well adapted for use as an aid to the digestion of starchy foods, whilst furnishing also important food constituents.

PRESENTATIONS TO MEDICAL MEN.—Dr. John Martin has been the recipient from the members of the Huddersfield and District Teachers' Association Ambulance Classes of a Malacca cane and umbrella as a slight testimony of appreciation for his instructive lectures.—Dr. Patrick C. Pounden of Gorey, county Wexford, has been presented by his friends in the Killenagh and Wells Dispensary District with a gold watch, Albert-chain, and sovereign purse attached, as a wedding present, the watch bearing a suitable inscription.—Dr. C. R. Francis has been the recipient (on his resignation after thirty years' service as medical officer) from the residents of the Goldsmiths' Almshouses, Acton, of a testimonial consisting of a silk umbrella and an illuminated address.—Mr. Guy Mackeson, L.R.C.P. Lond., M.R.C.S. Eng., has received from the members of the Surbiton Ambulance Class a silver-mounted walking-stick inscribed as follows: "Presented to Dr. Guy Mackeson by the Surbiton Ambulance Class as a token of esteem, December, 1895."—Mr. E. E. King, M.R.C.S. Eng., has been the recipient from the members of the St. John Ambulance Classes, Ludlow, of a handsome silver teapot inscribed as follows: "Presented to Edward Ernest King, M.R.C.S. Eng., by the members of the Ludlow Ambulance Classes, April, 1896."

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New Inventions.

A NEEDLE-HOLDER AND FINDER FOR VAGINAL, VESICAL, AND INTRA-ABDOMINAL OPERATIONS.

THIS Needle-holder, the illustrations of which are one-fourth the natural size, has the advantage of (1) holding the needle very firmly on account of the great force which can be used; (2) being suitably adapted to the hand; and (3) releasing the needle easily by pressure on the catch with the

FIG. 1.

FIG. 2.

little finger of the hand grasping the instrument. As a needle "finder" it will pick up a loose needle in a deep cavity owing to the magnetisation of the steel surface of the needle-grip (by placing it on a dynamo), and consequently is most useful in the above variety of operations. The original was made for me by Messrs. Ziemann and Co. of New York in 1889.

Christchurch, New Zealand. GRAHAM CAMPBELL, M.B.

SAFETY PARAFFIN LAMPS.

SINCE the report of THE LANCET Analytical and Sanitary Commission on Dangerous Paraffin Lamps appeared in our issue of Jan. 4th we have had brought to our notice various types of paraffin lamps which are claimed to be of a safe construction. We append a short description of each lamp with a few critical remarks thereupon.

Lamp No. 1, the construction of which is illustrated in Figs. 1 and 2, is known as the "Hydro Non-Explosive Hygienic Safety Lamp," and is the property of the "Hygienic Heating and Lighting Company," 13, Southwark-street, S.E. Its principal aim, which seems to us to be secured, is to prevent the production of a space above the oil in the reservoir as the oil is consumed, so that the formation of an explosive mixture of air and vapour in this space is obviated. This is accomplished, odd as it may appear, by first pouring in water in sufficient quantity and afterwards the oil. Fig. 1 shows the lamp after the water has been poured in and Fig. 2 the lamp with the oil added ready for use. The water need not be changed more than about once a year, so that in most cases it is only necessary to pour in the oil in the ordinary way Obviously this device ensures all the conditions of safety of a paraffin lamp. Thus, should the lamp be upset the water takes the place of the oil and the flame is immediately extinguished. Besides this the oil and the chamber are kept cool, while the reservoir is always weighted so that the risk of tilting the lamp over is very much reduced. It might be expected that the wick being liable to become wet would not

FIG. 1.

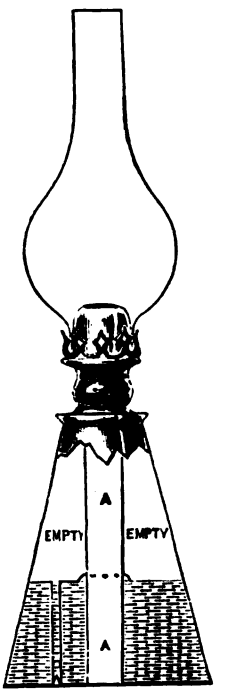
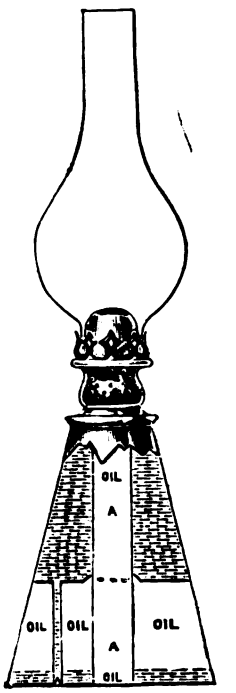


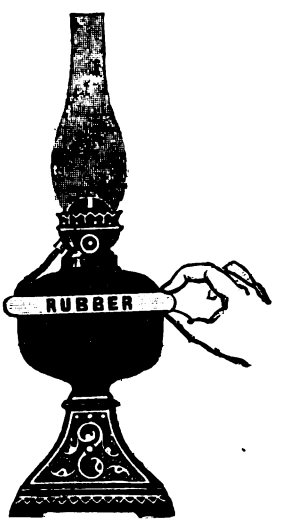
FIG. 2.



burn steadily. We have not found, however, any objection of this kind, as the lamp gives a brilliant, steady flame free from smoke and smell.

Lamp No. 2, the invention of Messrs. Stork and Lee of 70, Grafton-street, Leeds, exhibits no peculiarity of internal construction, but is provided all the same with a useful and probably safe device. It consists of either a self-acting extinguisher or of an extinguisher which may be used at will. In the former case, which is, we think, preferable, a ring

FIG. 3.



of rubber air-tubing is placed round the reservoir, a small rubber tube is joined at right angles with this and communicates with a small brass tube situated immediately beneath the wick. It is obvious that in the event of the lamp being upset a depression on the rubber tube is effected which causes a sharp puff of air to immediately extinguish

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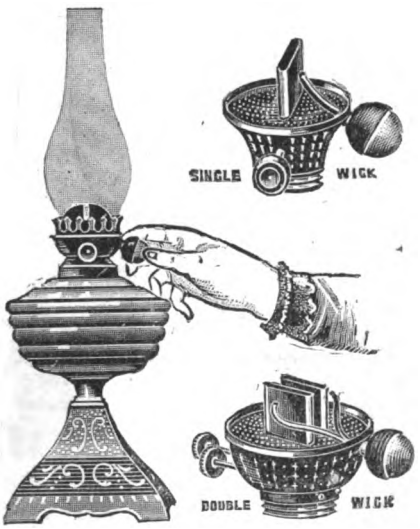
the flame. The accompanying illustration (Fig. 3) will make this action clear. Fig. 4 shows a similar device, applied to single and double wicks, which, consisting in both cases of a small air-ball, effects the same end. It is important to point

FIG. 4.



out that the air is directed upwards and not down upon the flame.

Lamp No. 3 is provided with a wick tube descending to within a short distance of the bottom of the reservoir. The wick tube is constructed so that it is impossible for the flame to travel down it, and there is no superfluous wick left loose in the reservoir. This, on the face of it, would make the wick too short, a drawback, however, which is obviated by attaching a small brass box at the end of the wick tube in which the wick terminates in a roll. In addition the box is closed underneath with a brass cap with a small hole in the centre through which are placed a few threads of worsted, which serve to supply the wick with oil from the reservoir. The lamp is, therefore, probably free from risk of explosion and from the ignition of oil when upset, so long, of course, as the screw fittings are good. The lamp is the invention of Mr. G. Holland of Barnton.

Lamp No. 4 is of simple construction, the wick, tube, and burner being situated some distance from the reservoir. The reservoir is pyramid-shaped, with a handle fixed upon it. A small pipe projects from beneath the reservoir to the wick-container, serving to feed the wick with oil. The wick-tube is in the same plane as the reservoir, but at a distance of about 2 in. from it. The lamp is proof against explosion and ignition of escaping oil. It is an inexpensive device, hardly artistic, but probably effectual, and is suggestive of a teapot with a vertical wick-tube attached to the spout. It is the invention of Mr. C. H. W. Remmett of 22, Edward-street, Camberwell.

Lamp No. 5 was sent by Mr. W. Heath of 21, Bride-lane, Fleet-street, E.C., and is simply fitted with an automatic extinguisher. The objection to extinguishers is their liability under constant change of temperature to become fixed, and therefore to fail at the precise moment they are required to act. The extinguisher of this lamp, however, appears to be very simple and is probably to be relied upon.

Lamp No. 6 is the patent of Mr. A. H. Thompson of 18, Garford-street, Poplar. We have not received a lamp for inspection, but it appears to be adapted for the burning of colza oil. It is stated that if the "Equipoise Lamp," as it is called, is knocked over by accident the flame is automatically extinguished.

Most of the above lamps were of an inexpensive type, and the chief objection to several of them consisted in their inferior screw fittings. This point was alluded to in the report of our Commission. The thread of the screw used for attaching the wick-tube to the reservoir is sometimes so badly cut as not to afford a safe means of securely fastening the wick-tube to the screw of the reservoir. In some cases barely the turn of the screw is necessary to detach it, with the result that on upsetting the lamp it is not improbable that the burner would fall out and the reservoir rapidly empty itself of oil. We have shown, however, that it is quite possible to construct a lamp which will not cost much and at the same time be safe, and there are plenty of devices which may be made to meet these ends.

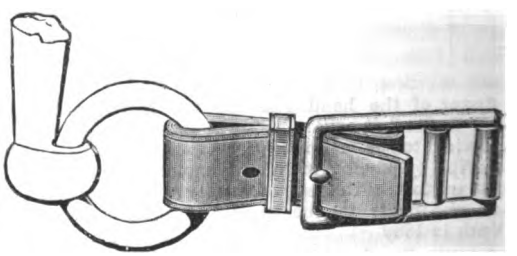
CATHODAL PLATES.

WE have received from Messrs. B. J. Edwards and Co., of The Grove, Hackney, N.E., a packet of cathodal plates which are specially prepared for the new photography in accordance with suggestions made by Professor Oliver Lodge. The sensitised film contains a fluorescent substance the presence of which greatly reduces the exposure—as we have ourselves found—while the pictures contain full detail with good density. We selected as a subject the elbow, and with a minute's exposure an excellent definition of the joint was obtained.

In this connexion we may add here that Dr. Macintyre of Glasgow writes that he has obtained very rapid results without the aid of fluorescent screens. He has found that by using a mercury interrupter the fluorescence obtained from the apparatus was more brilliant, while with the ordinary interrupter the current, although 17 ampères across the terminal screws of the primary wires, never rose to 1. On the other hand, with the mercury interrupter the actual current passing through the primary circuit registered as high as 5 to 7 ampères. This to a large extent explains the improvement which he has been able to note in direct vision as well as in reduction in exposures. He has also succeeded in obtaining shadows of the heart, diaphragm, and other soft tissues.

THE "RENSUM" PULLEY-REIN BRIDLE.

IN the interest of the profession, the owners of an army of horses, and of the public who look to them for guidance, we may call attention to the "Rensum" patent pulley-rein bridle for riding, driving, and schooling horses. This invention is intended to supersede the gag-snaffle for hunting and the gag-bearing rein for harness purposes and to give complete control over the most obstinate animal. The annexed diagram shows one of the pulleys, with billet for use on any



ordinary curb bit or double ring snaffle, either for riding or driving, and forms part of the "Rensum." Any apparatus which will stop a bolting horse with but little application of extra force must recommend itself; we need, therefore, only add that these bridles appear to have the high approval of the War Office. We think they are worthy of a trial. They are supplied by J. S. Rensum, The Cottage, Yardley, Worcestershire.

PATHOLOGICAL SOCIETY OF LONDON.—The following are the officers and council proposed for election for the year 1896. The ballot will be taken at the annual general meeting to be held on May 19th:—President: Henry Trentham Butlin, D.C.L., F.R.C.S. Vice-Presidents: William Richard Gowers, M.D., Samuel West, M.D., Norman Moore, M.D., Seymour Sharkey, M.D., Arthur E. J. Barker, Frederic S. Eve, Samuel G. Shattock, and Frederick Treves. Treasurer: Sidney Coupland, M.D. Honorary Secretaries: J. H. Targett, M.S., and Richard G. Hebb, M.D. Council: Wilmot Parker Herringham, M.B., A. A. Kanthack, M.B., Hector Mackenzie, M.D., Julius Dreschfeld, M.D., G. Newton Pitt, M.D., H. D. Rolleston, M.D., Charles Scott Sherrington, M.B., F. Charlewood Turner, M.D., A. F. Voelcker, M.D., Hubert Montague Murray, M.D., Gilbert Barling, M.B., James Berry, M.B., W. G. Spencer, Anthony Bowlby, E. Hurry Fenwick, H. Betham Robinson, Stephen Paget, Bilton Pollard, M.B., Raymond Johnson, and C. E. Leopold B. Hudson.

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THE LANCET.

LONDON: SATURDAY, MAY 16, 1896.

THE constitution of the first Court of Appeal from the judgment of the General Medical Council cannot but be a matter of historical interest to the medical profession. The Court consisted of four members of the Privy Council—His Grace the Lord President (Duke of DEVONSHIRE), Lord RATHMORE (late DAVID ROBERT PLUNKET), Lord JAMES OF HEREFORD, and Lord MACNAGHTEN. No better Court, probably, of the sort could have been devised for the purpose. The wide experience of its members and the broad point of view from which they regarded the subject give importance to their judgment. It was easy to see that they were by no means intimately acquainted with the details of the Medical Acts and the interdependence under the Act of 1886 of the Medical Corporations. This is almost inevitable. If the General Medical Council has the wisdom so to administer the Medical Acts as to supply the material of an appeal only once in forty years it is scarcely likely to give their lordships of the Privy Council the chance of any serious familiarity with this somewhat technical and complicated legislation. The whole proceedings did not last more than about three hours. The statement of the case of the Apothecaries' Hall of Ireland by Mr. HALDANE, whose sound and studious knowledge of law is recognised, commenced the proceedings. He was supported and well prompted by Mr. B. S. FOSTER (son of Sir WALTER FOSTER), acting as junior. The case is doubtless well known to our readers, but must be recapitulated in outline; in fact, a similar outline occupied two-thirds of the time of the Privy Council on Monday. The Apothecaries' Hall of Ireland claims to be useful in a country which has some thousand dispensary officers, in supplying competent practitioners. Until 1886 the modest fee for its examination was 10*s.*; but by the Act of that year being unable longer to grant a separate diploma, it was required to be conjoined with another corporation or to seek the appointment of surgical examiners from the General Medical Council. The former arrangement was soon agreed to and a conjoint examination instituted between the Royal College of Surgeons in Ireland and the Apothecaries' Hall. This was a proof that in the judgment of those who knew Ireland there was room for an examination somewhat less costly, if not less exacting, than that held by the corporations of the King and Queen's College of Physicians of Ireland and the Royal College of Surgeons in Ireland.

The Conjoint Board of the Royal College of Surgeons and the Apothecaries' Hall seemed to work fairly well until very recent years, when the inspections of the General Medical Council showed less satisfactory results and the Royal College of Surgeons in Ireland saw fit to withdraw from a connexion out of which it probably drew a large share of the profits, and for the results and defects of which it must accept a large responsibility. Latterly the number of those receiving their diplomas from this Conjoint Board have dwindled down to a figure which, if permanent, would argue the superfluity of such a body. The College of Surgeons gave notice of the termination of its share in the conjoint examination in July, 1895, and then the troubles of the Apothecaries' Hall, whose conjoint examinations with the College of Surgeons had on three or four occasions been the subject of unfavourable notice by the inspector and visitor of the General Medical Council, became acute. The unfavourable notices applied chiefly to the medical part of the examinations and the climax was reached on June 6th, 1895, when it was resolved by the General Medical Council that the examinations having been found insufficient in four inspections, the General Medical Council "do now make a representation to that effect to the Privy Council." The representation was made to the Privy Council; but an easy answer was soon forthcoming. In August Sir C. LENNOX PEEL, in their lordships' name, replied that as the Conjoint Board was no longer in existence (having been terminated by the action of the Royal College of Surgeons in Ireland) it appeared unnecessary for the Privy Council to come to any decision as to the insufficiency or otherwise of the examinations. This was a sort of suggestion to the General Medical Council to consider *de novo* the question, but it was not so taken by the majority of the General Medical Council. And in November a request from the Apothecaries' Hall of Ireland to give that body another chance by appointing surgical examiners was rejected, leaving the Apothecaries' Hall no option but to appeal to the Privy Council, and this appeal came on for hearing on Monday, May 11th.

That the report of four inspections had been unfavourable and that a candidate—one of four—who really had done very badly in the examination in clinical medicine should have passed in medicine seemed facts rather damning to the Apothecaries' Hall; but this was not quite the whole truth of the last inspection, as was brought out before the General Medical Council and again before their lordships. The inspector and visitor did not deny that there had been general improvement in the examinations. They said so, indeed, in their report and added, "We have no fault to find with the examination itself." Mr. WHEELHOUSE, the visitor, with that candour which all who know him would expect, admitted that he was in error in saying that the candidate had passed. It was known that the candidate would be re-examined in the subject. Mr. HALDANE'S quiet statement on behalf of the Hall made the most of these admissions of the inspector and visitor. He showed that if the Irish members of the General Medical Council had not owing to unavoidable circumstances been absent the numbers on the division would possibly have been different. The statement of counsel occupied the Court till lunch time, and on its return Lord MACNAGHTEN, who had led their lordships throughout, suggested that it would relieve them from a delicate and difficult situation if the Apothecaries' Hall would approach the General Medical Council with another petition, leaving it a free hand in the selection of examiners, and if the General Medical Council would on its part entertain such

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a petition. Mr. HALDANE undertook, after consultation with the representatives of the Apothecaries' Hall, to do so. Sir ROBERT REID was in a most difficult situation. He had not had the chance of stating the case for the General Medical Council; but in a few very apt sentences he vindicated the single desire of that Council to maintain a proper standard of education, and, though he could not pledge that Council, undertook to place the views of the Privy Council in a favourable light before it. The terms in which their Lordships spoke of the General Medical Council and of the respect in which it is held by the public show that they believed that it was a more fit body to decide such questions than the Privy Council. At the same time they hinted that there had evidently been a slight failure to allow sufficiently for the admitted improvements and for the actual facts regarding the candidate who did *not* pass. The result is not altogether unsatisfactory, although neither party to the appeal can be quite satisfied. But dispassionate critics will find little cause to grumble. The result is mainly gratifying as showing the reluctance of the Privy Council to interfere in questions for the settlement of which the General Medical Council exists. It is no doubt tempting to undo a Gordian knot by cutting it. But it is the English way to persevere, and if there be any reasonable ways of solving a difficulty to let no one remain untried. This appears to be the view of the Privy Council their lordships being evidently unwilling to interfere until every chance of settlement by the General Medical Council has been exhausted. This attitude of the Privy Council is a revelation that comes at an acceptable time, but we fear it will not be appreciated by the General Medical Council. This body has spent time, money, and energy in their attempt to raise the standard of the profession, and the Privy Council, with much politeness of phrase, recommend that they should reconsider their deliberate decision.

IN these days, when the evil of overcrowding in the profession is so apparent to ourselves, it is interesting to find that other countries suffer in the same way. The *American Medico-Surgical Bulletin* contains an article with the heading of "Recruits to the Medical Profession" in which some excellent practical hints are offered to recently fledged graduates. The writer asserts that, given good training, average ability, pluck, and stability, there is room in his land (America) for everyone. It may be noted in passing that these rather exceptional characteristics would command success in any walk of life. In addition, however, the possession of capital is insisted upon.

"It is the exception that a young graduate possesses at the start influence or help sufficient and of the proper calibre to enable him to start in life with a boom..... The road which the average new graduate will have to travel will thence be a very hard one, and without doubt many a one will drop at the wayside, weary of waiting and despairing of success, before the year is out. Let his comfort be that he thus is simply doing what scores of others have done in the years gone by. It is no reflection on his ability or on his merit. The result has been the necessary outcome of the fact that he adopted a profession without possessing the amount of money requisite to give him staying power during the early years of his struggle. In short, too many men undertake the study of medicine without being advised that there is no royal road to success, that the struggle is bound to be hard and bitter, that the competition is keen and is becoming keener every day owing to the boundless charity shown to the sick and the suffering, too often irrespective of their pecuniary status."

The last lines of this paragraph awaken thoughts that must be agitating the minds of many of the younger generation in this country as well as in America. There can be no question that were the circumstances of each individual patient at present under treatment in our London hospitals carefully investigated many would be found able to pay adequate fees for operation or other treatment. We cannot but think that the two main uses of hospitals—to relieve the really poor and to afford means of medical instruction—are far too much lost sight of in our large cities. Some of the special hospitals in the metropolis especially are so comfortable, not to say luxurious, that patients of the well-to-do classes have every incentive to enter them. And though we should be the last to discountenance comforts for the sick and needy, we question very much whether the funds subscribed by public charity should be expended in providing apartments and attendance fitter rather for the upper classes than the very poor. In our experience tradespeople are usually as well-to-do as medical men, and yet a large proportion of the former do not hesitate to accept public charity when occasion offers. We very much regret to have to point out that there is reason to believe that this unsatisfactory state of things is directly fostered by the want of business capacity and supineness of the members of the profession themselves. The practitioner in thoughtless kindness of heart says to his patient, "Oh, I will send you to Mr. X. at such and such a hospital, he will take you in and do it for nothing." Mr. X. is very commonly too kind and good-natured or too blind to his own interests and those of the profession at large to refuse. The patients like Mr. X., find him kind and "clever," and as a snug room is found for them at the "hospital" they gladly enter it and receive gratuitously the benefits of public charity and medical skill. The individual experience of many of our readers will supply them with instances of this undesirable state of things in sufficient abundance. We believe that the younger members of the profession, especially the consultants, attached to special hospitals would do well most carefully to consider their position and to absolutely refuse to confer the benefits of their services on any but the really poor. The spectacle of a struggling surgeon or physician conferring his services gratuitously upon the wife or near relative of a well-to-do tradesman would be ludicrous if it were not also sad and terribly incongruous. A firm combination should be entered into between general practitioners and consultants to resist by all means in their power the growing abuse of gratuitous medical work.

The article in our American contemporary goes on to give some excellent advice to young graduates regarding the subject of special practice:—

"Specialists are neither born to the purple nor are they made by three years' study. It is the acquisition of knowledge through years of personal observation and of practice which fits the average man for a specialty, and disappointment is bound to come to the graduate who, in forgetfulness

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f this fact, at once after graduation announces himself as specialist in skin diseases, obstetrics, eye, and throat, or, a that very popular specialty, the diseases of women. If he scores of young graduates now being turned loose on his and other communities will only weigh well the question f adaptability to a special practice, they will reason out or themselves why it is a mistake on their part to rush into ne before they are really competent to cope properly with iseases of the body at large. This country now has far too nany *crude* specialists. It is they who cast disrepute on merican medicine and surgery. It is they who ruin the alue of our statistical data, reporting as they do incomplete nd immature operations, lauding to the skies new methods vhich their seniors in the profession would be desirous of esting for years before accepting as at all adequate or roper."

These remarks apply equally to our young graduates in his country. There is a regular rush into specialism. Attracted by exaggerated ideas of the earnings of specialists, nd with but a poor idea of their expenses and the requisite abours of their earlier years, "specialists" in the eye, ear, kin, or in the ever-popular gynæcology are almost weekly stablishing themselves in our large cities. Mr. MITCHELL BANKS alluded to this in his speech at the recent dinner of he Medical Society of London with some feeling. What is rue of London is true of Liverpool, and probably of Manchester and other large towns. "Incomplete and immature" perations are not unknown on this side of the Atlantic. Any young graduate who makes up his mind to become a "specialist" in any branch of medicine or surgery must also make up his mind to go through the many years of hospital drudgery that are essential to equip him with the superior knowledge, judgment, and skill that alone are sufficient to entitle him to the support of the members of his own profession and the public. It may be that hospital teachers are apt to neglect the opportunities offered to senior men to give words of counsel and advice to their juniors in respect of these and similar particulars.

A SPECIAL meeting of the governors of the Chelsea Hospital for Women will be held on Wednesday next, May 20th, at the Hospital, to adopt the following by-laws:—

"SUSPENSION.—A Member of the Honorary Medical Staff may be suspended from duty for not longer than one calendar month by resolution of the Weekly Board, and notice of a Special Council Meeting shall be immediately given to consider the case.

"REMOVAL.—A Member of the Honorary Medical Staff, whether previously suspended or otherwise, may be removed by a majority of not less than three-fourths of the members present at a Council Meeting specially convened by not less than seven days' notice, which notice shall state that the Meeting is to consider a matter concerning a member of the Staff. The member of the Staff in question shall have an opportunity of appearing before the Council to give explanations. A member so removed shall *ipso facto* cease to be a member of the Honorary Medical Staff."

The lay managers of hospitals have before now enacted by-laws offensive to their medical staffs, and it has been our experience that the more uncertain the status of the hospital, and the more undecided the reasons for its existence, the more is the lay management quick to misappreciate the relative importance of the medical and administrative sides of the institution. But for silly impudence manifested by a lay management towards their professional colleagues we have seen nothing to approach the two by-laws to which we give publicity above.

The weekly board of the Chelsea Hospital for Women is therefore to be given leave to suspend at pleasure a member of the honorary medical staff for not more than a month! This weekly board will attempt next to get a rule adopted enabling it to send cantankerous medical officers to bed not earlier than 6 P.M., or to fine them, say, not less than two pounds if they contradict each other in an angry manner. Seriously, however, these by-laws are an insult to the medical profession. If a member of the honorary medical staff does wrong of course he must be dismissed, but every properly constituted hospital, governed by persons able to look after its interest, has ordinary provision for this remote contingency. What do the lay managers of the Chelsea Hospital for Women mean by taking extraordinary steps and anticipating that their medical staff is likely to misbehave? These insinuations of bad conduct to be feared on the part of the medical gentlemen who do the work on the performance of which, we suppose, the hospital would base its reason for existence come with exceedingly bad grace from the lay board of the Chelsea Hospital for Women, who at the present moment rest under the stigma set upon them by an independent committee of investigation—we refer to the report of Lord BALFOUR of BURLEIGH'S committee. That committee, the members of which were Lord BALFOUR of BURLEIGH (chairman), Lord SANDHURST, Sir CHARLES DILKE, Dr. (now Sir) JOHN WILLIAMS, Mr. H. G. HOWSE, and Mr. J. H. BRASS, reported in July, 1894, that the administration of the hospital left much to be desired, that the Committee of Management did not meet sufficiently frequently, and that the house committee was scantily attended. In spite of these findings by an independent and unimpeachable body of gentlemen the lay board refused to resign and proceeded to elect a new medical staff. When they did resign later it was—according to Lord GLENESK, who tendered their resignation—for other and quite trivial reasons. Certain of the members of the old lay management were re-elected and remain active members of the present board. Would they have been re-elected if they had resigned when their conduct had been recently reviewed by Lord BALFOUR of BURLEIGH'S committee, and because of the findings of that committee? Of course not. In the eyes of all practical men the present lay management abides under the censure of Lord BALFOUR of BURLEIGH'S committee, and for it to take extraordinary precautions to censure other people is pharisaical and incongruous.

We have, in conclusion, one question to ask. Sir ALGERNON BORTHWICK (Lord GLENESK) on Nov. 28th, 1894, in tendering the tardy resignation of the discredited lay board, said that the question of mixed committees had been considered and that in the future the Committee of Management of the hospital would consist of laymen only; but it

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would have attached to it, he added, one of the medical staff, who would always be ready to give advice to the committee, though he would not be a member of the committee or in a position to register any vote at their deliberations. Sir ALGERNON BORTHWICK then read out the names of the proposed new lay Board of Management, but he did not say who the medical adviser to this board was to be. He did not mention his name nor did he say how he was to be chosen. Now the offensive by-laws we have quoted have clearly a medical bearing. They constitute threats of punishment uttered by the lay management against the medical staff. If the purely lay board is suggesting out of their own lay heads that the governors of the hospital should adopt these by-laws they have acted improperly. But if their by-laws are the result of a consultation with their medical assessor we should like to have the name of the member of the staff of the Chelsea Hospital for Women who rates his colleagues so highly that he sanctions an attempt on the part of the lay management to make arrangements for having them whipped if they are naughty!

When going to press we hear that the full approval of the medical staff has been obtained to these proposals, but they could not have seen the drift of them.

THE Poor-law Officers Superannuation Bill as amended by the Standing Committee on Law has been issued, and since it will probably soon come on for the third reading, at which stage it may be expected that some amount of opposition will have to be met, it may be well to glance at some of the more salient points of the proposed measure. In the first place, it is very wide in its application in so far as officers and servants of Poor-law authorities are concerned. All persons regularly employed by such authorities, whether giving whole time services or part time only, come within the provisions of the Bill and will participate in its advantages. Thus superintendent registrars, district registrars, and school attendance officers come within the definition "officer." The managers of district schools, sick asylums, and the managers of the Metropolitan Asylums District also come within the purview of the Bill, their officers and servants being therefore included within the scope of its operations. As regards the "certainty" of superannuation which the Bill desires to see granted, it leaves it optional to existing officers whether they will accept it on the proposed basis, or by standing out from the enforced deduction of a percentage of salary place themselves at the mercy of boards of guardians and others in the matter of superannuation when the time comes for their retirement. In other words, if existing officers like to run the risk of a retiring allowance which is now at the discretion of their employers they may do so, just as they have had to do hitherto. If they decide to convert doubt into certainty they will have to pay from 2 to 2½ or 3 per cent. of their emoluments, according to whether they have been in office less than five, or less than fifteen, or upwards of fifteen years at the time of the passing of the Act. A superannuation allowance may be secured after ten years' service by reason of incapacity for discharge of duties arising from infirmity of mind or body, or of old age, or after forty years' service if the individual be sixty years old, or by having reached the age of sixty-five years; and the guardians may compulsorily retire an officer at the latter age if they deem it expedient. The allowance granted is to be at the rate of one-sixtieth for every year after ten years' service up to forty-sixtieths. All future officers and servants will have to surrender 2 per cent. of their emoluments to secure these benefits. All services, whether continuous or not, will be aggregated for the purposes of superannuation allowances, which latter will be granted on the average receipts of the last five years of service in each instance. Peculiar professional qualifications and special circumstances may, with the consent of the Local Government Board, be recognised by the addition of a number of years—not exceeding ten—beyond those actually served. Resignation of office, dismissal for grave misconduct, &c., may be followed by return of a part or the whole of the contributions made towards the superannuation fund; and an officer losing office through no fault of his own will have the right of return of his contributions and may be granted a gratuity in addition. But in all these cases of added years, of returned contributions and of gratuities, one month's notice of any such proposal must be given to each guardian. Certain provisions are made to meet the cases of appointments which lapse by reason of the death, or dismissal, or insanity, of one of two persons holding a joint appointment. The Bill also deals with the questions of divided unions, allowances to persons paid by fees, the inclusion for allowance purposes of all poundages, allowances for rations and house rent, and the like. It also appoints the Local Government Board as arbitrators in difficult cases, and finally limits the measure to England and Wales. Such, briefly, are the chief points of interest in the contemplated Act as at present drawn.

Annotations.

"Ne quid nimis."

SIR WILLIAM OVEREND PRIESTLEY, M.P.

THE unopposed election of Sir William Priestley to the representation of the Universities of Edinburgh and St. Andrews in the place of Sir Charles Pearson, the Lord Advocate, will be welcomed with satisfaction and pleasure by the whole of the medical profession. To us it is the more gratifying because the hope which we expressed in our issue of April 11th that the link which had so long bound the representation of the Universities to a Government office would be broken has not only been fulfilled, but fulfilled by means of the election of a medical graduate. Sir William Overend Priestley is the son of Joseph Priestley, the grand-nephew of the celebrated chemist; his professional qualifications and appointments are too well known to our readers to require recapitulation on the present occasion. The advantages which must result from the presence of medical men in the House of Commons are obvious, and, while congratulating Sir William Priestley on his election, we also congratulate the members of the House of Commons, whose hands will be strengthened when legislating on matters concerning the health of the public.

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MEDICAL FREEMASONS.

THAT many members of the medical profession take an interest in Freemasonry is obvious for various reasons, among which the following may be noted. From time to time appear in our columns accounts of the meetings of the Æsculapius Lodge, which was founded for the convenience of medical Freemasons, and the members of which are, we believe, at the present time all medical men. The Rahere Lodge, if not entirely medical, being recruited from St. Bartholomew's Hospital, must be predominantly so. The University of London Lodge necessarily includes a very considerable proportion of medical graduates. And there is probably scarcely a Masonic lodge throughout the country which does not contain at least one medical practitioner. The important part played by members of our profession in the history of Freemasonry has been well shown by a distinguished Masonic writer, Mr. R. F. Gould, whose paper on the subject we reviewed in our issue of Jan. 26th, 1895 (p. 246). It is therefore deserving of record in THE LANCET that on the recent occasion of the twenty-first anniversary of the Prince of Wales's installation as Most Worshipful Grand Master of England high Masonic honours have been bestowed upon several medical Freemasons. Brother George Cowell, F.R.C.S. Eng., senior surgeon to Westminster Hospital, and Brother Henry Sutherland, M.D. Oxon., M.R.C.P. Lond., have received the honour of the rank of Past Grand Deacon, and Brother C. D. Hill Drury, M.D. Aberd., of Darlington, and Brother George Mickley, M.B., M.C. Cantab., Medical Superintendent of St. Luke's Hospital for Lunatics, that of Past Assistant Grand Director of Ceremonies. The number of those who received brevet honours on this special occasion was twenty-one, corresponding, we presume, to the number of years during which the Prince of Wales has been Grand Master, and it will be seen that our profession has received a generous proportion—nearly one-fifth of the whole number. We also notice in the list of the Grand Officers for the present year the name of Mr. Frederick Gordon Brown, M.R.C.S. Eng., L.S.A., who has been appointed one of the Assistant Grand Directors of Ceremonies. We congratulate our medical brethren (this last word ought to be as highly prized and respected in our world as it appears to be in that of Freemasonry) on their well-won promotion. Since the above was written information has been received of the death, at the great age of 106, of Mr. W. Salmon, M.R.C.S. Eng., of Cowbridge, Glamorganshire. It is hardly to be doubted, seeing that the date opposite his name in the Calendar is 1809, that Mr. Salmon was the Senior Member of the Royal College of Surgeons of England. The honour was also generally claimed for him of being the oldest Freemason in the world, although the validity of this claim has, we believe, been questioned in the Masonic papers. Be this as it may, we may safely look upon him as having been the oldest medical Freemason.

PRECAUTIONS AGAINST RABIES.

IT is a pity that some more efficient methods cannot be taken for the extinction of rabies than those at present in vogue. The muzzling order as it now stands is very incomplete, and by its incompleteness it not only fails to effectually stamp out the disease, but also gives rise to great dissatisfaction on the part of those who keep dogs. It is quite absurd to muzzle dogs in a certain small district and limit it by definite lines, and this is pointed out in our last week's issue by our correspondents in Manchester and Ireland. At Dublin, for instance, we are told that while the South Dublin Union approves of muzzling the northern part does not, so that the consequence is that people remove the muzzles as soon as they pass over the boundary line. Such local laws are, of course, absolutely worthless and most illogical. We further learn from one of our correspondents in Ireland that a member of the profession has been strongly protesting against muzzling dogs, as in his opinion it is calculated to produce rabies and to develop in rabid dogs a tendency to bite, and also, in this gentleman's opinion, a muzzle may actually cause madness, and so rabies may develop *de novo* without contact with another diseased animal. We cannot agree with him in this theory and we cannot help thinking that a great deal of harm may be done by the spread of such ideas. If efficient muzzling were enforced throughout the country for a certain time and proper precautions taken with regard to imported dogs there is no reason why rabies in England should not become a disease of the past. The objection to muzzling is mainly the result of a morbid sentiment which considers the temporary inconvenience caused to the dogs to be of more importance than many human lives. One great good the order has certainly done: it has shown what a vast number of dogs there are which are never looked after, and the destruction of many of these has at least removed some of the dangers and nuisances which they cause.

BICYCLING FOR WOMEN.

THE April number of the *American Journal of Obstetrics* contains two articles on the question of bicycling for women. One of the papers was read before the Washington Obstetrical and Gynæcological Society by Dr. F. S. Nash in December last, and the same number of the journal contains a short report of the discussion which followed the reading of his paper. The opinions expressed in these two papers and in the discussion mentioned appear to be on the whole distinctly favourable to the use of the bicycle by women. At the same time the possibility of harm resulting was not lost sight of. It may not be out of place for us to briefly consider some of the dangers that have been suggested as likely to result. The advantages are so much in evidence that we need say very little about them. It is rather in the direction of pointing out the possible dangers that we think it may be useful to make a few observations. As regards the effect of the bicycle on the pelvis, it is to be borne in mind that the pelvis is not really mature until at least twenty years of age. Before that time its shape is decidedly influenced by pressure. One of the objections urged to the use of the bicycle has been that the tuberosities of the ischia may be pushed upwards and inwards, so as to seriously curtail the transverse diameter of the outlet of the pelvis. This view takes for granted that the rider uses a saddle that enables her to support herself actually on the ischial tuberosities, as in ordinary sitting. On the other hand, it has been urged by Dr. Nash that so long as the patient is really supported on the saddle by the ischial tuberosities alone without pressure on the perineum no harm is likely to result. It will thus be seen that those who have given careful consideration to the subject are by no means in accord in their views as to how immunity from ill-effects in bicycling may be best secured. Under the same circumstances one writer says that contraction of the pelvic outlet in the transverse diameter will result, a consequence that may be of the gravest import in a subsequent labour, while another takes the view that nothing of the kind is likely to happen. This being so, we must probably wait for further information as the result of actual experience before this and allied questions can be satisfactorily settled. In the meantime it would seem desirable that young girls especially, whose pelves are not firmly ossified, should either be advised not to use the bicycle at all, or at any rate to use it to a very moderate extent. Some of the cases in which the use of the bicycle is likely to be advantageous are those of hysteria, neurasthenia, anæmia, chlorosis, dyspepsia, constipation, or in general terms cases

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where the patient is more or less an invalid, but without the existence of any definite organic disease. We have already called attention to the opposite opinions as to the effect of bicycling on the pelvis. We may also mention that authorities are equally divided as to the effect of bicycling on the perineum, some holding that the effect of bicycling on the perineum is to render the structures of the pelvic floor dense or, indeed, almost cicatricial, and therefore extremely slow and difficult to dilate; while others hold that the effect is the exact opposite, and that, in patients who ride bicycles, the perineum actually dilates much more readily, so that the latter part of the second stage of labour is materially facilitated. There can be no doubt that bicycling during a menstrual period is unadvisable, and that to ride during pregnancy will in many women involve a special liability to the occurrence of a miscarriage or of premature labour. From what has been said it is evident that ill-effects due to bicycling may be immediate or remote. Among the more serious of the immediate consequences are the production of ante-partum hæmorrhage, or the derangement of the function of menstruation. A less important immediate consequence may be abrasion of the skin of the perineum and parts adjacent; this may probably be avoided by choosing a good form of saddle—one that presses as little as possible on the perineum. The most serious remote consequence that appears to be possible is deformity of the pelvis. At present we do not think that the occurrence of such deformity as a result of cycling has been actually proved. We publish in another column an interesting article on Perineal Pressure in Cycling by Mr. A. C. Roper. His paper is more especially concerned with the effects of cycling in men. In the concluding paragraph, however, he makes a few remarks on cycling for women, and expresses the opinion that women are less liable than men to damage from pressure. We should be disposed to take exception to this opinion. It is true, as Mr. Roper says, that in women the urethra is not much exposed to pressure and they have no prostate to be bumped about. There is, however, the effect of pressure on the shape of the pelvis to which we have referred above which has especial importance in women; and, again, if they have no prostate there are the uterus and vagina which may be displaced or prolapsed, and there are the uterine appendages which are prone to inflammatory mischief. An old-standing perimetritic inflammation may easily be stirred into renewed activity by over-exertion or imprudence, especially at or about the time of a menstrual period. We should say that there are many more possibilities of harm resulting from cycling in the case of women than in the case of men.

THE REFORMATION OF BABY-FARMING.

THE horrors which have recently come to light in connexion with baby-farming must have convinced the most indifferent observer of the necessity for employing such measures as will not only threaten, but effectually prevent, the recurrence of such barbarities. To punish the criminal is just; it is wise, also, because in some degree deterrent; but the crimes themselves, for these are but representative of a class, prove that the remedy remains to be discovered. In order to find this we must be familiar with the conditions under which the system of foster-parentage commonly maintains itself in the present day. Such conditions in very many cases are merely the effect of a too selfish regard for domestic or personal convenience. A child for some reason, usually because it is expensive or illegitimate, is considered to be superfluous and it is boarded out. The transfer is regarded as a confidential matter and is conducted as a rule with all possible secrecy. The result may be favourable to the child. In many cases it is so, for the transaction may be of a *bonâ-fide* character. In many more it is quite otherwise. After a few months it ends with the child's death, and for some impoverished parent or unwedded mother there is one incumbrance the less. To question the existence of criminal complicity in a large number of such cases would be to ignore the most patent facts of legal evidence. As to the means employed these are not always summary and certain, though the more gradual process of starvation is hardly less effectual in the end than actual violence. Wearing, as it may do, the comparatively innocent aspect of an error in judgment it is, on the whole, safer—or at all events it is supposed to be so. In judging of its real character and motive there is need of the careful examination of circumstantial data. It is only after a scrutiny of these various facts that we can find ourselves in a position to discuss the question of preventive treatment. To our own mind this does not present any very serious difficulty, but it requires to be dealt with in a decided and practical manner. We have always maintained that inspection is in such cases the key to the position but this method in order to succeed ought to be carried much further than it now is. It should be made to apply to the case of every single infant sent away from the parent to be nursed. It should take cognisance of the character of the intending custodian, of her fitness for her duties, and we may add, of the health, condition, and prospects of the infant. It should provide for periodical official supervision of the nurse and child. It would also be desirable as a safeguard, and a very simple matter, to provide the nurses with a code of instructions as to necessary points in diet and hygiene. Hitherto the State, beyond instituting a system of partial registration, has made no regular provision for the requirements of nurse-children. We trust that the evidences of legislative inadequacy which from time to time have been so painfully apparent will at length, and soon, receive that practical recognition which can alone make amends for past neglect in reference to this subject.

THE ADMINISTRATION OF THE VACCINATION ACTS IN THE COUNTY BOROUGH OF READING.

DR. ASHBY, medical officer of health for Reading, has just issued a special report on the vaccination of this county borough, and the document has interest from several points of view. Dr. Ashby first shows that the increase in the number of children unaccounted for as regards vaccination had risen from 2·0 per cent. of registered births in 1872 to 24·4 per cent. in 1894, and he calculates that this represented a remanet of 26 unvaccinated infants for 1872 and 231 for 1894. This rate of increase must mean for the period in question between 1000 and 2000 children who have no protection against small-pox. Another point well worthy of notice is the fact that certificates of so-called "insusceptibility to vaccination" are on the increase in the borough. As to this he recalls the statement in Dr. Thorne Thorne's last report to the Local Government Board, to the effect that in the hands of the several vaccinators attached to the Board's Vaccination Department there have been, within a certain term of years, over 81,500 consecutive vaccinations of children, either from arm-to-arm or from calf-to-arm, without the occurrence of a single case of "insusceptibility." And he further records that in the hands of the Public Vaccinator of Reading precisely the same result has been obtained as the result of 14,000 primary vaccinations. The obvious lesson is that insusceptibility must be regarded as all but non-existent when vaccination is performed with fresh lymph in either of the methods referred to, and that it is essentially a product of vaccination with stored lymph. And if the use of stored lymph leads so often to absolute failure at all insertions made, and this on the three consecutive occasions which alone constitute statutory insusceptibility, how

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numerous must be the occasions where one or more out of several insertions fail and only a partial protection is granted? Lastly, Dr. Ashby properly protests against the position in which a borough such as Reading with its 60,000 population is placed by the delegation of vaccination to the guardians. Not only have the town council no right of intervention in this matter in their capacity as sanitary authority, but they are actually kept in the dark as to the state of their borough as regards vaccination, and they are without remedy in the matter.

GRAVES'S DISEASE WITH UNILATERAL SIGNS.

IN a recent number of *Gräfe's Archiv für Ophthalmologie* Dr. Percy Fridenburg of New York has described an interesting case of this nature. His paper is abstracted in a recent number of the *Neurologisches Centralblatt*. The patient was a woman aged twenty-four, a member of a nervous family, whose excitability and nervousness were increased by family misfortunes, and who complained of unusual weariness, palpitation, difficulty in breathing, frequent blushing, profuse perspiration, and weakness. The palpebral aperture on the left side was distinctly widened, so that in looking straight forward the sclerotic was visible two millimetres above the border of the cornea. The globe was distinct but not very prominent, Gräfe's sign was present, and vision was normal. The face, especially on the left side, was distinctly red, and with the slightest excitement this became extremely marked. Other symptoms were as follows: Swelling of the isthmus and the right lobe of the thyroid gland, fine fibrillary tremor of the tongue and hand, strong, occasionally intermittent cardiac impulse, accentuated second sound in the pulmonary area, diffuse impulse, increased cardiac dulness to the left, and a loud bruit over the jugular vein. There was no sign of valvular defect, and the pulse was 120. Respiration was superficial. Considerable improvement took place under the influence of rest, strophanthus, and bromide. The case is an interesting example of Graves's disease in which the exophthalmos was one-sided, and the writer has collected out of the literature of the subject as many as thirteen similar cases.

A PLAGUE OF ACARI.

ONE of the weirdest conceptions of the talented writer of "The Time Machine" is the monstrously overgrown centipede putting to flight the degenerate human beings as it comes looping along with armour-plates rattling, its gigantic head towering higher than the tallest elephant. After myriads of years the indomitable insect race, breaking through the fixed limitations of the old dispensation, has at length been rewarded by corporeal growth commensurate with its courage and perseverance, while, on the other hand, pleasure-loving and pain-fearing mortals have degenerated into loathsome pigmies. It is fortunate for the inhabitants of Barfleur that Mr. Wells's blood-curdling vision is referable to the remotest future and that the barrier restraining the potentiality of the insect world not only still remains impassable, but is also likely to continue so for some considerable time to come. With marvellous suddenness an entire quarter of the ancient seaport was recently invaded by a veritable horde of acari, huge in respect of number if not individually, and plenteously endowed with the energetic, not to say aggressive, qualities so greatly belauded by the ingenious Mr. Wells. With persistency worthy of a better cause the minute raiders commenced operations by entrenching themselves securely in furniture and hangings and then sallied forth on marauding expeditions until kitchens, storerooms, and wardrobes were all occupied by outlying parties. Next they attacked the food and clothing, and finally they captured the bodies of the hapless Barfleurians themselves, establishing well-nigh ineradicable depôts wherever the presence of hair afforded them facilities. In one particular alone could it be said that the intrusive mites were deserving of commendation. Contrary to the customs prevailing among certain of their congeners they refrained from burrowing beneath the epidermis of their unwilling hosts, who consequently, as the account now before us has it, remained free from cutaneous lesions. Had the very vigorous invaders taken to sinking tunnels after the fashion of their allies, the Sarcoptes scabiei, the condition of the Barfleurians would have been truly appalling, for even as it was the irritation, mental as well as corporeal, due to their ubiquitous tormentors became so unbearable that the prefect had to be invoked on the principle of the *deus ex machinâ*. Barfleur, however, boasts of a Conseil d'Hygiène, and very naturally the provincial ruler referred the matter to that learned body for investigation and report. The contaminated houses were accordingly noted and disinfected, but the results were negative. Nothing was capable of dislodging the pertinacious and impertinent creatures, which actually seemed to thrive on the means adopted for their repression. At length, tired of the contest, the local authorities appealed to the Natural History Museum of Paris, begging for advice as to the best way of obtaining deliverance from this incubus. In the opinion of the museum *savants* the intruders were closely allied to the acari which are to be met with in places where organic matter is slowly undergoing the process of dry putrefaction—as, for example, in herbaria or on anatomical preparations, stuffed birds, mummies, preserves, dried and candied fruits, &c.—but inasmuch as the precise species could not be determined at a distance an expert would be designated to hold an investigation on the spot. M. Perrier having been selected for the duty consequently proceeded to Barfleur, and after some time succeeded in completely unmasking the enemy. The acarus by which Barfleur has been so seriously disturbed turns out to be the Glyciphagus domesticus, a variety hitherto regarded as extremely rare; but although it might have been thought soothing to the feelings of the victims to learn that their visitors were such distinguished members of the Arachnidæ, they were nevertheless prosaic enough to maintain that the chief matter at issue was how to get rid of them. On this point, however, they were speedily reassured by the museum authorities, who drew attention to the fact, which apparently was outside the ken of the Conseil d'Hygiène, that the sulphur treatment systematically employed is almost infallible. Further interesting details will be found in our Paris correspondent's letter in THE LANCET of May 9th.

PREVENTION OF CRUELTY TO CHILDREN.

THAT admirable body "The National Society for the Prevention of Cruelty to Children" held its annual public meeting upon May 12th at the Mansion House, and we are glad to see that the society is flourishing, although the mere fact of its existence discloses a most lamentable state of things. Sir Richard Webster in moving a resolution pointed out that although the society had an exceedingly difficult task to perform, and although naturally they occasionally made mistakes, yet in the cases which they brought before the courts 96 per cent. convictions were obtained. We have lately commented in these columns upon some specially gross cases of cruelty, and it is gratifying to think how much brutality has been stopped from going further, how many human fiends have been punished and, we hope, made to pause and consider before beginning systematic torture by the operation of this society. We are glad to see that funds are plentiful and that the society has become national, with

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a Royal charter, instead of metropolitan. Its objects appeal to every class, a distinction which it shares with perhaps only one other society, the National Lifeboat Institution. In nearly every other organisation the faddist can find something to cavil at. In most the religious apple of discord comes in, and even in such a matter as strengthening of the navy some well meaning fanatics see harm. But the bringing about the comfort and happiness of a helpless child is a matter which must appeal to everyone. Not that we object to corporal punishment for unruly children, be they the offspring of a duke or a dustman, holding with the remark of a great authority—"Cocker thy child and he shall make thee afraid, but beat him on the sides when he is young lest he wax stubborn and regard thee not." But wholesome discipline is a very different thing from cruelty.

PURCHASE OF THE SMALL-POX HOSPITAL BY THE ISLINGTON GUARDIANS.

THE guardians of Islington have agreed with the trustees of the Small-pox Hospital of Highgate to purchase the hospital with the nine acres of ground in which it stands on the hill for the sum of £52,000. We intimated some weeks ago that this seemed to be the best way for the guardians out of a muddle into which they had been brought by various circumstances and qualities which we need not describe, but which was seriously affecting their reputation as men of business and the interests of the huge number of poor committed to their charge. It is only fair to say that a leading member, who had charged himself with the responsibility of a most inadequate, temporary, and costly scheme, at once abandoned it in favour of purchase of the hospital, and so hastened the termination of a discussion which has lasted for years and has seriously compromised the reputation of the board as regards fitness for the enormous administrative duties which it has to discharge. We can only hope that with this purchase a new spirit of usefulness will prevail and that in the management of the sick poor of the largest parish in the United Kingdom an example of generous economy will be set which will command an extensive following.

VITALITY OF THE DIPHTHERITIC BACILLUS OUT OF THE BODY.

FLÜGGE in his *Grundriss der Hygiene*, published in 1889, stated that the microbes of diphtheria retained their virulence for ten days in the form of dust and from four to six weeks if dried in dense layers; but in a paper on the means by which the disease is spread, which appeared in the *Archiv für Hygiene* in 1894,[1] he expresses his incredulity as to aerial diffusion of diphtheria beyond the range of personal intercourse on the ground that the degree of desiccation required for the floating and conveyance of the bacilli in currents of air would be fatal to them. Roux and Yersin and Pernice and Scagliosi had carried out some experiments with portions of the membrane, but Carlo Reyes, deeming these unsatisfactory, since it was not by such means but rather by the saliva, mucous discharges, and similar fluids that the infection took place, undertook an inquiry into the subject, using pieces of linen or cotton, silk, paper, sand, and finely pulverised and sifted earth, which he saturated with emulsions in water of pure cultures of great virulence. These materials were allowed to dry spontaneously and were then exposed to light or were kept in darkness in air of the normal humidity at ordinary temperatures, or maintained in a state of saturation; and in atmospheres artificially dried by H_2SO_4 or kept at a constant temperature of 37° C. His results, which appear in the *Annali d'Igiene Sperimentale*,[2] show that in chemically and absolutely dried air Löffler's bacilli died in all cases within a few hours, forty-eight at the most; that light had, as a rule, but little influence; that under other conditions they retained their vitality on silk and paper for a few days only in dry, and for about a week in moist, air; on cotton or linen for from five to eighteen days, longer when moist than when dry; in sand, exposed to light and with a dry atmosphere for five days only, but, in darkness, for sixteen or eighteen days, and as long again with a moist atmosphere; while in fine earth they retained their vitality for from 75 to 105 days in dry air and were still active in damp air after 120 days. He also exposed vessels of water at different heights above the floor to dry dust containing living microbes raised by draughts produced by mechanical means, with the result that cultures were successfully obtained from most, thus demonstrating not only the possibility of the aerial diffusion of the virus for various periods, but its persistence in moist earth for an almost indefinite time. Though, as a rule, he observed a progressive attenuation of the virus, the fact that in moist earth, which had previously been desiccated so as to permit of its reduction to an impalpable powder, the microbes were still living after the lapse of 120 days suggests the possibility of their permanent existence and reproduction in soil charged with pabulum in the form of decomposing organic matter; in other words, that diphtheria may be one of those filth diseases in the life-history of whose microbes their parasiticism is an accidental stage.

[1] Band xvii., p. 403.

"THE PLAINS OF AUSTRALIA."

THE place occupied by Australia as a health resort makes Mr. Boxall's article on "The Plains of Australia" in the *Contemporary Review* interesting to medical readers. "The mammals of Australia," says the writer, "represent the early tertiary or kainozoic age, and it may be reasonably assumed that the land in which they dwell afforded, in its original condition, before it was brought under the influence of the white man, an excellent opportunity for estimating what the condition of the earth was in other continents during the marsupial era or before the evolution of the great ruminant families." In the early days of Australian colonisation the land in the plains of the interior was regarded as "rotten," and the opinion was generally held that it would never be fit for occupation. But on these vast plains a hundred million of sheep are now pastured besides large numbers of cattle and horses. There is a consensus of opinion that when the early explorers penetrated to these plains they found them barren and inhospitable, almost utterly waterless, practically without inhabitant, and the soil so soft and insecure that horses and carts sank deeply into it. But these plains—or at least those portions of them which lie on the edge of the settled districts—are now talked of as the future granary of Australia when the proposed irrigation schemes are completed, and the change, in Mr. Boxall's view, is simply due to the trampling of innumerable sheep and cattle. It is believed that a range of mountains once stretched across the Australian continent from east to west, and that it has disappeared by denudation, the material of which it was composed having been slowly carried away by flood waters and deposited as sediment over vast areas. "In other lands where similar deposits were formed they were trampled down and consolidated, stratum by stratum, by herds of elephants, camels, llama, buffalo, bison, oxen, sheep, deer, and other highly gregarious animals. In Australia the kangaroo was incapable of performing a similar work. The kangaroo is not gregarious to

[2] Vol. v., 1895.

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the same extent as the sheep or deer. Out on the plains only four or five are seen together even now. Before the advent of the white man with his flocks and herds the kangaroo only ranged in the neighbourhood of permanent water where the land was firm enough to support him. No doubt, when he was driven out on the rotten ground by dog or man, the great bird-like claw on his hind leg afforded a better support than the hoof of the sheep or bullock. The great strength capable of being exerted in the hind leg of the kangaroo would also enable him to extricate himself from a bog more easily than animals of a higher type of development. His short forepaws would be useful in 'clawing' himself along over rotten ground. But kangaroos do not follow each other and make tracks, and this is how the sedimentary deposits of the Ganges, the Nile, the Amazon, the Mississippi, and other deltas have been principally consolidated and compacted." The "rottenness" of the soil of the Australian plains in the early days of colonisation is shown by such facts as that a walking-stick could be thrust its full length into what looked like solid earth without using any special effort, a horse or bullock sunk up to his belly in the soil, and a full-woolled sheep could not extricate itself but had to be rescued. While this condition of things lasted the land was not flooded, as the waters sank into the porous earth and left their sediment resting lightly on the top. It is believed that these waters escape somewhere to the ocean, and in the Mount Gambier district water has been found running in underground channels at the rate of four or five miles an hour. Irrigation is alone required to make the Australian plains productive. "The plains of Australia," concludes Mr. Boxall, "are singularly alike, and if the plains of Northern and Western Australia can be consolidated by the trampling of stock, as I believe those of the eastern districts have been, the time is not far distant when the word 'desert' may be wiped off the map of Australia, and the true character of its vast plains become more generally understood and appreciated."

"PSEUDO-ACTINOMYCOSIS."

IN the *Russian Archives of Pathology, Clinical Medicine, and Bacteriology* Dr. T. G. Savchenko relates an interesting case of what, clinically speaking, was actinomycosis, but which differed from ordinary forms of this affection in its pathological course. Dr. Savchenko has seen several cases in Kieff and all except this one were due to fungi as ordinarily described. The patient was a peasant thirty years of age who had passed through his period of military service and had afterwards worked in the fields, being, in fact, in robust health until his illness began, which was about May, 1893, when he began to feel pain in his back. Subsequently a tumour appeared on the left side of the chest, which ultimately burst the skin and discharged large quantities of pus. When admitted into the St. Cyril Hospital, Kieff, in September, 1893, the tumour—which extended from the sternum to the left axilla and from the clavicle to the fifth intercostal space—was firm and covered by bluish-red skin. There were four sinuses with everted discoloured edges, from which pus with a peculiar disagreeable smell was discharged, together with a large number of whitish granules. There was but little cough and no sputum. The lungs gave no indication of disease and the urine was free from albumin and casts. New abscesses continued to form in the part affected and more than one operation was performed, but by April, 1895, the patient was discharged practically cured. The unpleasant-smelling pus was present throughout the whole course of the disease. It was significant, too, that the granulations occupying the sinuses were of a brown colour, very easily broken down, and contained a large quantity of blood. The chief interest of the case lies in the microscopic and bacteriological examination. When examined with low powers the granules did not look unlike those of actinomycosis, but when high powers were used it was seen that they were totally distinct, being, in fact, zooglœa made up of numbers of bacteria differing from one another in size. Bacilli were also contained in the pus apart from the granules, some being free and others within leucocytes. The bacteria were all stained by aniline colours, but not by the Gram stain. When isolated they were found to be absolutely anaerobic and never formed colonies on the surface of nutrient media. In glycerin jelly isolated granules were formed consisting of bacilli. A rabbit inoculated with a pure culture always presented an abscess in which the same bacilli, sometimes massed in zooglœa, were found, and always had the specific smell which was noticed in the patient and which was always present in the cultures. Dr. Savchenko proposes for this affection the term "bacillary pseudo-actinomycosis."

IMPROVEMENTS IN THE NEW PHOTOGRAPHY.

WE mentioned three weeks ago some experiments which we made with some sensitised metal plates submitted to us by Mr. Strauss Collin of Bush-lane House, Cannon-street, E.C. We have since obtained excellent results with these in THE LANCET Laboratory. They are developed in the ordinary way, using "rodinal" preferably as a developer, and fixed in the hyposulphite bath. Very thorough washing is the next step. The image which first appears on developing vanishes in the hyposulphite solution. When the plate, after washing, is, however, placed in a solution of perchloride of mercury the image reappears with great distinctness and with excellent detail. For medical work the employment of these plates offers undoubted advantages. Thus the thin sheeting upon which the sensitised film is spread may be adapted to any shape, and, unlike glass plates, is not easily fractured, so that it may be placed under the body of a patient without risk of breaking. Moreover, as will be gathered from the foregoing description of the process of development, a positive not unlike a ferrotype is at once obtained. The "tones" are good and the plates fairly rapid, the exposure we adopted in the case of the ankle being three minutes.

EXCITABILITY OF NERVES AFTER SECTION.

IN the *Archives de Physiologie* a paper by Arloing recently appeared in which were detailed a number of important experiments in reference to the duration of the excitability of the peripheral end of a cut nerve in warm-blooded animals. An abstract of this paper was published in the last number of the *Neurologisches Centralblatt*. Waller and Ranvier showed long ago that in pigeons and rodents excitability rapidly disappeared—in the course of two or three days. Arloing has investigated this variation very carefully, and according to his experiments the excitability of the peripheral end of the cut facial nerves in ungulates disappears in from eight to ten days. Microscopical examination of the nerve at this period shows disintegration of the myelin into drops in places, while at other parts the myelin is intact or shows only some irregularity of its borders. The individual differences are very striking. Thus in one case the peripheral end of the facial nerve was found excitable thirty days after section. In the same individual also the different nerves showed different conditions. Thus in a dog the facial nerve was excitable at its peripheral end five days after section, while at this time the median nerve was not excitable. As a rule the excitability of the cranial nerves took longer to disappear than that of the spinal nerves. In the same nerves also the different bundles lost their excitability at different periods. For

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instance, in the vagus the inhibitory nerves of the heart died first, next the motor nerves for the œsophagus and larynx, while the accelerator fibres for the heart lost their excitability distinctly later, and last of all to die was a peculiar bundle, excitation of which brought about arrest of the heart in systole. This is the bundle which Arloing has already described as the "ordinary motor nerve of the heart muscle."

SIR JOHN MILLAIS.

IN view of the many unfounded rumours which are rife concerning the condition of Sir John Millais we think it right to state that the condition of affairs is as follows. On the night of Saturday, May 9th, urgent dyspnœa set in. This gradually increased, and early on Sunday morning Mr. Treves, assisted by Mr. G. H. Hames, considered it necessary to perform a tracheotomy. Sir John Millais was much relieved by the operation and has since gone on well. He sleeps well, and there are no chest complications. In addition to Mr. Treves and Mr. Hames, Sir Richard Quain is in attendance.

THE MEDICAL OFFICER OF THE ADMINISTRATIVE COUNTY OF LONDON.

THE average ratepayer is apt, and with good reason, to kick against the constantly increasing expenditure of the London County Council. But we fancy that the increase in the salary of the medical-officer, Mr. Shirley Murphy, from £1000 to £1250 will meet with nothing but approval. The medical and hygienic work of the London County Council is enormous, and the admirable way in which Mr. Shirley Murphy and his assistants direct it is well known. We are glad to see that an amendment to increase the salary to £1200 by an annual rise of £50 was negatived and the committee's original recommendation carried by 70 votes to 31.

PREVENTION OF HÆMORRHAGE IN DISARTICULATION AT THE HIP-JOINT.

AMPUTATION at the hip-joint has always been accompanied by a very high mortality, and two causes especially can be assigned to this great death-rate—namely, infection and shock. The deaths due to infection are now much less frequent than they were in the pre-antiseptic days, but shock still remains responsible for a very large proportion of deaths. A great part of this shock is caused by the large amount of blood which is so often lost at this operation, and many attempts have been made to diminish the hæmorrhage. One of the most recent methods was brought forward by Dr. V. Chalot, Professor of Clinical Surgery at the Faculty of Medicine of Toulouse, at the Huitième Congrès de Chirurgie, held at Lyons. He suggests that a slightly curved incision, four or five centimetres in length, should be made about two centimetres internal to the anterior superior iliac spine, and the anterior abdominal muscles then divided, so that the peritoneum can be gently raised from the iliac fossa. When this is done the common iliac artery can be felt on the inner border of the psoas muscle. An assistant places on the artery the tips of the middle and ring fingers of the left hand for the right side of the patient, and of the right hand for the left side, at the same time grasping the iliac crest with the forefinger and the thumb, while the little finger rests on the abdominal wall. The compression is made against the ala of the sacrum, and its efficacy is judged by the cessation of the femoral pulsation. The amputation is then proceeded with in the ordinary way. Dr. Chalot quoted a case in which he had employed this method with success, and with only a small amount of hæmorrhage.

THE HEALTH OF SIR J. RUSSELL REYNOLDS.

THE news which was announced at the beginning of the week of the serious illness of Sir J. Russell Reynolds came as a surprise to all but a few who were very well informed. His request that he should not be re-elected as President of the Royal College of Physicians of London might have been taken as a preparation for the bad tidings, for he was not the man to escape responsibilities that he had once accepted until it had become clear to him that to burden himself further with them would be wrong. But his indisposition was so ill defined and the absence of important indications of any organic mischief so entire that the serious symptoms which set in last Saturday night were as unexpected as alarming. But they were not without a definite cause. Sir J. Russell Reynolds had improved under rest, care, and change of air, but on April 23rd, after seeing some patients at home, he returned from a drive, and in alighting from his carriage slipped on his own doorstep. This accident, unfortunately, caused him to be confined to bed, and consequent on the shock and increasing weakness pulmonary complications supervened. We are very glad to be able to announce that a slight improvement, shown by the abatement of temperature and the diminished frequency of respiration, which took place on Monday has been maintained; and although the patient's condition is still one to cause the deepest anxiety, his medical advisers now allow us to hope that the rally is perhaps not temporary but the commencement of a return to strength. Dr. Barlow and Dr. Buzzard have seen Sir J. Russell Reynolds regularly with Mr. Cooper Bentham, who has been in constant and assiduous attention. Dr. Wilks and Dr. Gowers have also seen Sir J. Russell Reynolds in consultation.

THE annual general meeting of the Pathological Society of London for the election of officers and council, and other business, will be held at 20, Hanover-square on May 19th, at 8.30 P.M. Mr. Stanley Boyd will propose the following resolution: "That in the opinion of this meeting it is expedient that ladies, who are duly qualified medical practitioners, should be eligible for the membership of this society." The result of the voting on this motion will be awaited by the profession with no little interest and curiosity. By the way, why do not the ladies unite to form a medical society of their own? Some doubt seems to be felt as to whether the medical societies will follow the example set them by the British Medical Association.

MR. CHAMBERLAIN has been informed by telegram from the Governor of Hong-Kong that seventy-four fresh cases of bubonic plague occurred in the colony in the week ending May 12th, and that the number of deaths from the plague in the same period was sixty-four.

DR. GEORGE OLIVER will deliver the Croonian Lectures—A Contribution to the Study of the Blood and of the Circulation—at the Royal College of Physicians of London, Pall Mall East, on June 2nd, 4th, 9th, and 11th. The lectures will commence at 5 P.M.

DR. JOHN ANDERSON, C.I.E., M.D. St. And., F.R.C.P. Lond., Physician to the Seamen's *Dreadnought* Hospital, has been appointed Lecturer on Diseases of Tropical Climates at St. Mary's Hospital Medical School.

MR. A. PEARCE GOULD has been appointed Surgeon to the Middlesex Hospital.

THE annual dinner of old students of King's College,

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London, will be held at the Holborn Restaurant on Monday, June 29th, Sir Benjamin Baker, K.C.M.G., LL.D., F.R.S., President of the Institution of Civil Engineers, in the chair.

Pharmacology and Therapeutics.

PHARMACY IN JERSEY.

WE have received a copy of the proposed Bill to Regulate the Practice of Pharmacy and the Sale of Poisons in Jersey, and cordially welcome it as an effort to put the work of the druggist there more in line with the conditions which control the practice of pharmacy in this country. The Bill provides for the proper qualification of those acting as chemists or druggists, but the qualifications recognised include those of the Schools of Pharmacy of the University of France in addition to those granted by the Pharmaceutical Society of Great Britain or the Pharmaceutical Society of Ireland. A register is to be kept of all those to whom permission to practise has been granted, and it is to state the title or qualification in each case. To prevent hardship the new Act will not apply in these respects to those chemists and druggists who are already practising in Jersey. A further act of grace enables the legal representatives of a chemist or druggist who has practised his profession in the island to continue the business after his death, but it necessitates the employment of an assistant who is in all respects qualified and authorised to act as a chemist and druggist. Provisions which closely follow those in force in this country safeguard the sale of poisons, whether wholesale or retail, and the Bill includes a list of poisons, and the usual precautions are taken to prevent the sale of the more active and dangerous poisons to minors aged less than sixteen years or to persons unknown to the vendor. It is satisfactory to find that preparations used or sold for the destruction of vermin are included in this list. Medicines containing a poison or poisons prepared by a medical man, or by a chemist or druggist when prepared after a medical prescription, are exempt from the restrictions ordinarily affecting the sale of poisons, provided that a copy of the prescription is kept by the vendor. Nothing is said in this connexion of the importance of marking the prescription with a date each time it is brought to the druggist, a small precaution which would be for the public safety in dealings with poisons. The concluding articles of the Bill refer to the penalties incurred by contraventions of the regulations. The proposed Act is so liberal in dealing with vested interests and so essential for the protection of the druggist and the public that it should meet with no opposition and but few amendments.

ELDER BARK AS A DIURETIC.

M. Lemoine, Professor of Clinical Medicine in the Medical Faculty of Lille, has recently revived the practice of employing the elder (sambucus niger) as a diuretic. Some years ago he was much struck with the efficacy of a decoction of elder bark in a case of general anasarca with pulmonary œdema and ascites due to subacute nephritis in which several ordinary diuretics had failed. The first day of the treatment by elder the urine, which had been very scanty, rose to 400 grammes, the next to 1500 grammes, and at the end of a week's treatment to 3500 grammes. Since that time M. Lemoine has had occasion to use this remedy frequently for œdema or ascites due to heart or kidney troubles, and it has almost invariably been successful in increasing the quantity of urine passed. At his request Dr. Combermale has made a series of experiments on animals. He finds that infusions and decoctions of the inner bark are more active than those of the outer bark. Latterly M. Lemoine has employed an alcoholic extract of the inner bark, sometimes prescribing it alone, sometimes alternately with digitalis or caffein, the effects of which it serves to prolong and increase. There do not seem to be any distinct contra-indications to its use and it does not produce any unpleasant head or lung symptoms. It may, however, sometimes cause diarrhœa or increase it if already existing.

POISONING WITH PIPERAZINE.

In the American *Medical News* Dr. Slaughter of Philadelphia relates the case of a young married woman aged thirty-two who, through a druggist's blunder, received one dose of piperazine of twenty grains. Some hours later, when the patient was seen by Dr. Slaughter, she was much cyanosed and in a serious comatose condition. The pupils were much contracted, the pulse gave 50 beats to the minute, and the temperature was 97·4° F. The respirations also were slow and there was low muttering delirium. The tips of the fingers were cyanotic and there was loss of motion but not of sensation in the lower limbs. Cardiac and other stimulants were at once energetically used, while the limbs were elevated and external heat was applied. A stimulating rectal injection was also given and the catheter was used. There was paraplegia, afterwards treated by massage and large doses of strychnia. Recovery was perfect.

APOCYNUM CANNABINUM.

Apocynum cannabinum, which in America is called Indian hemp, has long been used as a diuretic and indeed is included in the United States pharmacopœia. Its value in general dropsy due to renal disease gained for it the name of "the vegetable trocar" from Dr. Rush.[1] Its physiological properties have recently been investigated by Dr. Dortschewski, who agrees with American observers that the most active portion of the plant, from a pharmacological point of view, is the cortex of the root. An extract was prepared from this and diluted with from ten to twenty times its volume of water. Less than 100 cubic centimètres of this diluted extract was sufficient to kill a medium-sized dog. The effect was to increase the blood pressure and to cause the heart's beat to become at first slower, stronger, and reduplicated, but subsequently rapid and irregular until the animal died. The effects were due to the action of the drug on the motor centres of the brain and spinal cord, the slowing of the pulse being caused by the stimulation and its rapidity by paralysis of the pneumogastric centres. The increased blood pressure, too, was due to the contraction of the peripheral arteries from central action. In clinical practice it was found that patients with cardiac mischief could take from five to ten drops three times daily with marked advantage. Larger doses were apt to cause nausea and vomiting.

ESSENTIAL OIL OF GARLIC IN PHTHISIS.

Dr. Séjournet of Revin communicates to the *Union Médicale du Nord-Est* some account of the effects he has obtained by treating phthisical patients with garlic. The preparation he used was the essential oil of garlic, that is to say, the sulphide of allyl, which he mixed with 200 times its weight of sterilised olive oil, the mixture being called by him "scoradine." A cubic centimetre of this was injected under the skin below the spine of the scapula, at first at intervals of some days and afterwards when the patients were able to tolerate it every day. Under this treatment the general condition improved in a marked degree and the local signs of the disease became modified. Sixteen patients have been treated in this way with excellent results.

[1] See THE LANCET, March 13th, 1886, p. 508.

THE HEALTH SECTION AT THE CARDIFF EXHIBITION.—The Cardiff Exhibition, which was opened by Lord Windsor on May 2nd, contains an interesting health section, the exhibits of which have been so numerous that the committee have had to nearly double the extent of the accommodation. It contains several sanitary appliances, and amongst other features may be mentioned the various processes adopted for freezing meat and the destructive distillation of wood. A model hospital is fitted up and the daily working and routine is shown. It is proposed to give a series of lectures on 'First-aid" in connexion with the St. John Ambulance Association. In another section scientific instruments are shown, and although the space is very limited the committee, of which Mr. E. T. Collins, M.R C.S. Eng., is secretary, have succeeded in bringing together an interesting collection. The profits of the exhibition, on which £100,000 has been expended, will be divided between the Cardiff Free Museum, the Free Library, and the charities of the town.

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THOMAS WAKLEY,

THE FOUNDER OF "THE LANCET."

A BIOGRAPHY.[1]

CHAPTER XIX.

The Offensive By-law.—Its Effect on the Private Schools.—More Letters of "Brutus."—The Sorest Point with the Members.—Dr. John Armstrong's Pamphlet.—A General Meeting of the Profession suggested.

ON March 19th, 1824, a manifesto was issued from the Royal College of Surgeons of England, which was stated by the authorities of the corporation to have been promulgated "in pursuance of the duty of the Court of Examiners." This manifesto contained the by-law to which allusion was made in the previous chapter and which was found by Wakley's reforming spirit as well as by his personal interest to be so very offensive. The wording of the by-law was as follows:—

"That certificates of attendance at lectures on anatomy, physiology, the theory and practice of surgery, and of the performance of dissections be not received by the Court except from the appointed professors of anatomy and surgery in the University of Dublin, Edinburgh, Glasgow, or Aberdeen, or from persons teaching in a school acknowledged by the medical establishment of one of the recognised hospitals, or from persons being physicians or surgeons to any of these hospitals."

As has been said, Wakley's first objection to this by-law was that it conferred on the metropolitan hospital surgeons and lecturers an increased authority. It virtually gave them a complete monopoly in the surgical education of the London student, and this at a time when Wakley was attempting to show in the columns of THE LANCET, and making a very successful attempt also, that the metropolitan hospital surgeons were selected upon corrupt principles, and that no one therefore need be surprised if they should be found unable to discharge their duties properly either towards the sick, the student, or the public. From discussing the by-law from this point of view such a disputant as Wakley was bound to pass almost immediately to its more general consideration. We find him at once discussing the *personnel* of the Court of Examiners and the methods which had dictated their election until, by swift retrogression, he reaches the constitution of the College.

The Court of Examiners who had "pursued their duty" in issuing this by-law was constituted as follows:—Sir Astley Cooper, Mr. Abernethy, Sir Everard Home, Sir William Blizzard, Mr. Cline, Sir David Dundas, Mr. Forster, Sir Ludford Harvey, Mr. Lynn and Mr. Norris; and every one of these gentlemen was a past or present lecturer at a hospital school, and directly or indirectly a pecuniary beneficiaire under the working of the new law. The real purpose of the objectionable by-law was, in fact, to aggrandise the hospital surgeon. It was not only that it placed the exceedingly lucrative post of lecturer at his disposal, but it gave him a monopoly. He was not put into competition with the outside lecturers. Here Wakley's personal feelings no doubt dictated his inimical view. He was himself, as we have already said, largely educated at a school, the Webb-street School, attached to the Borough Hospitals, but only informally. Most of the students at this school were young men who were walking the wards of Guy's Hospital or St. Thomas's Hospital, but they were not compelled to take out their anatomy course with the Graingers, who conducted the Webb-street School; on the contrary, at Guy's Hospital Mr. Aston Key and Mr. Bransby Cooper were lecturing in anatomy; while at St. Thomas's Hospital Mr. Joseph Henry Green and Mr. Flint South were prepared to instruct the student in the same subject; and, as an additional facility to the student of the Borough Hospitals, if he had paid his fee as a perpetual student at the school of either hospital he could attend whichever anatomical course he chose. In spite of the embarrassment of riches that is suggested by a choice of four authorised demonstrators at the regular schools it was a fact that the majority of the Borough students joined the Webb-street School, as Wakley had done, for the brothers Edward and Richard Grainger—exceedingly able anatomists—had a reputation as instructors that entirely put in the shade that of the four members of the combined staff of the Borough Hospitals. Consequently many fees found their way to Webb-street that should have gone to the Borough Hospitals. Now the by-law would prevent this. It would make the brothers Grainger mere coaches, whose certificates of attendance had no real value. Similarly, Mr. Joshua Brookes, of the Theatre of Anatomy in Blenheim-street, and Mr. Carpue, whose headquarters were at Dean-street, also in Soho, were deprived of their status as official lecturers.

Now, these men, like the Graingers, were among the finest anatomists in England, and instructed the majority of the students at St. George's and Middlesex Hospitals and many from other less adjacent schools while of the four hospital lecturers Mr. Green alone could be considered a first-class anatomist. Curiously enough Mr. Green's class suffered most under the system of free trade, for the competition of the Graingers, who had more to offer and at a lower figure, had told so severely upon the St. Thomas's School that, according to Wakley, who was in the habit, it must be remembered, of constantly attending the lecture-rooms of all the schools, public and proprietary, Mr. Green's post was becoming a sinecure. This struck Wakley as in no way regrettable, and merely a very proper example of the survival of the fittest, (though the phrase had not then been coined). Therefore he saw in the by-law an unfair attempt to bolster up the incompetent hospital official and give him a monopoly in a lucrative business which he had not had enough wits to keep by his own exertion in fair competition. The hospital official had, in short, to be protected against the outside lecturer. Furthermore, Wakley considered that the authorities of the Royal College of Surgeons of England had betrayed their position by thus sanctioning a piece of legislation so wholly in the private favour of hospital surgeons and so inimical to the interests both of their commonalty and of the students from whom their coffers were repleted. For it must be remembered that not only were the outside schools cheaper to attend, but they were open all the year round, while the anatomical lectures at the hospitals were only delivered during the winter season. The evils arising from a measure condemning the students to attend the lectures of the hospital officials only were, said Wakley, twofold—unnecessary delay and increased expense, for they would be compelled to spend more time in London. He did not consider it reasonable that every student should be put to an expense of over £100 in order to pour money into the pockets of the gentlemen from whom the Court of Examiners were chosen—viz., the hospital lecturers—and whose by-law in their own interest the College was asked to ratify. He expressed his opinion both with voice and pen that the profession as a whole should petition Parliament to abrogate the existing Charter and grant a new one, in which it should be a fundamental principle that any

[1] Chapters I., II., III., IV., V., VI., VII., VIII., IX., X., XI., XII., XIII., XIV., XV., XVI., XVII., and XVIII. were published in THE LANCET, Jan. 4th, 11th, 18th, and 25th, Feb. 1st, 8th, 15th, 22nd, and 29th, March 7th, 14th, 21st, and 28th, April 4th, 11th, 18th, and 25th, and May 2nd respectively.

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person to whom the power was given of making by-laws should be elected by the whole body of Members and not by each other, as was the case with the Court of Examiners. This was the course of events which led Wakley to inquire into the constitution of the College, to print its charter, and to promise to spare no pains to make clear to the medical profession that he considered the existing authorities of the College to have abused their position. These are the stages by which he passed from a habit of criticising the College as the stronghold of his declared foes, the hospital surgeons, into a deliberate intent to show it as a constitutionally rotten concern, badly behaved, and of evil pedigree.

During the year 1825 letters from "Brutus" were inserted several times and always showed the intimate knowledge of the constitutional history of the Royal College of Surgeons of England that the communication from the same pen which has already been quoted so obviously displayed. The College, "Brutus" maintained, had virtually formed itself out of the old company without any consultation with the Members—i.e., the commonalty—and the spirit of exclusiveness thus immorally and even illegally shown had been imported into the management of the new corporation. The Court of Assistants and Examiners of the Royal College of Surgeons of England, who were placed by the Charter in the position of trustees for the members of the corporation in general, were found to have abused their trust in every direction. Presented by Government with Hunter's splendid anatomical collection, the Museum had been at once rendered by stupid restrictive regulations inaccessible to the Members for eight months in the year, while no attempt to make it more useful to students by supplying a descriptive catalogue had been entered upon. The great John Hunter's work had been accepted by the Court because it was worth a large sum of money; they at once proceeded to render it valueless by withdrawing it as far as possible from all chances of intelligent notice. The Library, which it was often promised should be thrown open to the Members, had been kept for the sole use of the Court of Assistants. The pecuniary status of the College, which was concealed from the Members, whose fees were taken and nothing rendered them in return, was laid bare by "Brutus." Since the year 1797 the receipts of the College upon a moderate calculation must have exceeded £150,000, and of this sum £32,000 must have been appropriated to the private use of the examiners, so that the concealment of the auditors' accounts had obvious reason. The Members who really supported the College entirely by their fees were excluded from all voice in their own affairs; they were obliged to obtain certificates before being examined from certain persons especially chosen by the College for reasons other than their merits; and, lastly, they could only enter their own building by the back door at stated hours.

The publication of these letters aroused great excitement in the profession, and many communications were written to THE LANCET and privately to Wakley in a similar strain, some enlarging on one grievance and some on another, but all persistently dwelling upon the last two in the category extracted from "Brutus's" bitter epistles. It was an impertinence that every Member felt personally that he should be sent round to the back door of his own College; while the greediness and injustice of the by-law with regard to the certificates of attendance at lectures was very keenly felt by many. In particular the pettiest grievance of all, the fact that the front door of the building in Lincoln's-inn-fields was closed to them rankled in the breasts of the Members. From all parts of England the general practitioners wrote to Wakley to complain of this impertinent distinction between themselves and men whose only claim to superiority was in many instances to be found in their relationship to some inept hospital surgeon or the longer purses of the parents who provided them with education. Some of them thought that the history of the Charter was discreditable, and many of them grumbled at the large fees that were exacted from them, but all who put pen to paper on the subject of their College—and it was a large number—based their support of a reforming movement chiefly upon their intention to obtain the right to go into their own College by the front door. One such letter is worth printing if only that it contains a tribute of personal respect that might have inspired Mr. Sampson's opinion of Mrs. Wilfer. "With every sentiment of respect for you, you know, ma'am—vipers really doesn't do you credit," said that *naïf* gentleman, it may be remembered, to his future mother-in-law; and Mr. James Morss Churchill wrote with something of the same simplicity to Sir Anthony Carlisle:—

To Sir A. Carlisle.

SIR,—When you delivered the Hunterian Oration two or three years ago I was one of your hearers, and was exceedingly gratified by it; and it is out of no personal disrespect to you either as a man or as a surgeon that I signify to you my intention of not being present at the next anniversary; for, independently of the detestation with which I view the various disgraceful and arbitrary acts which proceed continually from the corporate body of the College of Surgeons, I consider it extremely degrading to pass down Portugal-street, celebrated only for its stables, butchers' shambles, and dirt, that I may enter the *back* door of a building which has a handsome portal, through which pass none but a self-elected body of about twenty individuals and some of their very particular friends.

I for one protest against such uncalled-for distinctions and thus set an example which I trust will be followed.

I am, Sir, your humble and obedient servant,

JAMES MORSS CHURCHILL.[2]

In the meantime Wakley and his correspondents in THE LANCET were not the only critics of the action of the College of Surgeons in issuing the by-law concerning certificates for students. A pamphlet had been published by a Dr. John Armstrong dealing very roughly with the action of the College in issuing the offending by-law. Dr. John Armstrong was lecturer on the Principles and Practice of Physics at the Webb-street School, where the brothers Grainger were the proprietors and chief lecturers, so that his opinions could not be considered unbiased. The Graingers were the persons most clearly aimed at by the by-law—or rather, to those who believed that the motives of the Court of Examiners in making such a by-law were wholly corrupt the Graingers must have seemed to be the particular individuals most hardly used; therefore their colleague's opinions were necessarily received with caution. Another intimate friend of Dr. Armstrong, a Mr. Bennett, was also a well-known lecturer whose certificates were rendered valueless by the new regulations, and his case is quoted in the pamphlet as one of particular hardship. Dr. Armstrong's work was, therefore, regarded by the College as the outcome of mere partisanship. Wakley said that he saw no reason whatever to doubt the purity of his motives; his only criticism of his ally was that the view taken up by Dr. Armstrong was too narrow. Dr. Armstrong in his pamphlet contented himself with insisting upon the hard measure that had been dealt out to a number of worthy persons, whose income was largely derived from students' fees, by making their lectures practically useless as part of the surgical education of the future Members of the College of Surgeons; while Wakley looked upon this as only a minor point, the larger question being present to him by this time—viz., how the constitutional reform of the College from top to bottom, from hall porter to President, could be best effected. But Dr. Armstrong's pamphlet had its outcome. It placed

[2] THE LANCET, Feb. 11th, 1826.

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the *pros* and *cons* of one point, if a small one, before a large number of persons, and prepared their minds for the developments now imminent.

Week after week the necessity for reform was urged in THE LANCET. The language might differ, but the sentiments were always the same. The result of these repeated and categorical accusations as well as of the letters of "Brutus" and Dr. Armstrong's pamphlet was to bring to Wakley an enormous mass of letters, showing that the dissatisfaction of the commonalty of the College with their rulers was very real and very widespread. As soon as this evidence reached him that the time was rife for organised resistance he placed himself in the van. Hitherto, as has been said, his opposition to the junto at the head of the College business had been largely a part of his general crusade against the management of the metropolitan hospitals, but when he saw that a large number of his readers were deeply stirred by the wrongs they had received at the hands of the Royal College of Surgeons of England his treatment of the subject became more serious and much more comprehensive. Instead of seeing in the abuses at the College a mere confirmation of the fact that self-elected rulers—whether presiding at lecture-room, operating-table, or examining board—were under strong temptations not to do their duties, as they were answerable to no one but themselves and all were in the same boat, he became aware that the profession at large was deeply moved at the way in which they were treated and in which the College of which they were mostly members was governed, and he pledged himself to a definite course—namely, to the procural by all constitutional methods of agitation of some measures of redress. In January, 1826, a suggestion was made in THE LANCET that a meeting of the profession should be held to determine on a plan of campaign, the suggested course being to petition the Crown to grant a new Charter or to appoint a Royal Commission to inquire into the working of the Charter granted by the late King in 1802.

(To be continued.)

ANNUAL REPORT FOR 1894 OF THE MEDICAL OFFICER OF HEALTH OF THE ADMINISTRATIVE COUNTY OF LONDON.

III.[1]

THE duties of supervision which devolve upon the County Council in respect of sanitary administration over the entire area governed by the forty-three metropolitan vestries necessarily occupy very much of the attention of the Council and find almost constant employment for its Public Health Committee. In their endeavours to secure that the conditions under which milk was sold during 1894 in London were such as would prevent risk of contamination difficulties were frequently experienced by the committee from itinerant milk vendors. These persons sell milk in the streets during the day and in the evening take what remains to their homes, often consisting of single rooms, where the conditions are but little conducive to cleanliness. In such rooms, the means for washing or scalding milk-cans being absent, any remaining milk is allowed to stand in the cans through the night, exposed to the foul atmosphere of a crowded sleeping apartment, and is distributed next day mixed with the morning's fresh supply. These hawkers are migratory in their habits and their homes can with difficulty be found; they generally contrive to evade registration. Offensive trades come in for a large share of the inspector's attention—the businesses of cattle slaughterer, knacker, marine-store dealer, brick-burner, and gas manufacturer being mentioned in the report as having received special attention during the year. The condition of the Regent's and Grand Junction Canals was brought prominently before the Council, but little amendment seems to have hitherto been effected because of the adverse opinion of counsel as to the legal powers of the authorities concerned. A considerable number of schemes were either initiated or advanced a stage during the year under Parts I. and II. of the Housing of the Working Classes Act in respect of unhealthy areas. The committee were actively engaged in dealing with questions of the reconstruction and rearrangement of the Boundary-street area and in contributing to the expenses of schemes under Part II. of the Act, undertaken by the various sanitary authorities. In particular, progress was made during 1894 in dealing with improvement schemes connected with Brooke's-market, Holborn, Ann-street, Poplar, and Mill-lane, Deptford, all of which had been previously sanctioned by the Council. The Millbank Prison site, consisting of about ten acres of land, was also purchased by the Council at the price of £2500 per acre for the purposes of Part III. of the Housing of the Working Classes Act. Three hundred and seventy-six presentations were made during the year in respect of houses unfit for human habitation. In all cases orders were obtained for the closing, demolition, or improvement of these properties, and only 12 cases remained undealt with at the end of the year. The Public Health Committee devoted much attention to the question of workmen's train service in the metropolis. At a conference of representatives of the railway companies an attempt was made to secure an extension in the time of arrival of the workmen's morning trains at the termini and also the removal of existing restrictions against the use of return workmen's tickets except by special trains and after certain hours. Having failed in their attempts to obtain more than trifling concessions from the companies, the committee reported that further Parliamentary inquiry was necessary in order to settle whether any and what amendments were required in the Cheap Trains Act, and they recommended the Council forthwith to petition Parliament for an inquiry into the whole subject of extension of the cheap train system for the working classes. The condition of the London bakehouses was specially reported on by Mr. Shirley Murphy during the year. The Public Health Committee were satisfied on review of their medical officer's report that the law with reference to bakehouses requires amendment. They recommended that the central metropolitan authority rather than the vestries should have charge of the bakehouses of London and that the Council should be empowered by Parliament to make by-laws for the proper regulation of bakehouses. The food-supply of the metropolis appears to be satisfactorily kept under supervision by the vestries. Seizures were made during 1894 in a large number of districts of food consisting of meat, fish, vegetables, and fruit, and the persons selling such unsound commodities were in most cases fined. In the course of the year the medical officer of health of Islington investigated the question of the manufacture of ice-creams and of the conditions under which this article of food is prepared by the Italian vendors who habitually hawk it in the streets during hot weather. Specimens of ice-creams thus sold, and of the water used for washing the glasses in which the ice-cream is served, were found by Dr. Klein to contain, amongst other things, the "bacillus coli"—a normal inhabitant of the bowels of men and other animals! In December, 1894, Mr. Shirley Murphy presented a report to the Public Health Committee, showing the provision existing in the several metropolitan districts for the disinfection and destruction of infected articles and for the temporary shelter of persons during disinfection of their houses which had been contaminated by infection. The report gives account of twenty out of the thirty-four districts which had already made such provision, and also speaks of other districts which had taken the initiatory steps for providing such safeguards in the near future. As regards hospital accommodation for infectious diseases Mr. Shirley Murphy reports that nearly 18,000 persons suffering from fever, diphtheria, or small-pox were in the course of 1894 removed from their homes to the various hospitals of the Metropolitan Asylums Board, that 5000 convalescent patients were transferred to the Northern and Gore Farm Hospitals, and that about an equal number of patients were returned to London from those hospitals. The accommodation for scarlet fever was found sufficient, but that for diphtheria was insufficient during this year, and consequently much delay occurred in the removal of

[1] Nos. I. and II. appeared in THE LANCET of May 2nd and 9th.

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sufferers from enteric fever and diphtheria, if, indeed, many of them were not unavoidably left to be treated in their own homes.

Arrangements are now in progress for the erection of fever and diphtheria hospitals at Shooter's-hill, Hither-green, and Lower Tooting, containing about 500 beds apiece. When the additional hospital buildings now in progress have been completed it is contemplated that the Metropolitan Asylums Board will possess accommodation for 6000 fever and diphtheria patients, exclusively of that provided for small-pox. Additional land at Long Reach has also been acquired near the hospital ship as a site for a small-pox isolation hospital. In connexion with the spread of small-pox by vagrants, which subject has been under the consideration by the committee since the beginning of 1893, a conference was held at the County Hall in July, 1894, and was attended by delegates from thirty-three London vestries and thirty-two extra metropolitan sanitary authorities. After discussion a series of recommendations were adopted with a view of limiting the spread of infectious disease by means of tramps and of providing for the more satisfactory regulation of the persons inhabiting common lodging-houses. In regard to the question of metropolitan water-supply Mr. Shirley Murphy has important observations for the consideration of the Council not less than of the consumers of water themselves. He states the opinion that examination of water delivered by any filter at intervals not shorter than a month affords but an inadequate test of the continued efficiency of filtration throughout the year. So long as London is so largely dependent on river supply for its drinking water it is obvious that examinations are requisite at much shorter intervals than a month, and it would appear to be the duty of the London County Council as the chief guardian of the health of the metropolis to arrange for a much more frequent examination of its water-supply.

During the year 1894 the London Building Law was consolidated and amended. The Act requires that for the future there shall be provided for the due ventilation and lighting of basements in rear of every building an open space of not less than 100 square feet, free from any erection above the level of the pavement. The elevation of every domestic building is, moreover, to be limited by the extent of the open space at the rear, so that its height shall not exceed twice the distance from the rear of the building to the boundary of the open space. Domestic buildings may be erected under special provisions on the site of similar buildings existing before 1894, which had less than the rear space prescribed by this Act, provided that no more ground is occupied by the new buildings than that which had been covered by the buildings previously existing.

In bringing to a close our notice of Mr. Shirley Murphy's excellent report we regret that we have no space for remarks upon any of the eleven appendices which form part of the document before us. We can only hope that these appendices, each of which is a complete report in itself, will receive adequate circulation, for they possess in almost every instance, far more than merely local interest.

THE PRIVY COUNCIL AND THE APOTHECARIES' HALL OF IRELAND.

IN THE PRIVY COUNCIL.

In the Matter of the Medical Acts 1858 to 1886 and in the Matter of an Application by the Apothecaries' Hall of Ireland for the Appointment of Examiners to Assist at the Qualifying Examinations which are held by the said Hall.

THIS case was heard on Monday, May 11th, at eleven o'clock in the Privy Council Chamber, Downing-street. The Members of the Privy Council were the President of the Council (the Duke of Devonshire), Lord Macnaghten, Lord James of Hereford, and Lord Rathmore. The Apothecaries' Hall was represented by Mr. R. B. Haldane, Q.C., M.P., and Mr. B. S. Foster; the General Medical Council by Sir Robert Reid, Q.C., M.P., and Mr. Muir Mackenzie. Several members of the General Medical Council were present, including the President (Sir Richard Quain), Dr. Thorne Thorne, and Dr. Glover. The proceedings were not prolonged. Mr. Haldane spoke for two hours on the history of the case as detailed in the minutes of the General Medical Council, a pretty full *précis* being in the hands of the court. His contention was that the Apothecaries' Hall had done its best under difficult circumstances; that on the admission of the Inspector and Visitor of the Council the examinations were improving, and that the Visitor was in error in saying that a certain candidate had passed who had not passed. He did not attach much importance to the allegations of malice in the pleadings of the Hall against the Royal College of Physicians of Ireland but to the great claims of the Hall examination as meeting the case of those who were intended for general practice in Ireland, and he maintained that if the Council would appoint examiners as desired the prosperity of the Hall would revive, and that it was for the interest of Ireland that it should do so. He showed that the action of the General Medical Council at the last meeting would destroy the power of the Hall to place its Licentiates on the Register—a statement which seemed to surprise Lord James of Hereford and Lord Macnaghten, who questioned Mr. Haldane on the subject. They were soon convinced by his reference to the Acts that it was so.

On the conclusion of Mr. Haldane's speech Lord Macnaghten asked him if the best course would not be for the Hall to make a further application to the General Medical Council for examiners, not confining the Council merely to surgical examiners. Mr. Haldane said he must consult his clients. Lord Macnaghten made a similar appeal to Sir Robert Reid, who begged in a few sentences to indicate the object and views of the General Medical Council, the drift of which was that the Council's prime object was to uphold the standard of medical education. Mr. Haldane then announced the willingness of the authorities of the Apothecaries' Hall to make a renewed application in the form suggested by their Lordships. Sir Robert Reid and Mr. Muir Mackenzie conferred. Though they could not pledge the General Medical Council they agreed to represent to it the views of the Court. Lord Macnaghten expressed the hope that such a course would succeed with the General Medical Council. "We all know," he said, "its familiarity with these questions and the great respect in which it is held by the public. There has evidently been a slight misunderstanding as to the facts which have now been placed in a clearer light. It is admitted that the examinations are improving, and the Council will have a freer hand over them if it pleases to require the nomination of other than surgical examiners. If it can settle this question it will relieve us from a delicate and difficult situation. At the same time the question will stand over for our further consideration should it not be arranged by the Council at its approaching meeting."

THE ANNUAL REPORT OF THE SANITARY COMMISSIONER WITH THE GOVERNMENT OF INDIA FOR 1894.

[SECOND NOTICE.[1]]

WHILE the chief causes of admission among the European troops in India were venereal diseases and ague, causing 34 and 27 per cent. respectively of the total sickness, the chief causes of mortality were enteric fever, cholera, hepatic abscess, and injuries. Enteric fever gave rise to 36 per cent. of the total deaths and cholera to 13 per cent. We have already described and commented upon the facts connected with the lamentable prevalence of venereal diseases. The Sanitary Commissioner's report contains a good deal of valuable information on the subjects of enteric fever, cholera, malarial fever, dysentery, and hepatic abscess, and we now propose to deal with some of the more salient points of the report in respect of these diseases.

In all three Presidencies enteric fever heads the list of causes of death among British troops, and in Bengal and Bombay the ratio was higher in 1894 than the average of the decennium. Let us see whether any light can be thrown on the subject of enteric fever from general conditions or

[1] The First Notice was published in THE LANCET of May 9th, 1896.

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etiological considerations before speaking of any assigned specific cause. Among the large stations with a strength of over 1000 we find that enteric fever caused a mortality of 15·23 at Mhow, 14·20 at Meerut, 11·96 at Peshawar, and 8·01 at Lucknow per 1000 respectively, with smaller rates at other stations. The disease is very widely distributed in India. The following table shows that the ratios for European troops are very unlike those for native troops and prisoners.

	1882-91.		1894.	
	Admissions.	Deaths.	Admissions.	Deaths.
European troops ...	14·7	4·13	20·9	5·75
Native troops	0·3	0·09	0·3	0·05
Gaol population ...	0·2	0·10	0·4	0·13

These ratios are obtained from large numbers, they are consistent with one another, and the facts they set forth have been repeated from year to year over such a period of time as to leave no doubt of their substantial correctness. In the case of native soldiers necropsies are rarely obtainable, but among prisoners the cause of death is verified in this way in nearly every fatal case. Moreover, the total mortality from fever in the European army is not that, but considerably less than that, of the native army, and the difference cannot, therefore, be accounted for by a mere matter of diagnosis. The question of the immunity, or apparent immunity, of natives of India has been long recognised and differently accounted for. This immunity, it may be added, was maintained by the native contingent during our campaigns in Egypt. It is but part of a bigger question, for the Arabs of Algeria and the natives of other countries enjoy a similar immunity. Mr. Hankin states, as the result of his observations, that the natives of India appear to be naturally insusceptible to enteric fever. The three principal views that have been put forward, according to the Sanitary Commissioner's report, are: (1) inherent racial immunity; (2) acquired toleration by exposure to, and a continuous but gradual imbibition of, the poison; or (3) the protective influence of the disease acquired in early life, but of the possible truth of this assumption there is really no reliable evidence. The results of the experimental researches of Sanarelli are quoted to show that it is possible that the natives of India may not be really immune; but that, by the constant imbibition of bacterial toxic fluids, they may have attained intestinal tolerance, and that, therefore, fatal fevers among them may often be in reality cases of enteric fever without intestinal lesions; but in that case we do not see how the nature of the fever can be really determined; it must remain a reasonable conjecture insusceptible of actual proof.

As regards the general contributory causes and conditions to this disease what has been pretty well established amounts to this: that enteric fever is very prevalent among Europeans in tropical and sub-tropical climates; that it has seasonal periods of manifestation, its maxima of prevalence coinciding with the maxima of temperature, the disease, for example, occurring earlier in the plains of India than in the hills; and that as regards the age of its subjects youth and immaturity and recent arrival in those climates are powerful predisposing causes to attack. But when we have said all this there still remains an essential factor to be added without which the disease does not appear, and this is now practically assumed by all bacteriologists to be the Eberth-Gaffky bacillus. The question narrows itself down, then, into the inquiry as to the life-history of this parasite and how it gains an entrance into the human system. Mr. Hankin has by his researches thrown considerable light on the origin of some mysterious cases and outbreaks in India. Some bacteriologists hold that the bacillus is constantly present in the stools of enteric fever patients after the second week of the disease, and that it maintains its identity and can also be recognised outside the body—in water, for example, contaminated by animal dejecta. In a very careful review of the recent literature on this subject the Sanitary Commissioner shows, however, that considerable difference of opinion still exists among bacteriological authorities and that there are many points which yet require to be cleared up before we can be said to have exhausted our knowledge of the subject and of the causation of typhoid fever. Professor Wright of Netley and Surgeon-Major Semple, for example, have pointed out in the pages of THE LANCET[2] that the typhoid fever bacillus was detected in the urine of enteric fever patients in six out of seven cases examined, and they accept the conclusions of Sanarelli and Wathelet that enteric fever is a blood infection and that the bacillus of Eberth is rare in the stools. Of course, if these observations be subsequently confirmed this source of infection will have to be recognised and guarded against. The water theory of enteric fever, as of cholera, has the largest amount of evidence in its favour; but in the meantime the Sanitary Commissioner contends that it may not be the whole truth and that the lesson to be learned is that we cannot be too careful of attention to cleanliness in all things and of guarding every avenue of approach, not only from enteric fever but from any filth disease. The hygienic condition of our cantonments may be excellent, but that of the native bazaars and villages and of every place, indeed, accessible to the soldier outside cantonment limits may be, and really is, quite the reverse. The difficulty that has to be accounted for, however, is the relatively small amount of enteric fever among the children and women, who consume both water and milk, and the large amount of it among officers, who do not usually consume these or the beverages and products of the native bazaars of which they are not usually frequenters as are the men. With the number of skilled inquirers available in India, supplemented by the researches of bacteriologists, we may fairly anticipate some fresh additions to our knowledge of the nature and causes of this fever which annually gives rise to such a great drain on the young manhood of the European force in that country.

With regard to cholera we may say that in Section 6 of the Report there is a very full and excellent analysis of the views regarding causation of cholera current at the time of Professor Koch's memorable visit to India and subsequently to that date. We may commend this to the perusal of those of our readers who are interested in the study and desirous of obtaining a good summary of the recent advances which have been made in the etiology of cholera.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A MEETING of the Committee of the Association of Fellows of the Royal College of Surgeons of England was held on May 6th, at 25, Grosvenor-street. Mr. Timothy Holmes, Vice-President, occupied the chair in the unavoidable absence of Mr. George Pollock, President.

The minutes of the last meeting were read and confirmed. Mr. H. Percy Dunn, honorary secretary, reported that, in answer to the resolution forwarded to the President of the College in reference to the admission of reporters to the meetings of the Fellows he had received a reply to the effect that the Council had already decided to admit reporters to these meetings.

The subject of the direct representation of Members of the College on the Council then came up for consideration in connexion with the adverse resolution adopted at the March meeting of the Council. It was ultimately agreed that the following resolution should be forwarded to the President of the College:—

"The Committee of the Association of Fellows of the Royal College of Surgeons of England regrets that the Council of the College should not have seen its way to adopt the resolution passed by a large majority at the meeting of the Fellows on Jan. 2nd, and trusts that the opinion of the Fellows generally on this important subject may be ascertained as agreed upon at the meeting of the Council of the College held on Feb. 11th."

The Honorary Secretary reported that he had received a communication on the foregoing subject from Mr. Dickinson, honorary secretary of the Society of Members, and it was agreed to acknowledge the letter and to state that the Committee did not see its way at the present moment to suggest any course of action.

The vacancies likely to arise upon the Council in July next were then considered. Mr. Norton stated that he did not intend to come forward as a candidate this year. Several

[2] THE LANCET, July 27th, 1896.

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other Fellows were mentioned as probable candidates, but it was agreed that the further consideration of the subject should be deferred till the next meeting of the Committee on May 18th.

This concluded the business of the meeting and the Committee adjourned.

THE HISTORY, METHODS, HINDRANCES, EXPENDITURE, AND POLICY OF THE CIVIL RIGHTS DEFENCE COMMITTEE.

(Concluded from p. 1306.)

EXPENDITURE.

THE Civil Rights Defence Committee, although warmly supported in many quarters by the medical profession, has never at any time been in receipt of funds that would enable the committee to take the first step of application for special leave to appeal to the Judicial Committee of the Privy Council and has been compelled either to remain inactive or to expend the funds already received in renewed appeals, each of which has produced an insufficient return. Of the amounts received £84 were paid in preliminary legal expenses incurred in Trinidad and in this country and in the expenses of preparing the petitions for special leave to appeal, which are ready to be lodged. The expenses of the office, clerical assistance, postage, canvassing for signatures to memorials, printing, and other essential matters extending over a period of two years have been considerable and have made large inroads into the funds subscribed. There is an account still due to the printers, and the operations of the committee are hampered by the want of adequate funds. Great economy has been practised in all the expenditure incurred by the committee, letters and circulars wherever possible being delivered by hand and as strict a supervision as possible being exercised over printing and clerical expenses. Mr. Anderson's work for the committee has been entirely gratuitous, and advantageous arrangements were made with Mr. H. Anderson, solicitor of the committee, for office accommodation and clerical aid in his office at 5, Mitre-court, Temple, where the committee sits *de die in diem*, and from which all communications and reports are dated and issued. An Ellam's duplicator was purchased for three guineas enabling the committee to produce many circulars very cheaply. Still, it has been impossible without arresting the progress of the movement to stint the supply of reports, memorials, and other publications, which are essential for the creation of a public opinion favourable to the views of the committee. It is only now that the past outlay in printing is beginning to bear fruit in publicity, it is only by such publicity as that which is now being striven for and obtained that interest can be aroused, and it is only when interest is fully aroused that the general and large subscriptions necessary for the successful prosecution of the various appeals promoted by the committee can be received.

POLICY.

It was explained in the article which appeared in THE LANCET on Feb. 29th on the "Objects and Aims of the Civil Rights Defence Committee" that—

1. The primary purpose for which the Civil Rights Defence Committee was formed was to assist Mr. R. B. Anderson to appeal to the Privy Council for the reversal of the illegal judgments and orders of Colonial judges which remain in force and control his personal liberty, preventing him from returning to Tobago to carry on his practice, collect his debts, dispose of his property, or in any way satisfactorily to settle his affairs—judgments and orders which have been emphatically condemned by Royal Commissioners as "judicial persecution" and "a public danger."

2. The affirmation by the Court of Appeal of Lord Coleridge's decision against Mr. Anderson when a Middlesex special jury had found a verdict in his favour for £500 damages in the action "Anderson *v.* Gorrie and others" has rendered it necessary for the Civil Rights Defence Committee to appeal to the House of Lords to set aside this judgment. The decision renders nugatory not only the stipulations in Magna Charta and the Bill of Rights for the personal liberty of the subject, but the professional rights of medical men conferred by their diplomas whereby they have hitherto been able to pursue their calling in peace, to enjoy the right of recovering their fees for medical attendance in courts of law and to determine for themselves whether they shall attend or not attend, continue or discontinue, attendance in any particular case. The enjoyment of these rights is now made subject to the will and pleasure of Her Majesty's judges, and for any violation of them, however wilful and malicious, committed by a judge no remedy at law will exist.

3. In the event of the decision of the House of Lords upholding the decision of the Court of Appeal the Civil Rights Defence Committee must resort to Parliament for the amendment of the law and for compensation to Mr. Anderson for the unprecedented wrongs he has suffered. A petition to Parliament has been prepared and, if necessary, will be presented in due course by Lord Stamford at the bar of the House.

4. With the view of laying the foundation of a favourable opinion in Parliament and to enlist the sympathies and aid of individual members the Civil Rights Defence Committee arranged for a conference, which was held in the House of Commons on Aug. 29th, 1895. The result was so encouraging that memorials to Members of Parliament have been drawn up for signature by constituents, and are being widely circulated through the agency of friends and with the coöperation of the British Medical Association and its branches.

5. In order to leave no avenue of justice unexplored Mr. R. B. Anderson submitted to the committee a petition to the Queen which he had drawn up, and after very full discussion the committee decided not to fetter his discretion in the matter. Accordingly the petition was sent in and an answer has been received which evades the question really at issue, and which will necessitate further steps.

6. Various public bodies have been approached for the purpose of securing their coöperation and representation on the committee. The bodies at present represented are the British and West Indian Alliance, the West Indian Union, the Royal College of Surgeons of England, the British Medical Association, the Association of Fellows of the Royal College of Surgeons of England, the West London Divisions of the London and Counties Medical Protection Society, and quite recently the Medical Defence Union. The Royal College of Physicians of London, the Apothecaries' Society, the University of London, and the General Medical Council were applied to, but have not responded to the appeal. The Civil Rights Defence Committee still entertains a hope that when these bodies come to understand how the decision of the Court of Appeal affects the professional rights which they guarantee every day, a different result will be obtained.

7. Efforts have been made and will continue to be made to enlist the more active support of the public press. To the medical journals and to some of the weekly and daily papers, to provincial and colonial organs of opinion, and to some of the reviews the committee has been greatly indebted for the insertion of articles and appeals. Quite recently the *Echo* has inserted articles and opened its columns to a correspondence upon Mr. Anderson's case. The *Westminster Review* has dealt with the doctrine of judicial immunity in an exhaustive manner, and in addition to previous articles we have published in the columns of THE LANCET the present series of articles which have, we trust, fully elucidated the whole scope and plan of operations of the Civil Rights Defence Committee. The circle of interest is undoubtedly widening and a full awakening of the public conscience is anticipated at no very distant date. In evidence of this it may be mentioned that only on Friday, May 8th, the Hardwicke Debating Society, which is the chief barristers' debating society and represents the four Inns of Court, engaged in a formal debate on the following resolution, moved by Mr. Copeland and seconded by Mr. Candy, Q.C.

"That the modern interpretation of the law of judicial immunity is mischievous and dangerous, is an encroachment on the liberty of the subject, and ought to be revised." In the course of his speech Mr. Candy said that no more suitable case than that of Anderson *v.* Gorrie could be found for appeal to the House of Lords, and that it is one which justified an appeal to the public for funds. The whole debate turned on Mr. Anderson's case, and the resolution was carried with only two dissentients.

8. Other measures to arouse public sympathy and interest have been undertaken both by Mr. Anderson and the Civil

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Rights Defence Committee. Operatives in the printing trade and other businesses and political clubs have been addressed, and through their aid the publications of the committee are being widely circulated. Other steps are proposed The organisation of public meetings fully reported in the press ought to bring the work of the committee to a successful issue, since there is but one side to the case, the other being compounded of *vis inertiæ*, *non possumus*, and dogged resistance to the claims of justice. It is in view that public meetings shall be held first in East Islington and Wandsworth, and afterwards at the Mansion House with the coöperation of City guilds, and then throughout the country.

THE SOUDAN CAMPAIGN.

BEYOND the fact of the intended despatch of Indian troops to garrison Suakin and Tokar and the active progress of the preparations on the Nile stations for the anticipated advance on Dongola there is but little to chronicle. We have pointed out the suitability in all respects of our Indian Army for service in Egypt. The native troops are admirably fitted for the climate to begin with, and both in their own country and on previous occasions in Egypt have maintained a high standard of health and efficiency during campaigns in the hot weather, besides being in point of training, gallantry, and discipline excellent soldiers. It is intended that the garrisons of Suakin and Tokar shall consist of these Indian troops and one Egyptian battalion, the remainder of the Egyptian force at those places proceeding to Wady Halfa to form hereafter part of the Dongola expeditionary force. The Indian contingent is a mixed force, consisting of a regiment of Bengal infantry, with a Sikh regiment, the 1st Bombay Lancers, a native mountain battery, and a section of Madras Sappers and Miners. This force will be accompanied by the 31st and 32nd Bombay Native Field Hospitals and the principal medical officer will be Surgeon-Colonel Calthrop, an officer of experience in the field. It is stated that the Indian contingent is for purely defensive purposes and will simply hold the stations whither they are proceeding; but if their services should be subsequently required for field purposes elsewhere they are sure to prove efficient and may be expected to give a good account of themselves.

As far as the Dervishes are concerned the Anglo-Egyptian force on the Nile is allowed to remain quiet and unmolested in making and perfecting their arrangements for the subsequent advance. The different stations are well provided with hospital accommodation, the railway is progressing, and arrangements are being made for the transport of the sick and wounded. The inaction of the Dervishes is attributed to different reasons, but nothing reliable is known about their intended operations; it is all conjecture. Meanwhile the heat is intense and very trying—114° F. in the shade and 128° in tents—but the health of the force continues to be quite as satisfactory as could be expected.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6726 births and 3858 deaths were registered during the week ending May 9th. The annual rate of mortality in these towns, which had been 19·5 and 18·4 per 1000 in the two preceding weeks, rose again to 18·5 last week. In London the rate was 17·9 per 1000, while it averaged 19·0 in the thirty-two provincial towns. The lowest rates in these towns were 12·3 in Portsmouth, 12·7 in Gateshead and in Swansea, 13·3 in Croydon, and 13·8 in Nottingham; the highest rates were 22·0 in Preston, 22·8 in Birmingham, 23·1 in Manchester and in Plymouth, 25·9 in Burnley, and 31·4 in Salford. The 3858 deaths included 622 which were referred to the principal zymotic diseases, against 701 and 641 in the two preceding weeks; of these, 225 resulted from measles, 205 from whooping-cough, 74 from diphtheria, 53 from diarrhœa, 40 from scarlet fever, 25 from "fever" (principally enteric), and not one from small-pox. The lowest death-rates from these diseases were recorded in Brighton, Portsmouth, Nottingham, and Swansea; and the highest rates in West Ham, Birkenhead, Manchester, Salford, and Burnley. The greatest mortality from measles occurred in London, Bristol, Manchester, Burnley, Sunderland, and Birkenhead; from scarlet fever in Huddersfield; from whooping-cough in Halifax, West Ham, Croydon, Manchester, and Salford; and from "fever" in Halifax. The 74 deaths from diphtheria included 41 in London, 6 in West Ham, 6 in Birmingham, 5 in Manchester, and 3 in Burnley. No fatal case of small-pox was registered either in London or in any of the provincial towns. There were 15 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 9th inst., against 16 and 13 at the end of the two preceding weeks; 5 new cases were admitted during the week, against 4, 8, and 3 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2527, against 2527, 2534, and 2523 on the three preceding Saturdays; 238 new cases were admitted during the week, against 236 in each of the two preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 287 and 292 in the two preceding weeks, declined again to 260 last week, and were 68 below the corrected average. The causes of 63, or 1·6 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Oldham, Bradford, Leeds, Newcastle-upon-Tyne, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Leicester, Liverpool, and Blackburn.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·9 and 19·0 per 1000 in the two preceding weeks, further declined to 18·9 during the week ending May 9th, but was 0·4 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 16·8 in Greenock and 17·1 in Edinburgh and in Perth, to 20·6 in Dundee and 22·1 in Paisley. The 552 deaths in these towns included 25 which were referred to whooping-cough, 14 to "fever," 13 to diarrhœa, 11 to measles, 3 to diphtheria, 3 to scarlet fever, and not one to small-pox. In all, 69 deaths resulted from these principal zymotic diseases, against 67 and 76 in the two preceding weeks. These 69 deaths were equal to an annual rate of 2·4 per 1000, which was 0 6 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 30 in each of the two preceding weeks, declined to 25 last week, of which 17 occurred in Glasgow, and 7 in Aberdeen. The deaths referred to different forms of "fever," which had been 4 and 9 in the three preceding weeks, further rose to 14 last week, and included 6 in Glasgow, 4 inEdinburgh, and 2 in Dundee. The 11 fatal cases of measles corresponded with the number in the preceding week, and included 7 in Glasgow and 3 in Dundee. The deaths referred to scarlet fever, which had been 10 and 6 in the two preceding weeks, further declined to 3 last week, of which 2 occurred in Aberdeen. The 3 fatal cases of diphtheria slightly exceeded the numbers recorded in recent weeks. The deaths referred to diseases of the respiratory organs in these towns, which had been 120 and 88 in the two preceding weeks, rose again to 110 last week, and were 12 above the number in the corresponding week of last year. The causes of 26, or nearly 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased in the three preceding weeks from 20·6 to 23·7 per 1000, declined again to 21·9 during the week ending May 9th. During the past six weeks of the current quarter the death-rate in the city has averaged 23·4 per 1000, the rate during the same period being 18·9 in London and 17·6 in Edinburgh. The 147 deaths registered in Dublin during the week under notice showed a decline of 12 from the number in the preceding week, and included 13 which were referred to the principal zymotic diseases, against 4 and 10 in the two

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ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON—APRIL, 1896.

(Specially compiled for THE LANCET.)

Sanitary Areas.	Estimated population in the middle of 1896.	Notified Cases of Infectious Disease.										Deaths from Principal Infectious Diseases.										Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON...	4,435,955	22	1496	986	—	202	6	19	457	—	3188	7·5	2	750	71	206	580	—	31	1	49	1690	4·0	7951	18·7	136
West Districts.																										
Paddington	123,942	—	44	17	—	8	—	2	16	—	87	7·3	—	27	1	4	11	—	2	—	2	47	4·0	198	16·7	132
Kensington	167,993	4	52	29	—	4	—	2	26	—	117	7·3	—	48	2	5	24	—	—	—	—	79	4·9	307	19·1	156
Hammersmith	111,246	1	30	16	—	4	—	1	8	—	60	5·6	—	10	—	8	10	—	1	—	1	30	2·8	178	16·7	144
Fulham	124,029	—	32	21	—	2	—	—	6	—	64	5·4	—	22	2	4	10	—	3	—	1	42	3·8	180	15·1	115
Chelsea	100,815	—	38	18	—	3	—	—	9	—	68	7·0	—	49	3	6	10	—	—	—	1	69	7·1	213	22·0	190
St. George Hanover-square	73,054	—	25	11	—	3	—	—	6	—	45	6·4	—	5	1	4	4	—	1	—	—	15	2·1	104	14·8	109
Westminster	53,595	—	15	11	—	2	—	—	7	—	35	6·8	—	1	3	2	4	—	—	—	1	11	2·1	87	16·9	85
St. James Westminster	22,735	—	6	6	—	—	—	1	2	—	15	6·9	—	6	—	—	1	—	—	—	1	8	3·7	44	20·2	190
North Districts.																										
Marylebone	136,239	1	44	19	—	6	—	—	14	—	84	6·4	—	37	4	5	9	—	1	—	—	59	4·3	261	20·0	116
Hampstead	79,831	—	27	10	—	5	—	1	4	—	47	6·1	—	7	1	2	4	—	1	—	—	15	2·0	84	11·0	92
St. Pancras	233,247	2	69	34	—	8	—	—	24	—	137	6·1	—	24	2	11	16	—	3	—	1	57	2·5	414	18·5	115
Islington	340,007	—	93	60	—	10	1	2	30	—	216	6·6	—	41	2	21	53	—	2	—	2	121	3·7	580	17·8	140
Stoke Newington	36,329	—	8	5	—	—	—	1	1	—	15	4·3	—	—	2	1	6	—	—	—	2	11	3·2	35	10·0	109
Hackney	219,834	2	108	42	—	10	1	—	17	—	180	8·5	—	24	5	8	33	—	2	—	2	74	3·5	326	15·5	127
Central Districts.																										
St. Giles	37,170	—	4	8	—	1	—	—	7	—	20	5·6	—	6	—	2	3	—	—	—	—	11	3·1	75	21·0	160
St. Martin-in-the-Fields	13,294	1	3	1	—	—	—	—	1	—	6	4·7	—	2	—	—	1	—	—	—	—	3	2·4	25	19·6	95
Strand	22,008	—	4	4	—	—	—	—	1	—	9	4·3	—	3	—	—	1	—	—	—	—	4	1·9	56	26·5	188
Holborn	31,940	1	7	12	—	3	—	—	2	—	25	8·2	1	4	—	2	3	—	1	—	—	11	3·6	63	20·6	153
Clerkenwell	64,762	—	26	17	—	2	—	—	7	—	52	8·4	—	7	2	4	8	—	—	—	1	22	3·5	127	20·5	154
St. Luke	40,362	—	7	10	—	—	—	—	13	—	30	7·8	—	13	1	4	3	—	—	—	—	21	5·4	113	29·2	124
City of London	32,845	—	11	5	—	1	—	—	—	—	17	5·4	—	—	—	1	3	—	1	—	—	5	1·6	63	20·0	167
East Districts.																										
Shoreditch	122,678	—	28	21	—	13	1	—	21	—	84	7·1	—	18	2	2	24	—	2	—	1	49	4·2	247	21·0	142
Bethnal Green	130,282	—	65	39	—	8	—	—	24	—	136	10·9	—	30	2	5	45	—	—	—	3	85	6·8	301	24·1	164
Whitechapel	76,143	1	35	25	—	6	—	—	10	—	77	10·5	—	4	1	2	5	—	—	—	3	15	2·1	166	22·7	126
St. George-in-the-East	45,036	—	29	24	—	2	—	1	7	—	63	14·6	—	3	—	4	1	—	—	—	2	10	2·3	89	20·6	122
Limehouse	56,770	—	19	27	—	2	—	—	8	—	56	10·3	—	5	1	7	12	—	—	—	—	25	4·6	125	23·0	144
Mile End Old Town	108,645	—	36	50	—	12	—	1	12	—	111	10·7	—	12	2	13	18	—	—	—	1	46	4·4	198	19·0	125
Poplar	172,319	—	48	53	—	8	1	—	26	—	136	8·2	—	37	3	7	36	—	—	—	1	84	5·1	356	21·5	167
South Districts.																										
St. Saviour Southwark	26,429	—	12	6	—	—	—	—	1	—	19	7·5	—	2	1	—	3	—	—	—	—	6	2·4	68	26·8	219
St. George Southwark	60,276	—	19	13	—	2	—	—	5	—	39	6·7	—	16	—	3	5	—	—	—	1	25	4·3	130	22·5	135
Newington	120,211	1	55	18	—	6	—	—	17	—	97	8·4	1	8	3	4	8	—	1	—	3	28	2·4	215	18·7	123
St. Olave Southwark	13,147	—	3	3	—	—	—	—	1	—	7	5·6	—	2	—	1	3	—	—	—	1	7	5·6	28	22·2	135
Bermondsey	83,669	—	21	12	—	10	—	—	5	—	48	6·0	—	15	1	6	33	—	—	—	2	57	7·1	195	24·3	160
Rotherhithe	41,064	—	22	1	—	2	—	—	10	—	35	8·9	—	3	2	—	5	—	2	—	—	12	3·0	66	16·8	106
Lambeth	287,211	—	80	42	—	12	—	4	36	—	174	6·3	—	32	4	11	33	—	—	—	4	84	3·1	470	17·1	106
Battersea	168,825	—	58	21	—	8	—	—	18	—	105	6·5	—	41	3	4	25	—	1	—	2	76	4·7	316	19·5	156
Wandsworth	191,922	1	83	13	—	6	—	1	9	—	113	6·1	—	47	1	1	41	—	—	—	5	95	5·2	298	16·2	178
Camberwell	266,672	—	85	98	—	16	—	1	24	—	222	9·0	—	14	4	13	41	—	3	—	1	76	3·1	444	18·0	128
Greenwich	177,286	1	58	80	—	5	1	1	14	—	160	9·4	—	66	5	14	19	—	2	—	—	106	6·2	356	20·9	134
Lewisham (excluding Penge)	84,995	—	18	22	—	5	—	—	4	—	49	6·0	—	14	—	4	4	—	1	—	2	25	3·1	109	13·4	140
Woolwich...	43,222	—	7	6	—	1	1	—	2	—	17	4·1	—	33	1	4	—	—	—	1	—	39	9·4	104	25·1	166
Lee	39,504	1	29	11	—	3	—	—	2	—	46	12·1	—	1	2	1	1	—	—	—	1	6	1·6	55	14·5	108
Plumstead	64,203	3	32	24	—	2	—	—	—	—	61	9·9	—	11	2	6	1	—	1	—	1	22	3·6	82	13·3	85
Port of London	—	2	1	—	—	1	—	—	—	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 44 cases of membranous croup.

† Including deaths from membranous croup.

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preceding weeks; of these, 7 resulted from "fever" (principally enteric), 3 from scarlet fever, 2 from diarrhœa, 1 from diphtheria, and not one either from small-pox, measles, or whooping-cough. These 13 deaths were equal to an annual rate of 1·9 per 1000, the zymotic death-rate during the same period being 3·5 in London and 1·5 in Edinburgh. The 7 deaths referred to different forms of fever exceeded the number recorded in any week since the end of 1894. The fatal cases of scarlet fever, which had been 1 and 6 in the two preceding weeks, declined to 3 last week. The 147 deaths in Dublin last week included 21 of infants under one year of age, and 29 of persons aged upwards of sixty years; the deaths of infants showed a further decline from recent weekly numbers, while those of elderly persons corresponded with the number recorded in the preceding week. No inquest cases, and only 1 death from violence, were registered; and 47, or nearly a third, of the deaths occurred in public institutions. The causes of 12, or more than 8 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING APRIL, 1896.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during April in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 7·5 per 1000 of the population, estimated at 4,435,955 persons in the middle of this year. In the three preceding months the rates had been 10·3, 8·8, and 8·4 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in Fulham, Stoke Newington, St. Martin-in-the-Fields, Strand, and Woolwich; while they showed the largest excess in Bethnal Green, Whitechapel, St. George-in-the-East, Limehouse, Mile End Old Town, Camberwell, Greenwich, Lee, and Plumstead. The prevalence of small-pox in London showed a slight decline from that in the preceding month, the 22 cases notified including 4 in Kensington, 3 in Plumstead, 2 in St. Pancras, 2 in Hackney, and 2 in the Port of London sanitary areas. The Metropolitan Asylum Hospitals contained 10 small-pox patients at the end of April, against 68, 45, and 33 at the end of the three preceding months; the weekly admissions averaged 4, against 13, 6, and 7 in the three preceding months. The prevalence of scarlet fever in London showed a slight decline during April; this disease was proportionally most prevalent in Hackney, Bethnal Green, Whitechapel, St. George-in-the-East, Newington, Rotherhithe, Lee, and Plumstead sanitary areas. The Metropolitan Asylum Hospitals contained 2464 scarlet fever patients at the end of April, against 2814, 2867, and 2688 at the end of the three preceding months; the weekly admissions averaged 208, against 282, 258, and 234 in the three preceding months. The prevalence of diphtheria in London during April showed a marked decline from that recorded in recent months; among the various sanitary areas this disease showed the highest proportional prevalence in Holborn, Bethnal Green, Whitechapel, St. George-in-the-East, Limehouse, Mile End Old Town, Camberwell, Greenwich, and Plumstead. There were 713 diphtheria patients under treatment in the Metropolitan Asylum Hospitals at the end of April, against 682, 715, and 704 at the end the three preceding months; the weekly admissions averaged 89, against 99 in each of the two preceding months. The prevalence of enteric fever in London showed a slight increase upon that recorded in the preceding month; this disease was proportionally most prevalent in Holborn, Shoreditch, Mile End Old Town, and Bermondsey sanitary areas. Erysipelas was proportionally most prevalent in St. Giles, St. Luke, Shoreditch, Bethnal Green, and Rotherhithe sanitary areas. The 19 cases of puerperal fever notified during April included 4 in Lambeth, 2 in Paddington, 2 in Kensington, and 2 in Islington sanitary areas.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various sanitary areas, the deaths occurring in the institutions of London having been distributed among the different sanitary areas in which the patients had previously resided. During the four weeks ending Saturday, May 2nd, the deaths of 7951 persons belonging to London were registered, equal to an annual rate of 18·7 per 1000, against 18·4, 20·0, and 19·4 in the three preceding months. The lowest death-rates during April in the various sanitary areas were 10·0 in Stoke Newington, 11·0 in Hampstead, 13·3 in Plumstead, 13·4 in Lewisham (excluding Penge), 14·5 in Lee, and 14·8 in St. George Hanover-square; the highest rates were 23·0 in Limehouse, 24·1 in Bethnal Green, 24·3 in Bermondsey, 25·1 in Woolwich, 26·5 in Strand, 26·8 in St. Saviour Southwark, and 29·2 in St. Luke. During the five weeks of April 1690 deaths were referred to the principal zymotic diseases in London; of these, 750 resulted from measles, 580 from whooping-cough, 206 from diphtheria, 71 from scarlet fever, 49 from diarrhœa, 31 from enteric fever, 1 from an ill-defined form of continued fever, and 2 from small-pox. These 1690 deaths were equal to an annual rate of 4·0 per 1000; among the various sanitary areas the lowest death-rates from these diseases were recorded in St. George Hanover-square, Westminster, Hampstead, Strand, City of London, Whitechapel, and Lee, and the highest rates in Chelsea, St. Luke, Bethnal Green, St. Olave Southwark, Bermondsey, Greenwich, and Woolwich. The 2 fatal cases of small-pox were 3 below the corrected average number in the corresponding periods of the ten preceding years; 1 belonged to Holborn and 1 to Newington sanitary areas. The 750 deaths referred to measles were more than double the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Kensington, Chelsea, St. Luke, Bethnal Green, Poplar, St. George Southwark, Battersea, Wandsworth, Greenwich, and Woolwich. The 71 fatal cases of scarlet fever were within 10 of the corrected average number; the mortality from this disease showed no marked excess last month in any of the sanitary areas. The 206 deaths from diphtheria were 62 above the corrected average number; among the various sanitary areas this disease was proportionally most fatal in St. Luke, St. George-in-the-East, Mile End Old Town, Limehouse, Bermondsey, Woolwich, and Plumstead. The 580 fatal cases of whooping-cough were as many as 234 above the corrected average number; this disease showed the highest proportional fatality in Kensington, Shoreditch, Bethnal Green, Limehouse, Poplar, Bermondsey, and Wandsworth sanitary areas. The 31 deaths referred to enteric fever were 10 below the corrected average number; there was no marked excess of enteric fever mortality in any of the sanitary areas. The 49 fatal cases of diarrhœa were 23 below the corrected average number. In conclusion, it may be stated that the mortality in London during April from these principal zymotic diseases was more than 65 per cent. above the average.

Infant mortality in London during April, measured by the proportion of deaths under one year of age to births registered, was equal to 136 per 1000. Among the various sanitary areas the lowest rates of infant mortality were recorded in Westminster, Hampstead, St. Martin-in-the-Fields, Rotherhithe, Lambeth, and Plumstead; and the highest rates in Strand, City of London, Bethnal Green, Poplar, St. Saviour Southwark, and Wandsworth.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-MAJORS CHARLTON and Moffitt have arrived in England on completion of a tour of service in India. Surgeon-Major Swabey has been appointed to York, Surgeon-Major Hughes to Brighton, Surgeon-Major Archer to Chester, and Surgeon-Major Cowan to the Cork District. Surgeon-Major Simpson is under orders to proceed to South Africa and Brigade-Surgeon-Lieutenant-Colonel Leake to Bermuda.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of Surgeon-Lieutenant C. R. Stevens are placed temporarily at the disposal of the Government of Bengal. The services of Surgeon-Captain J. R. Adie are placed temporarily at the disposal of the Government of the Punjab. The services of Surgeon-Lieutenant G. Y. C. Hunter are placed temporarily at the disposal of the Government of the Punjab. The services of Surgeon-Captain C. G. Robson-Scott are placed temporarily at the disposal of the Government of Bengal. The services of the

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undermentioned officers are placed temporarily at the disposal of the Chief Commissioner of Burma:—Surgeon-Lieutenant C. C. S. Barry, and Surgeon-Lieutenant C. E. Williams. Surgeon-Major J. Anderson is appointed to be Joint Medical Officer of Simla. The services of Surgeon-Major J. A. Cunningham, Civil Surgeon of Simla, are replaced at the disposal of the Government of the Punjab. Surgeon-Captain E. C. Hare is appointed to officiate as Civil Surgeon of the North Lushai Hills, until further orders. Surgeon-Captain H. R. C. Barber, Civil Surgeon, is transferred from Jhelum to Murree. Brigade-Surgeon-Lieutenant-Colonel Francis Cobbam Nicholson and Surgeon-Lieutenant-Colonel Benjamin Evers, Bengal Medical Establishment, Civil Surgeon, Central Provinces, retire from the service subject to Her Majesty's approval.

NAVAL MEDICAL SERVICE.

The following appointments are notified:—Surgeon A. M. Page to Royal Marine Depôt, Walmer. Surgeon and Agent: R. Lyddon at Deal.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Major Thomas W. Richardson resigns his commission, Surgeon-Captain Casper Robert Laurie, 1st Volunteer Battalion the Duke of Cornwall's Light Infantry, to be Surgeon-Captain.

VOLUNTEER CORPS.

Artillery: 1st Shropshire and Staffordshire: Surgeon-Lieutenant R. P. Mackenzie, M.B., to be Surgeon-Captain. *Engineer: Fortress and Railway Forces, Royal Engineers:* 2nd Gloucestershire (the Bristol): Surgeon-Lieutenant J. M. M. Thomas to be Surgeon-Captain. *Submarine Miners, Royal Engineers:* The Clyde Division: Surgeon-Lieutenant J. H. G. Whiteford, M.B., to be Surgeon-Captain. *Rifle:* 4th (Cambridge University) Volunteer Battalion the Suffolk Regiment: Surgeon-Lieutenant H. K. Anderson, M.B., resigns his commission. 1st Volunteer Battalion the East Lancashire Regiment: William Moir, M.B., to be Surgeon-Lieutenant. 2nd Volunteer Battalion the Duke of Cornwall's Light Infantry: Brigade-Surgeon-Lieutenant-Colonel D. Thomson resigns his commission, also is permitted to retain his rank and to continue to wear the uniform of the Battalion on his retirement, vacating at the same time his appointment in the Plymouth Volunteer Infantry Brigade. 12th Middlesex (Civil Service): Surgeon-Lieutenant T. H. Dickson, M.B., to be Surgeon-Captain. 3rd (The Blythswood) Volunteer Battalion the Highland Light Infantry: James Allan Wilson, M.D., to be Surgeon-Lieutenant. 6th Volunteer Battalion the Royal Scots (Lothian Regiment): James Cameron, gent., to be Surgeon-Lieutenant. 4th Volunteer Battalion the Hampshire Regiment: Surgeon-Lieutenant G. R. R. Paine resigns his commission, 2nd (Angus) Volunteer Battalion the Black Watch (Royal Highlanders): Surgeon-Lieutenant-Colonel W. F. Murray, M.D., resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the Battalion on his retirement. 2nd Volunteer Battalion the Oxfordshire Light Infantry: Surgeon-Lieutenant C. D. Batt is appointed Second Lieutenant.

DEATHS IN THE SERVICES.

Deputy-Surgeon-General G. Scott Davie, M.D. Edin., Army Medical Staff, at Upper Norwood in his sixty-first year. The deceased officer had a record of long and varied field service. During the Crimean War he served with the Turkish contingent in Turkey and at Kertch. He became assistant-surgeon in the British Army in November, 1858, and surgeon-major in September, 1875. He served as senior medical officer in the operations in Perak, and with the Peshawar Valley Field Force in the Afghan War of 1878–9. In 1882 he served in the Egyptian War and was present at Tel-el-Kebir. In 1885 he was promoted to the rank of brigade-surgeon, and to that of deputy-surgeon-general in May, 1886, when he retired from the service. The late officer, besides receiving medals and clasps with decorations for the foregoing, was also mentioned in despatches for his services. He was a most reliable and valuable officer, of excellent professional attainments, and much respected by all. In addition to his other qualifications he had a good knowledge of the Turkish and Persian languages and had published translations of poetry from the latter.

Surgeon-Major Henry Ogilvy Stuart, on the 11th inst., aged thirty-nine. He was appointed to the Army Medical Staff in February, 1882, and was promoted to the rank of surgeon-major in February, 1884. He served in the Afghan War of 1880 (medal), and was engaged in the expedition to the Soudan in 1884 in command of detachments of the Army Hospital Corps, and was present at the battles of El Teb and Tamai (medal with clasp and the Khedive's star). He was present at the action of Kirbekan, Nile expedition 1884–85 (two clasps).

Surgeon-Lieutenant-Colonel Robert Smith, A.M.S., on the 6th inst. He was appointed a surgeon in September, 1874, and was promoted to be surgeon-major in 1886 and surgeon-lieutenant-colonel in September, 1890. He was engaged in the Boer War of 1881 and in the Soudan expedition of 1885 (medal with clasp and Khedive's star).

ROYAL MILITARY TOURNAMENT.

If the performance may be judged by the promise, the Royal Military Tournament, which will be held at the Agricultural Hall, Islington, from May 28th till June 11th next, should prove one of the best that has yet been organised. Carried out by what is practically a new staff, with Colonel Fox as Military Commandant, it will embrace the leading features of past years, but the committee have infused into the programme new ideas which should make the Tournament for 1896, from a spectacular point of view at any rate, exceedingly popular. In order to give the general public and the world at large some notion of the reserves at the command of the British Empire a grand pageant has been arranged under the title "Sons of the Empire," in which representatives of the home, Indian, and colonial armies will take part. The display of all arms will this year be set in a *mise-en-scène* representing the storming of an Afghan fort. The medical officers in charge of the troops will be Surgeon-Major Alexander of the Coldstream Guards and Surgeon-Lieutenant Kenneth Cameron, A.M.S. During the progress of the tournament a detachment of the Volunteer Medical Staff will appear in the arena, and the St. John Ambulance Brigade will furnish a detachment to attend on the general public in case of need.

THE VOLUNTEER OFFICERS' DECORATION.

The Queen has been graciously pleased to confer the Volunteer Officers' Decoration upon the undermentioned officers of the Volunteer Force:—*North-Eastern District: Rifle:* 1st Volunteer Battalion the Prince of Wales's Own (West Yorkshire Regiment), Surgeon-Major Charles Husband, retired. *North-Western District: Artillery:* 8th Lancashire Volunteer Artillery, Surgeon-Major Arthur Richard Hopper. *Rifle:* 4th Volunteer Battalion the Cheshire Regiment, Brigade-Surgeon-Lieutenant-Colonel William Edward Sevier Burnett; 5th Volunteer Battalion the Cheshire Regiment, Surgeon-Lieutenant-Colonel Patrick Moir Davidson. *Home District: Rifle:* 18th Middlesex Volunteer Corps, Brigade-Surgeon-Lieutenant-Colonel George Danford Phillips Thomas. *Scottish District: Rifle:* 6th Volunteer Battalion the Royal Scots (Lothian Regiment), Surgeon-Lieutenant-Colonel Charles James Allan; 9th Lanarkshire Volunteer Rifle Corps, Surgeon-Lieutenant Edward Henry Kelly.

THE QUEEN'S BIRTHDAY.

The Queen's birthday will be celebrated on Wednesday May 20th next, at all the naval and military stations as well as in London.

Surgeon-Major-General W. Taylor, M.D., was invited by the Queen to Windsor Castle on the 11th inst.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.—The next general meeting of this society will be held at the rooms of the association, 11, Chandos-street, Cavendish-square, on Thursday, May 21st, 1896, under the presidency of Dr. Nicolson. There will be an adjourned discussion on Dr. Hyslop's paper on Pseudo-General Paralysis of the Insane; Dr. Robert Jones will read a short account of Claybury Asylum, the first new asylum of the London County Council; and Dr. Mercier will read a paper on Medical Reticence. The next examination for the Certificate and the Gaskell Prize will take place at Bethlem Hospital in July. Candidates for the Bronze Medal and Prize of Ten Guineas must send in their essays to the President before May 30th, 1896. Particulars of the examination for the Certificate and the Gaskell Prize can be obtained of the registrar, Dr. Spence, Burntwood Asylum, near Lichfield. The members will dine together after the meeting at the Café Royal, Regent-street, at 6.30 P.M.

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Correspondence.

"Audi alteram partem."

THE CASE OF KINGSBURY v. HART.

To the Editors of THE LANCET.

SIRS,—In your recent issue, dated April 25th, I observe amongst other miscellaneous Manchester news that a society designated a "medical guild" passed in review the judgment on the recently heard case of Kingsbury *v.* Hart and placed on record a pronouncement of dissent from the views expressed by plaintiff's witnesses. As reasons for this dissent are withheld and may come up for review at a later date, perhaps you will allow me to supply mine, seeing that I was one of the witnesses alluded to by the "guild" as testifying on the plaintiff's behalf. 1. In a sense every medical practitioner advertises himself to the public once by fixing a brass plate on his door. 2. Manchester being devoted almost exclusively to business purposes, and dwelling houses being so few in the central parts of the city that they may almost be counted on five fingers, it follows that consulting physicians and surgeons are under a necessity of engaging rooms or offices for professional purposes in the daytime apart from their private residences which are located for the most part in suburban districts and on the gate-posts of which their names and designations are again repeated. We thus arrive at two separate forms of publicity or so-called advertisement, against which no exception is taken, adopted by gentlemen justly accounted honourable, and who act up to the best professional traditions. 3. Another practitioner, following an already existing and commonly adopted custom, has three door-plates at different parts of the town where he follows his calling—one on his dwelling-house and two on gate-posts of hydropathic institutions of which he is the accredited medical referee—stating the hours when he can be seen at each for purposes of consultation. For so doing his fair fame has been libelled and himself stigmatised as one who has grievously derogated from the best traditions of his profession. Failing to realise that this numerical appraisement of brass plates represented, *cæteris paribus*, all the nice gradations between honour and infamy I testified that, in my judgment, Dr. Kingsbury had not laid himself open to the grave imputations brought against him.

I am, Sirs, yours obediently,

Manchester, May 11th, 1896. F. RENAUD.

"THE HISTORY, METHODS, EXPENDITURE, AND POLICY OF THE CIVIL RIGHTS DEFENCE COMMITTEE."

To the Editors of THE LANCET.

SIRS,—Permit me to thank you very warmly for the powerful support you are giving the Civil Rights Defence Committee in the series of articles now appearing in your columns, and especially for that in the last issue—an article, if I may venture to characterise it, dealing with a great subject in a manner worthy of a great journal and placing the position very clearly and definitely before the profession. The work of the Civil Rights Defence Committee will eventually be fully appreciated, not alone by the profession, but by the nation. The cases of Surgeon-Captain Fowler and Mr. Lionel Smith prove how much an organised defence of our rights is needed. Both cases ought to be taken up, and carried to a successful issue not only for the sake of justice, but in the interests of the profession and the public, for the best interests of the public are not served by injustice to medical men, and such oppression and "perversion of justice" are only possible whilst we submit to them. I wish to mention that I have not as a Fellow and Member made application to my College under By-law XV., though fully aware of its meaning and importance; but have, without any such claim, found the College at once, on the invitation of the Civil Rights Defence Committee and on my application, irrespective of the by-law, act in the same spirit as that which prompted the formulation of so admirable a provision—a spirit worthy of emulation by all bodies corporate in their relations to their constituents, whether graduates, Fellows, Members, or Licentiates. It would be difficult to express the comfort I have derived from the moral support of my College under great and prolonged suffering and under the sense of injustice and oppression from quarters whence we are taught to expect only "justice" and "right"; but, however inadequately, I desire to publicly acknowledge it, and I am sure that, as the proper occasion arises, all necessary support will be afforded for the vindication of what you well describe as fundamental rights.

I am, Sirs, your obedient servant,

May 11th, 1896. R. B. ANDERSON.

"THE REGISTRATION OF MIDWIVES."

To the Editors of THE LANCET.

SIRS,—The admirable letter of Dr. Frazer in THE LANCET of May 9th comes as a relief to many of us. The solution of the problem by a Bill based upon the lines set out in it will doubtless be a satisfactory one. These lines, I venture to say, are sound ones, and it is to be hoped that all interested in the subject will combine to produce a Bill which will command united support. The only difficulty I foresee is to be feared from the Midwives' Registration Society, but it is to be hoped that its members will, before it is too late, change an attitude of dictation into one of conciliation.—I am, Sirs, yours truly,

Hatfield, Herts, May 10th, 1896. LOVELL DRAGE.

OXY-CHLOROFORM ANÆSTHESIA.

To the Editors of THE LANCET.

SIRS,—In view of the publicity that the subject-matter of this letter is acquiring it is fitting that you should at least be made acquainted with the fact that in the early months of the year 1891 I first directed special attention to the physiological effects of the inhalation of chloroform. I was led to investigate the matter by the fact that after an experience of some thirty years I continued, in spite of every possible precaution, to meet with cases of "accidental asphyxia," and three successive ones determined me, if possible, to get at the cause of these so-called accidents and to devise a method by which they could be obviated. With your permission I will recapitulate two or three important points connected with the physiology of anæsthesia, and these may be best expressed in the words of the Hyderabad Chloroform Commission: (1) that chloroform has never, under any circumstances whatever, a direct action upon the human heart; (2) that the primary effect of chloroform is to lower the blood pressure, dilate the arterioles, and slow the circulation, both systemic and pulmonary; and (3) that after a certain stage the respiration is slowed, this being in direct proportion to the fall in the blood pressure. Such was the extent of our knowledge when my attention was first directed to the subject, and in stating this I do not profess to have added to our knowledge of the physiology of the process; but accepting the conclusions of the Hyderabad Commission I have arrived at what seems to me to be a rational explanation of the occurrence of asphyxia, and, what is more to the purpose, at a practical and safe method of averting it.

I regard the asphyxia as dependent upon a twofold cause—viz., a lowered blood pressure, with its attendant slowing of the pulmonary and systemic circulation, and a corresponding slowing of the respiration which, interfering with the normal rapidity of aeration, of necessity interferes with the due elimination of the CO_2 of the system. As a result of this slowing of the respiratory and circulatory systems we have by continued inhalation the cumulative effects of an active poison. It was a consideration of this latter fact which led me to devise the method of prevention which I now submit to your notice. It consists simply in the inhalation of a mixture proportionate to the requirements of the case of chloroform vapour and oxygen gas. This by maintaining perfect aeration throughout the whole process ensures regular respiration, consequently escape from the danger attending languid circulation, irregular respiration, and imperfect aeration—viz., asphyxia. Sudden lowering of the blood pressure with pallor the indication of approaching asphyxia, cannot occur because, the nutrition of the heart being unaffected, stagnation in the systemic vessels is prevented by normal activity of circulation. Again, let the required dose of chloroform be what it may, it

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s impossible to narcotise the respiratory or vaso-motor centres, because, being carried more rapidly to these nerve centres, they succumb the more readily to its influence, less chloroform is necessary, and its action is limited to the suspension of consciousness; recovery, too, is prompt, there being a total absence of the deadly depression which obtains under the old system; and last, but not least, the fortuitous element in chloroform anæsthesia is eliminated to the manifest advantage of all concerned.

A word or two here upon the subject of inhalers may not be out of place. It is, I believe, generally conceded that safety depends, not only upon who gives, but upon the mode of giving, our anæsthetic; but this to be absolutely safe must, whatever the form of the inhaler, be in combination with pure oxygen, regulated and controlled in the manner carried out by Messrs. Arnold and Sons of London.

I am, Sirs, yours truly,

THEO. G. H. NICHOLSON, M.R.C.S. Eng.

Catharine-street, Liverpool, May 8th, 1896.

HORSHAM UNION INFIRMARY.

To the Editors of THE LANCET.

SIRS,—Your strictures on the nursing arrangements at the Horsham Union Infirmary have not surprised me. It fell to my lot to have to visit an inmate in that institution some years ago, when I remarked the unwholesome quality of the bread and butter supplied at the evening meal—the former being of an ash-grey colour and evidently ill-made, while the butter was simply dirty. Though not connected with this union I thought it my duty to call the guardians' attention to the state of the bread-supply; but when my letter was read to the board at their next meeting one of the house visitors resented my remarks and declared that the bread was so good that he should not hesitate to set it before his own family. When the supervision of an infirmary is in such hands one could not expect the nursing and general *ménage* to be of a high order.

I am, Sirs, your faithfully,

Guildford, May 12th, 1896. HENRY TAYLOR.

SANITARY AUTHORITIES AND THE INFECTIOUS DISEASES (NOTIFICATION) ACT.

To the Editors of THE LANCET.

SIRS,—Under the Infectious Diseases (Notification) Act, 1889, has a sanitary authority the power to exclude any disease it thinks proper from the diseases to be notified under Section 6 of that Act? Also, in the case of an outbreak of an infectious disease if two or more persons are attacked in the same house, is it the duty of the medical practitioner in attendance to notify each case separately, and, if so, is he entitled to a fee for each notification? I should be pleased if you would let me have an expression of your views on the above points.

I am, Sirs, yours faithfully,

Dukinfield, May 9th, 1896. E. A. CLARKE.

*** Wherever the Infectious Diseases (Notification) Act has been adopted all the diseases mentioned in Section 6 must, under penalty, be notified by medical practitioners, and no power is given to a sanitary authority to relieve anyone of this obligation under the Act. The same applies to any diseases added either permanently or for a term of years under Section 7 of the Act. Except when otherwise provided for under a special local Act, each case in a house must be separately notified and the same fee has to be paid for each certificate.—ED. L.

THE BARGAIN OF THE RECRUIT.

To the Editors of THE LANCET.

SIRS,—Your Special War Correspondent's article in THE LANCET of May 2nd on the troops in health, their feeding, &c., has interested me much, and I am certain will also be of interest to all who have the welfare of Tommy Atkins at heart. Do we ever consider what sort of a bargain the soldier makes with his country when he enlists? Do we remember sufficiently what he brings into the contract?

A military life may possess its attractions but it also has its drawbacks, and anyone entering upon it must be prepared to sacrifice a great deal. To a soldier, especially when called upon to go abroad or join a campaign, home ties and domestic attractions must be, at any rate for a time, buried luxuries. His tenure of office is uncertain, his employment exceedingly precarious, and his remuneration quite out of proportion to the discomforts experienced and the risk he runs. True he can point to the prospects of a pension in his old age; but how many ever reach such a long-wished-for, well-worked-for goal? A return recently asked for in the House of Commons, if supplied, might possibly answer this very momentous question for us. I believe the number to be very small. Any individual joining the service gives the best and most active part of his life to it, and be he either a short- or long-service man, when he quits the army or navy in quest of employment, having borne, perhaps, for years a character for honesty, sobriety, and application, how often is he successful in securing a situation for which such an exemplary life is so admirably qualified to fill?

He must be possessed of a thoroughly sound mental as well as physical organisation on joining the service, and how often one, or maybe both, of these qualifications are impaired or even destroyed by the foreign service he is called upon to undertake. Surely, then, it behoves our Government to take good care of this excellent material when they get hold of it: to ascertain that the very best of food, drink, clothing, and healthy instruction and amusement be supplied the soldiers; and when sick or wounded to have them carefully attended to and nursed by the best professional services at their disposal. And last, but by no means least, Government should do something to prevent these old fellows—heroes of many fights—finding a cheerless and probably heartless reception in the workhouses or even worse asylums of the rich country for which they have worked and bled. How this is to be done certainly is a problem that remains to be solved, but one nevertheless capable of solution if the momentous question be grappled with by our Parliament in a way it ought to be—and that, too, without delay if the State desires to escape handsomely from an ever-increasing anxiety, and one moreover which confronts its members at every step. Just consider what each recruit brings in as his share of what may be justly termed "invested capital"; what physical and mental qualifications are demanded of the novice before he can expect to satisfy the requirements of the military medical officer who examines him. And let me here remark that even when he has successfully passed his medical examination the applicant may be rejected ultimately on other grounds, for although medical officers in approving recruits have to conduct their examination and record facts arrived at with due care and to the best of their judgment, they are never held responsible for the ultimate rejection of the man on grounds involving a decision contrary to the opinions they may have expressed. On presenting himself for approval the would-be soldier must first of all prove that he is sufficiently intelligent. I presume by this requirement it is merely desired that he should be able to read and write fairly, understand something of figures, as well as exhibit an ordinary amount of intelligence regarding persons and things generally. Then his power of sight is tested and very carefully inquired into, letters and numbers corresponding to Snellin's optotype (test-types for the determination of acuteness of vision) being used for testing the eyesight of each candidate. He is required to pass types numbered D = 6 at 6 metres, or 20 ft. away, each eye being separately tested for that distance. Should the candidate be unable to read with each eye separately and without the aid of glasses Snellin's type marked D = 36 at a distance of 20 ft.—i.e., if he does not possess one-sixth of Snellin's standard of normal acuteness of vision—although he may be able to read types D = 06 at some distance with each eye—he will be rejected as unfit for service. And, finally, he must in nowise be colour-blind. His weight must be normal according to standard. His ears are then examined in order to ascertain there is no defect as far as they are concerned. His speech must be clear and devoid of impediment. The glands of his body undergo an examination in order to ascertain if there exists any enlargement of them anywhere or any marks of a tuberculous tendency apparent. He must be at least 5 ft. 4 in. in height, and his chest measurement not less than 34 in. in circumference.

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Moreover, it should be well formed and fully developed, a maximum expansion of about 2 in. to 2½ in. being admitted. His heart and lungs must be normal and quite sound. He must not be ruptured. His limbs must be well formed and quite fully developed, with freedom and good movement in all his joints. Even his toes, feet, and hands are to exhibit perfect formation, and, lastly, he must not exhibit any congenital malformation or traces of any previous acute or chronic disease.

It will be admitted that the recruit brings a good deal on his side into the bargain. It is to my mind a question whether he takes enough out.

I am, Sirs, yours faithfully,

May 4th, 1896. DANIEL DEEVER.

"CHARITY BEGINS AT HOME."

To the Editors of THE LANCET.

SIRS,—I have just been filling up my voting-paper for the Royal Medical Benevolent College and am grieved with the thought that there are thirty candidates for pensions and forty-four for the school, of whom only five and nine respectively can be successful this year. Among the candidates for the school are two cases of boys made orphans by the sudden and violent deaths of medical men in the actual discharge of their duties, and of many others where death has followed directly upon professional avocations. Is it not wonderful that men are still found to embark in practice and matrimony without making any provision for their families by insurance of some sort? Allow me to urge upon the young men who at this time of year are just gaining their diplomas in large numbers that they should at once, and while residing in London, join the Society for the Relief of the Widows and Orphans of Medical Men, 11, Chandos-street, Cavendish-square, where, for a single payment of £20 or an annual subscription of two guineas for twenty-five years, they may at least secure that their belongings shall not be left "absolutely unprovided for." Is it not pitiful to find the widows of well-known and respected London practitioners actually begging for bread because their husbands never took thought for to-morrow in the way suggested?

I am, Sirs, yours obediently,

May 9th, 1896. A VICE-PRESIDENT.

THE ARMY MEDICAL STAFF.

To the Editors of THE LANCET.

SIRS,—In reference to the third paragraph of "Brigade-Surgeon's" letter in your last issue, "the abuse," "the endeavour to degrade," and "to make its members ashamed," &c. I joined the service over forty years ago, and at that time and for some years subsequently "the doctor" was, in nine cases out of ten, one of the most popular members of the mess. He was not A.M.S.; he was a regimental officer, and the question of combatant or non-combant was never raised. To us youngsters he was the mentor and friend—especially the friend—not for professional reasons, as may be suggested, but in all matters where disinterested advice and counsel were required; and he had the ear of the commanding officer, and that was often the channel of putting many small crooked things straight without having recourse to official ways and paths. This was the type of those days, though there were, of course, exceptions.

Yours faithfully,

May 13th, 1896. AN OLD SUBALTERN, XLIV.

"JENNER AND HIS WORK."

To the Editors of THE LANCET.

SIRS,—At the present time, when Jenner's merits in relation to vaccination are exciting so much interest, it may not be altogether inappropriate to refer to some of the views of Sir John Simon who forty years ago, when medical adviser to the General Board of Health, gave such deep attention to the subject and embodied in his letter to the President the digested outcome of opinions solicited by him from the most prominent medical men of that time. It may be remembered that forty years ago no memorial was in existence to the immortal name of Jenner, and Sir John concludes his summary of the feelings of the medical world in these words: "Looking, then, to the whole succession of answers and describing in few words what to myself has been the effect of perusing them I would say that, above all, I am struck with their concord. Two hundred and thirty years have elapsed since Harvey first taught the circulation of the blood: the first announcement of Jenner's discovery was but within the adult memory of men who are still living, yet questions addressed to the Governments of Europe and to 542 professors and practitioners of medicine with respect to the older truth, basis though it has long become of all physiological teaching, could hardly elicit more unanimous replies than those which recall the triumphant successes of vaccination. It can be no common certainty which commands so general an assent. It can have been neither a truthless nor a barren doctrine which, within sixty years from its rise, has all but universally satisfied private judgment and has converted nations to be its grateful followers.

"No truth can be thought of against which some one does not rail. And it would be idle to hope, under existing conditions of the human mind, that vaccination should be much more generally credited than it is. Perhaps in no age of the world, proportionately to its instruction, have persons been readier than now to accept physical marvels, and to modify their conception of natural laws at the cajoling of quacks and conjurors. It goes with this credulity to be incredulous of proven truth. Alike in rejecting what is known, and in believing what is preposterous, the rights of private foolishness assert themselves. It is but the same impotence of judgment which shrinks from embracing what is real and lavishes itself upon clouds of fiction. To some extent, therefore, it may be felt a weary and unprofitable work to have spent time and labour in reasserting proofs which, fifty years ago, were exhaustive of their subject; and many eminent men who have favoured me with their assistance may grudge to have given it against superannuated error. Yet if, in final acknowledgment of this assistance, I may be permitted to express what—far better than any thanks of mine—may requite those respected contributors for the trouble they have incurred I would say that they have given to Jenner the monument which, beyond any other, he would have prized. They have made it easy to estimate the full measure of gratitude which is due to the discoverer of vaccination. They have displayed as actual experience what it formally must have seemed mere enthusiasm to foretell. You will read it in the skilled evidence of individuals who, solely with the resources of Jenner's antidote, are maintaining day by day against the most dreadful of infections the victory which he commenced; you will read it in the colossal statistics of nations which, till sixty years ago, were still decimated by that one messenger of death.

"If utility to human life be any test of what is noble in labour, if our teachers of inductive philosophy have rightly advised us—*non tantum veritatè et ordini, rerum etiam usui et commodis hominum consulere*—then assuredly the discovery of which those things are told may rank with any achievement of man. 'Let men rejoice that there has shone so great a splendour from amid their race' is the bidding which, at Newton's tomb, reminds us of our immortal debt to the greatest interpreter of nature and claims kindred for us with the power of his intellect, passionless and 'almost divine.' If corresponding honour be due to the beneficent applications of science, if our immortal state owes love to those who have lessened its weakness and its misery, surely in Jenner has been a second student of nature, who, matchless as Newton in career, might have claimed to lie beside that monarch of the intellect in his last repose and to share the inadequate homage of that grateful epitaph. For though a different it is an equal praise which the members of Jenner's profession vindicate for his honoured name. He too interpreted nature; but, above all, he rendered her teaching fruitful to arm mankind against the worst of pestilences, to widen by his one discovery the horizon of human life, to banish a cruel terror from every mother's heart—such were Jenner's aspirations in his study of nature, such have been the fruits of his philosophy. Members of his profession esteem it their noblest vocation to imitate the endeavours which led him to this transcendent result; and I believe that they, whose contributions to the following pages I respectfully lay before you, will have felt an almost filial pride in expressing their knowledge of facts which consecrate Jenner's place in history."

I am, Sirs, yours faithfully,

London, W., May 11th, 1896. E. A. B.

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THE BATTLE OF THE CLUBS.—XXX.[1]

(*Continued from p. 1314.*)

LINCOLN: A MEDICAL PROTECTION FUND STARTED.

WE have received the following communication from Dr. Carline, which we gladly publish. His letter tells very succinctly and clearly the way in which the medical profession has been exploited in Lincoln, and confirms fully our Special Commissioner's report. We wish the New Provident Association every good fortune. The complete success that has attended similar movements when the medical men have determined to help the poor in their own fashion and consistently with their own dignity, and not at the beck and call of lay wire-pullers, encourages us to believe that the disinterested action of the three gentlemen who, for the good of the profession, have refused further connexion with the existing medical aid associations will be duly rewarded. In the meantime we recommend Dr. Carline's letter to the generous attention of our readers.

To the Editors of THE LANCET.

SIRS,—I was requested by a meeting of the medical profession held at Lincoln on the 11th inst. to ask you to kindly insert the following appeal for funds in your next issue.

I am, Sirs, yours truly,

Lincoln, May 12th, 1896. W. A. CARLINE, Hon. Sec.

To the Editors of THE LANCET.

SIRS,—Doubtless the majority of your readers have watched with interest the fight which is in progress in Lincoln. However, when appealing to the profession for assistance a short *résumé* of the facts may be useful. The area worked by the Lincoln medical clubs has a population of 50,000, and of this number some 20,000 obtain their medical attendance through the clubs at reduced rates. The clubs have amalgamated and formed two large institutions managed by lay committees. The resident medical officers, though debarred from private practice, do not receive the whole of the money earned by their exertions. All classes are invited to join these institutions, hence the medical officers have to attend wealthy tradesmen and others in a large way of business as well as those who have retired in affluence. All the abuses of the club system are here in their worst forms. The medical officers of these institutions, having felt that under these circumstances their continuance in office was not in accordance with the usual standard of professional ethics, approached the Lincoln Medical Society with a view to combined action for the remedying of these abuses, and as a result the clubs were asked to establish a wage limit and make sundry other alterations. The committees, however, which are chiefly composed of the interested members, have refused to consider the proposals, and consequently three of the medical officers have resigned and the private practitioners of Lincoln have pledged themselves unanimously to refuse to meet in consultation any persons who may be induced to fill the vacancies. To prevent any injustice to the working-man a provident medical association is being formed which will be chiefly under medical management and will be free from the abuses of the present institutions. In the meantime the lot of the three medical officers who have resigned is a hard one. They have no private practice to fall back on, and yet in the interests of the profession they have thrown up their appointments, thus cutting off their only source of income. Such disinterested action throws a responsibility on their professional brethren, and to meet this the "Lincoln Medical Protection Fund" has been started. The Lincoln medical practitioners confidently appeal to the profession to help them and show their appreciation of the generous way in which these gentlemen have considered the general good rather than their own personal profit. It should be stated that the fund will help to maintain these gentlemen in the New Provident Association until this pays its way, the success of which would mean victory for the profession, and a victory in this stronghold of the club system will immensely help the cause elsewhere. Subscriptions will be thankfully received and acknowledged by the honorary treasurer, Dr. W. A. Carline, Lincoln. Signed by request of a meeting of the Lincoln practitioners. GEO. MITCHINSON, Chairman.

Amounts already received or promised:—

	£	s.	d.		£	s.	d.
C. Harrison	5	5	0	W. H. B. Brook...	5	5	0
G. Mitchinson	5	5	0	H. Palmer	5	5	0
J. T. Collier	5	5	0	W. A. Carline	5	5	0
G. H. Mounsey...	5	5	0	D. Johnston	5	5	0
F. S. Lambert	5	5	0	H. Whitwell	5	5	0
F. Genney	5	5	0	W. McDade	5	5	0
Wm. O'Neill	5	5	0	A. P. Russell	5	5	0
G. Lowe	5	5	0	F. B. Cooper	2	2	0
B. McFarland	5	5	0	G. J. R. Lowe	2	2	0
E. M. Sympson...	5	5	0	A. D. Roberts	2	2	0
J. S. Thompson...	5	5	0	T. H. White	2	2	0
C. Brook	5	5	0	A. L. Peacock	1	1	0
W. J. Cant	5	5	0	D. J. G. Watkins	1	1	0

BENEFIT SOCIETIES AND MEDICAL MEN.

A conference was held at the Town-hall, Trowbridge, on May 2nd between representatives of sick benefit societies and medical men in response to a circular issued by Mr. C. E. S. Flemming, M.R.C.S. Eng., L.R.C.P. Lond., of Freshford, near Bath, setting forth that "it is the opinion of medical men that there is an abuse of friendly societies, whereby persons obtain medical aid who are not in a position to need it, which not only affects the various medical officers, but is in many and important respects harmful to the societies themselves. Lord Edmond Fitzmaurice presided, and the medical aspect of the case was described by Mr. C. E. S. Flemming and Mr. A. W. Dalby, L.R.C.P. Edin., of Frome. Medical men from Trowbridge, Bradford-on-Avon, Calne, Devizes, Warminster, Frome, and Freshford were present, and also delegates representing the principal friendly societies in West Wiltshire and the Frome district of Somerset. Mr. Flemming said that club practice was not sufficiently remunerative to enable a medical man to live; he must have a certain proportion of private patients, and if he found these private patients becoming club patients it was only natural that he should complain. No medical man, however, objected to attend a *bonâ-fide* working man as a club patient. A long discussion followed. Many of the delegates held that the medical man had a grievance, but considerable opposition was shown by them to a suggestion that those who are in receipt of £2 per week wages or who live in a house of the rateable value of £15 per annum should not be taken as club patients, and they stated that circumstances in these respects varied in each district. The following was ultimately agreed to with a few dissentients: "That the medical men at this meeting have suggested that £2 per week wages and £15 per year rateable value be adopted as the limit to prevent persons obtaining medical aid from friendly societies who by position do not require it, and that it be recommended by this meeting to the various friendly societies to consider whether any, and if so what, limit can be imposed upon the membership of friendly societies so as to accomplish the above objects."

MEDICAL UNION AT NOTTINGHAM.

On Wednesday, May 6th, the second meeting of this union was held. It was announced that a large proportion of local medical men had already joined the union, while others had expressed their intention of doing so. The meeting proceeded to elect a president, treasurer, and two secretaries, and a council consisting of fourteen representatives of the town with ten of the adjoining district. The council was instructed to at once consider measures to combat the abuses of medical aid and life assurance societies. The meeting was very well attended and throughout harmonious.

THE ASHANTI EXPEDITION.

(BY OUR SPECIAL WAR CORRESPONDENT.)

V.[1]

The Troops in Sickness.

I WILL now give details relating to our troops in sickness as far as the recent campaign to Ashanti is concerned, and in doing so will endeavour to show how varied have been the symptoms, not only in intensity, but also in duration, which

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Aug. 24th, 1895, Brussels; (2) Aug. 31st, 1895, Brussels; (3) Sept. 21st, 1895, Portsmouth; (4) Sept. 28th, 1895, Portsmouth; (5) Oct. 5th, 1895, Eastbourne; (6) Oct. 12th, 1895, Lincoln; (7) Oct. 26th, 1895, Lincoln; (8) Nov. 2nd, 1895, Grimsby; (9) Nov. 9th, 1895, Bexhill-on-Sea; (10) Nov. 16th, 1895, Hull; (11) Nov. 23rd, 1895, Hull; (12) Dec. 7th, 1895, York; (13) Dec. 14th, 1895, Northampton; (14) Dec. 21st, 1895, Fermanagh Medico-Ethical Association; (15) Dec. 28th, 1895, Northampton; (16) Jan. 4th, 1896, Birmingham; (17) Jan. 18th, 1896, Birmingham; (18) Jan. 25th, 1896, Club Practices in Rural and Mining Districts; (19) Feb. 1st, 1896, The Formation of a Provident Medical Association at Folkestone; (20) Feb. 8th, 1896, The Manchester Medical Guild and Medical Aid Associations; (21) Feb. 15th, 1896, The Leicester and Leicestershire Provident Dispensary; (22) Feb. 22nd, 1896, The Organisation of the Profession at Leicester; (23) March 7th, 1896, Loughborough: Local Efforts Defeated by Consultants from Neighbouring Towns; (24) March 14th, 1896, Medical Aid Societies in Small Heath; Medical Clubs at Stockport; (25) March 21st, 1896, General Meeting of the Profession and the Formation of a Union at Nottingham; (26) April 4th, 1896, Nottingham; the London and Manchester Industrial Assurance Company, Limited; the Public-house Medical Aid Clubs; United Action at Lincoln; (27) April 11th, 1896, Leicester and Wolverhampton; a Hastings Dispensary wound up; (28) April 25th, 1896, Walsall, Formation of a Medical Union; the Medical Profession and the Friendly Societies; Trade and Medicine; the Family Clubs; Women's Public-house Clubs; (29) May 9th, 1896, Sheffield: An Ancient Medical Society; Workmen Sweaters; The Old Grievances; Probable Formation of a Medical Union.

[1] Nos. I., II., III., and IV. were published in THE LANCET on April 4th, 11th, and 25th, and May 2nd, 1896, respectively.

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have preceded an accession of this African remittent fever, which has placed *hors de combat* nearly one half the troops employed, besides directly or indirectly being the proximate cause of death of seventeen officers and men. From first to last there was little uniformity in the character of the more prominent symptoms or in the way they would attack their victim. One patient, for instance, might complain of simple malaise, think and tell you he had an attack of indigestion, lie down for a short time, and in a few hours be found with a temperature of from 101° to 104° F. Another would perhaps at meal time, especially during the evening, complain of feeling cold and call for his overcoat, and in less than six hours be prostrated with the fever. A third whilst marching would suddenly be seized with a violent headache accompanied with an inclination to vomit, and be compelled to take to his hammock; while a fourth would experience a peculiar feeling along his spine, attended with a feeling of coldness generally, weakness speedily supervening, compelling him at once to seek for medical assistance. In some giddiness and in others lassitude was the first noticeable approach of the complaint. But in the majority of those complaining, if they were destined to go through a lengthened course of the fever a peculiar heavy look of the eyes was very noticeable, and more so if these were suffused, the pupils of the eyes performing their motions very languidly. The seizures in some cases were extremely sudden as well as unexpected—in my own case markedly so. Although I had served on the West Coast of Africa before, as well as been some years in the West Indies and passed through two epidemics of yellow fever, I never suffered from malarial fever until my recent visit to Ashanti. I neither considered myself, as far as constitution went, predisposed to, nor was I in any way afraid of, it, yet I had a severe attack this time for all that. On the day of its accession I had risen after a comfortable night's rest about 4.30 A.M., feeling as well as I had ever done in my life. The majority of the marches were completed and we were gradually nearing King Prempeh's stronghold, and most of us were in high spirits, expecting an easy capture of his place and a speedy return of the troops to the coast line. The Special Service Column was timed to leave Kwissa about 6 A.M. I had arranged to strike my tent early and journey forward on foot with them. My head man overslept himself and, of course, the hammock-bearers followed suit, so that I had to march on that morning without my usual cup of coffee; in fact (what I should condemn in anyone else), I commenced work on an empty stomach. Not only so, but having gone up to camp to learn how Prince Henry of Battenberg was (having ascertained from the Principal Medical Officer the previous evening that he was somewhat indisposed), I was terribly shocked to find that the poor fellow was down with remittent fever and had to be sent back to the *Coromandel* as soon as possible. I had already been considerably irritated by the procrastinating conduct of my Fantee men, added to this the painful intelligence respecting Prince Henry of Battenberg's seizure came as an unexpected blow to further distress and unnerve me. When we looked upon the wan countenance of one of the noblest, bravest, and most lovable of men I ever met with in my life — we all sympathised deeply with him in his misfortunes and truly felt a degree of sorrow that words fail to describe for the dire calamity which had so unexpectedly and so mercilessly overtaken him. Still, everybody encouraged him to hope for the best, and solaced him with the assurance that his enforced "going down" would only be of a temporary character (they had then no reason to think otherwise), and that he, with his bright, cheerful smile, would at no very distant date be taking his part in our midst again. Alas for human judgment. The unexpected often happens and the best prognosis sometimes fails. Daylight was dawning, the various companies with their officers were ready for a start, and clearly rang out in the chilly morning air the command, "Battalion, attention!" "Right!" "By your left, quick march!" Away went those fine fellows of the Special Service Column, stepping out as fresh and fit as if they had just come out of Aldershot. Even then my carriers were not ready, and I had, in order to overtake the rear-guard, to do a little running on my own account, leaving my lazy blacks to follow me at their own jog-trot pace.

This exertion to a certain extent overheated but certainly did not in any way distress me. Having been an amateur cricketer all my life I enjoy a fair amount of active exercise, and it never tells upon me in a way it might upon others of a similar age to my own. To proceed, however; I came up with Canon Taylor Smith and a military medical officer about half a mile out from Kwissa, and we three were footing it together in the rear of the column, which was marching at a rattling pace towards our destination. Several miles had been covered, and our next station had nearly been reached when quite suddenly I became aware of a sharp pain shooting across my temples, succeeded by a sort of feeling of constriction, as if a string had been tightly tied round my cranium. Thinking that my white helmet, which I was then wearing instead of my ordinary sombrero hat, was possibly the cause of the inconvenience I removed it and carried it under my arm (as the chaplain was also doing), but to no purpose, for, as far as any relief was experienced, I had scarcely gone a dozen yards before I came to a dead halt. All movement in the muscles of my legs ceased, my inferior extremities refused to carry my body an inch further. Moreover, a severe griping pain was experienced at the same time across the pit of my stomach, succeeded by a deadly feeling of coldness creeping over my whole body, my fingers presenting an appearance of lividity. It was some time before my bearers arrived, and when they came up and had lowered my hammock it was with the utmost difficulty that I could manage to get into it.

A few minutes afterwards the Special Service Column was halted and the military medical officer, with the kind approval of the officer commanding, quickly passed me on through the lines to the next village so that my case might receive the attention it required. The time from the first intimation of seizure to perfect helplessness scarcely exceeded a period of five minutes. Prostration was rapid and complete. Added to this I felt terribly cold, with an inclination to vomit, and as the head-quarter staff had not as yet come up I suggested that Mr. Bennet Burleigh should kindly give me forty drops of chlorodyne from a bottle I then had in my travelling case. This dose had the immediate effect of making me vomit a considerable quantity of bilious matter and afterwards of warming me thoroughly and sending me into a pleasant sleep. As soon as Brigade-Surgeon-Lieutenant-Colonel Taylor saw me he promptly pronounced my case to be one of fever and treated me accordingly, and to his kindness and unremitting attention I feel convinced I am indebted for the preservation of my life. Before noticing the more prominent symptoms that accompany remittent fever throughout its successive stages I may here observe that, as far as I was personally concerned, I experienced no pain whatever after the initiatory symptoms had passed off. I felt no thirst during the whole period of my illness, but the sense of taste was completely lost and a desire for food of any kind quite gone. As long as I remained in a recumbent position no serious inconvenience was felt, but directly I attempted to move the pulse appeared to quicken and the superficial arteries of the head to throb with an increased impetus so as to be inconveniently felt when the side of the head was resting on the pillow. In my own case the exacerbations of fever returned with unswerving punctuality every evening about seven o'clock. The paroxysms of distress increased in intensity towards midnight. I lay awake for several hours until that apex of discomfort had been reached, and when the fever symptoms were diminishing in force fell asleep, only to have that brief period of slumber again and again broken by the most hideous and fantastic dreams.

The first case of fever that came under my observation happened at Mansu. The man, a sapper belonging to the advance company of the Royal Engineers, working with a party laying the telegraph wire, was seized with a feeling of cramp in his stomach about 5 P.M. and brought back to camp at the rest station about 8 P.M. the same evening. On arrival he was cold and collapsed, with a quick, thready pulse, foul tongue, and a temperature of 101·7° F. A stimulant was immediately given to him, and he was wrapped in blankets, and put to bed. In the morning he described himself as "feeling much better." As his bowels were confined a slight aperient was administered, followed by three-grain doses of quinine every four hours. The purgative had the desired effect, and the quinine reduced the fever appreciably. He returned to duty three or four days afterwards only to be again placed on the sick-list a week or so later with a less aggravated attack.

In noticing the peculiar character, duration, and course of the attendant symptoms in this and other cases which have

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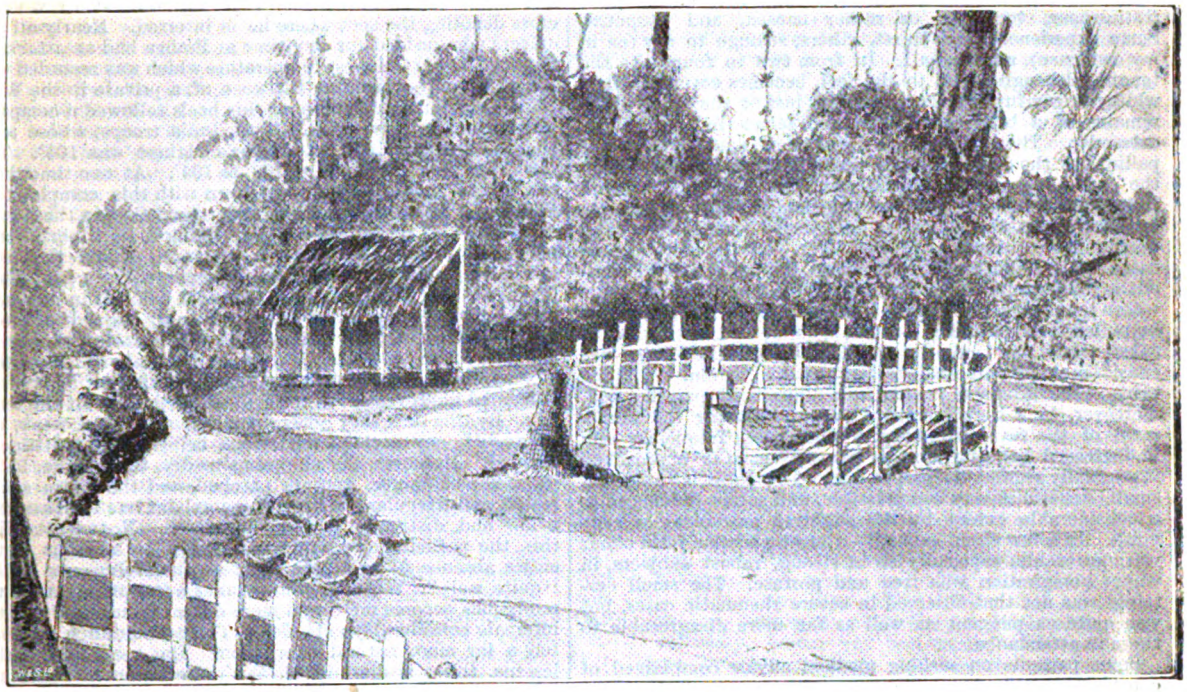
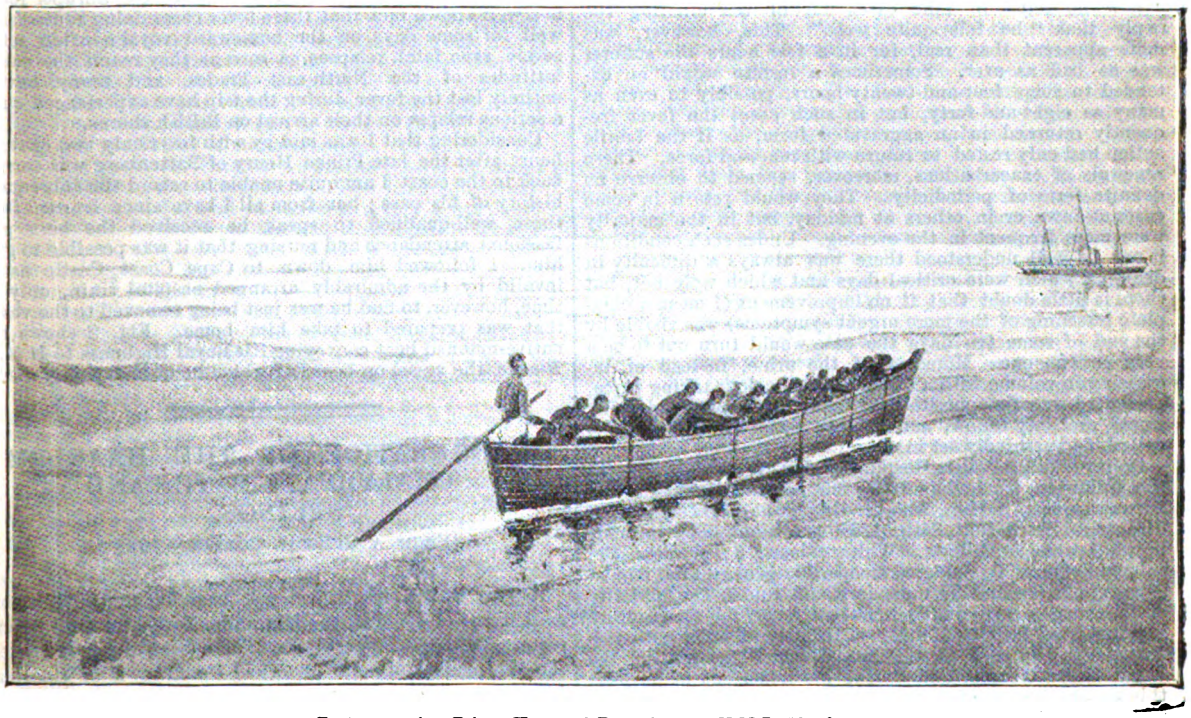
FIG. 1.



Major Fergusson's Grave in Prashu Cemetery.

FIG. 2.



Boat conveying Prince Henry of Battenberg to H.M.S. *Blonde*.

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come under my observation I must say I have never noticed any marked shivering at the onset, although prior to the vascular excitement the patient complains of great coldness, sometimes in his stomach, but more often in his limbs, particularly at the extremities of his fingers and toes. This coldness is sooner or latter followed by excruciating headache or a sense of giddiness, intense heat of the skin, restlessness, vomiting, or rather nausea, and dyspnœa. Some experience great thirst, others, strange to say (as in my own case), none at all. In from two to four days the tongue, although moist to the feel, becomes covered with a whitey-brown fur over its top except just at the edge, which remains of a bright-red colour and seems indented at its extremity. The countenance in some is flushed, in others pallid, but the conjunctiva is nearly always suffused, whilst the eyes have a wild, almost maniacal, look about them. The temperature at the onset is generally found to be three or four degrees above normal and varies considerably daily during the continuance of the fever. In the more serious cases the temperature often touches 105·55° or 106° F. without a fatal result to the patient, and I know of one officer whose temperature was at one time as high as 108° F. and yet he pulled through and is still alive, so far as I am aware, to substantiate the fact. In the majority of cases there was considerable tenderness over the epigastric region, whilst the urine at the onset was passed in a diminished quantity and, moreover, in a highly coloured state. During the abatement of the fever the urine is voided less frequently and in increased quantity, and as convalescence is approached it gradually regains its proper hue. The pulse is rapid and small, sometimes very compressible, and seems influenced to a considerable extent by the slightest movement or even noise. In a few cases—not all—a most peculiar fetid odour was noticeable, especially so in strong, robust subjects, in whom perspiration was free and profuse. The smell certainly was not that observed in severe rheumatic cases, but was quite as pungent as well as far more disagreeable to those in attendance.

Some patients on seeking medical advice complained of considerable pain along the spine at the onset of the fever. A subsidence of febrile action in general followed in from four to seven or eight hours, or, at all events, the symptoms if continued beyond the latter period became much mitigated. Diaphoresis came on, the thirst moderated, and the signs of oppression in a great measure disappeared. The perspiration that was a prominent symptom of the complaint continued during the whole of the paroxysm, and after it had passed off the patient appeared considerably relieved, the question "how he felt" in nine cases out of ten eliciting the reply that "he felt quite well." This, however, was more apparent than real, for in a few hours the sufferer was as bad as ever. Sometimes a respite would be extended to some four-and-twenty hours, possibly to even as many as eight-and-forty, but in such cases the fever frequently returned in an aggravated form, as if the febrile action had only rested to return with renewed force. These renewals of exacerbations, moreover, seemed to observe no definite form of periodicity. They would return in some cases at dawn or in others at midday, but in the majority were more frequent in the evening. Under such conditions it can be well understood there was always a difficulty in deciding which were critical days and which were not, but there is little doubt that if no improvement (I mean a complete lessening of the more urgent symptoms) was visible by the end of some ten days the case would turn out to be a very serious one. Moreover, if the urine, instead of increasing in volume with a diminution of colour taking place, presented exactly opposite conditions then uræmic poisoning would probably follow, and "black water" fever, as it is called, had assuredly set in.

On my visiting Prahsu Hospital on Jan. 17th, 1896, I learnt the following particulars from Surgeon-Lieutenant-Colonel Blennerhassett, A.M.S., who kindly placed all records at my disposal. Since Dec. 24th, 1895, the admissions into his hospital were as follows. White officers, 6; privates, 47; coloured officers, 0; coloured troops, 30; general total admissions, 6 officers and 77 men, or 83 all told. The majority of these cases were due to remittent fever, the temperature varying from 100° to 109° F. The latter temperature was reached in the case of the late Major Fergusson, of the Royal Horse Guards, and during his treatment in hospital this very high state of fever was only reduced by wet packing and cold sponging to 104°. The death of this much lamented officer occurred within a few days of his first observable symptom and was due to hyperpyrexia with suppression of urine, accompanied by a hot, pungent, dry skin, which all treatment failed to restore to its normal condition. His decease was as sudden as it was unexpected by those who knew him and loved him so well. He lies buried in Prahsu Cemetery beside another officer who died at this place during a former expedition (*vide* Fig. 1), the small wooden cross denoting the spot where he is interred. Nearly all the officers who resided for any time at Prahsu had an attack of fever. The next highest temperature which was recorded was 105·4°, which occurred in the case of a private in the West India Regiment, and close on his heels followed a company sergeant-major, also of the West India troops, whose temperature reached 105°. A sapper's highest was 104°. The remaining cases varied from 103° to 104°. At one time three out of four medical men were down with this complaint at Prahsu. I have been given to understand that in the matter of medicinal remedies calomel, quinine, antifebrin, and phenacetin, in their order of sequence, proved the most useful in subduing this malarial scourge. Surgeon-Lieutenant-Colonel Blennerhassett says that calomel in moderate doses, followed by magnesium sulphate, proved of great service in clearing the way for the administration of quinine and the other remedies. Prognosis must always be rather gloomy in the cases of sufferers from this kind of fever when a decided improvement is not evident by the end of the tenth day. By this time they generally become irritable, weak, and exhausted, any decided remissions being most indistinctly marked. Moreover, the skin remains dry, the tongue, losing its moist character, appears parched, and the pulse small, feeble, and irregular—in fact, the complaint has then assumed a low and distinctly typhoid character. Notwithstanding this, the patients may again and again, on account of the entire absence of any pain, express themselves as feeling "quite well." When the fever takes a favourable turn the remissions become more and more distinctly marked and the intervals considerably extended. The countenance assumes, too, a far more natural expression. The heat of the skin lessens, thirst is diminished, the pulse becomes fuller and less rapid, whilst the tongue gradually loses its fur and to the touch feels more moist. Diarrhœa often at this time sets in, but generally disappears after four or five motions have been passed, and, with care and good nursing, convalescence is speedily established; but exceeding carefulness must always be exercised during this period of convalescence. Patients improve considerably on removal from the coast to a healthier climate, for instance, seaward or to England, but the transition must not be too abrupt, for it is a well-known fact that these fever cases doing remarkably well for some days on the homeward voyage often suffer severe, even fatal, relapses as soon as they reach the cooler latitudes of the North-east Trades, and many having entirely lost the fever during the trip have experienced quite a serious relapse on their arrival on British shores.

Considering that I was laid by with fever only two or three hours after the late Prince Henry of Battenberg was carried back to the coast I am quite unable to record the subsequent history of his case; but from all I have since learned from those well-qualified to speak he received the best professional attendance and nursing that it was possible to give him. I followed him down to Cape Coast Castle as an invalid by the admirably arranged hospital train, only in time, however, to find he was just being removed to the vessel that was prepared to take him home. Fig. 2 shows the native-manned boat conveying His Royal Highness to H.M.S. *Blonde*, the vessel on board of which he unfortunately died.

INAUGURATION OF THE HAARLEM CHALYBEATE BATHS AND SPRINGS.

(FROM A SPECIAL CORRESPONDENT.)

A NEW health resort has just been inaugurated within easy access of London, the Midlands, Yorkshire, and Lancashire. Valuable mineral waters have been discovered near the old, interesting, and historical Dutch town of Haarlem. Like many other valuable things the discovery was the result of a pure accident. Some fifty years ago attempts were made to drain the Haarlem Mere—a vast sheet of

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allow water covering some 40,000 acres of land. It was rrectly thought that the land would be valuable for ricultural purposes if it could be reclaimed, and at its drainage would also contribute to render e town more healthy, for the inhabitants occaonally suffered from intermittent fever. Dykes were ilt, canals constructed, and windmills erected to mp out the water. The windmills, however, were not werful enough to effect this end and steam pumps great strength were obtained from England. At last tch perseverance got the better of all the difficulties, the ere was drained, and the whole of the reclaimed land put der cultivation. The rich, peaty soil amply repaid the bour that had been expended. Valuable pasture land was eated in some portions of the mere and good crops were own in other parts. At present one of the favourite plants ltivated is the caraway, which produces the aromatic ed which is used in the manufacture of the well-known queur called Kümmel. Several farmhouses were conructed on the mere, and wells had to be dug to satisfy the ants of the inhabitants. To obtain drinkable water it was cessary to dig to a great depth, ninety or more feet, and e wells were all on the Norton principle. When the good ater had been reached an iron pipe was inserted. The water en rises up the iron pipe, which protects it from mixing ith the water in the higher levels. After some time it as noticed that the cattle that drank the water of e of these wells prospered in so marked a degree at the farmers concluded the water possessed special alities. A gentleman having noticed that the ditches in hich this water flowed were very much stained by iron posits took some of the water to Mr. Loomeyer, a local emist, who in his turn brought it to the notice of several edical men. Samples were then sent to Professor Gunning, emonstrator of Chemistry at the Amsterdam University. ere the water was again analysed. Then a theoretical scussion arose as to the origin of the spring. Did it come om Germany? Was it an offshoot of the celebrated rmont chalybeate springs? This hypothesis was gradually andoned in favour of the conjecture that it was what ight be described as a local mixture. Haarlem is near the a and all along the shore there is a range of low sand owns which act as a sea wall. The rain which falls on these owns forms a layer of fresh water at but a few feet below e surface of the sand, which, however, communicates with e sea-water that is found at a lower level. The fresh ater comes in contact with the iron in the soil and dissolves out as a ferrous salt. Thus, in this water, as in the issengen waters, there is some ammonium chloride present, hich, it is urged, must be derived from the sea water and is ot due to any form of contamination. In any case the proortion of ammonium chloride is stated to be less than that oticed in the Kissengen waters. Nevertheless, this makes imperative that the construction of the well should be such to defy any possibility of contamination. Throughout the hole of this province there is a salt-water layer at about feet to 120 feet below the surface. Two years ago experients were made and a well was sunk to a very great depth ar Haarlem; but the deeper the well the more salt became e water, and with salt water there is always a little mmonium chloride. Ten metres below the surface there is nerally a layer of alluvia, and it is supposed that at some metres to 40 metres the fresh water, which, bearing also me phosphates, has dissolved the oxides of iron into ferrous lts, meets some of the salt water, and hence is found a ineral water containing an unusually high proportion of loride of sodium.

Whatever may be the value of these theories the analysis ints to the discovery of a valuable spring. Professor ockvis had indicated in his remarkable theoretical works this subject what should be the constituents of a chalyate water, and when subsequently the waters from the aarlem Mere were submitted to him he recognised that ey contained what he had theoretically held to be the siderata. Professor Stokvis writes: "I do not hesitate to alify this water as an excellent ferruginous water, which ay unquestionably be ranked amongst other known rruginous springs; nay, in some respects it surpasses em. This the chemical analysis proves so convincingly at any special recommendation of this chalybeate water ems almost superfluous." Thus encouraged, several gentlen living at Haarlem pushed the inquiry still further. Some the water was put in bottles and sent to a large number of edical men in different parts of Holland with the request that they would give it a trial. Seven years ago a sort of congress or meeting was held to which these same medical men were invited. Several attended and compared their notes. The result was most encouraging. Professor Huet of Leyden, notably, compared the water with that of Pyrmont and related the good effect it had produced on his patients. It was then decided to continue to make investigations for another year and to send further samples of the water to medical practitioners. Finally, when, after the lapse of this time, the reports were again found to be, if anything, even more favourable, some of the leading inhabitants of Haarlem determined to try to work the spring commercially. In 1892 a company was formed which proceeded to build a casino at Haarlem, close to the beautiful wood or park of that town.

In view of the approaching season the Wilhelmina Spring Company determined to inaugurate their enterprise by an opening ceremony. A number of English journalists were invited, and on April 12th last, together with seven colleagues of the daily, weekly, and scientific press, I left London at 8.30 P.M. for Harwich. In spite of the rough weather the magnificent new steamers of the Great Eastern Company landed us at the Hook of Holland at five the next morning. By half-past seven we were already at Haarlem. It will be seen, therefore, how easily the journey can be accomplished from London; but it is equally easy to reach Harwich from the midland counties and the north of England. On arriving our first visit was to the bath-house. It consists of a central building, with two low wings on either side, one for ladies and the other for gentlemen. Both sides are similarly constructed. There is, first of all, a waiting-room, then the medical man's consulting-room, communicating with a chamber in which electric baths can be taken, and after this the resting-room for those who have taken their bath. These rooms are so arranged that the medical attendant can, if necessary, render any assistance to the patient. Then there are six ordinary bath-rooms, with glazed hardware baths, hot and cold water douches, &c. Provision has been made for giving chalybeate baths with or without the addition of carbonic acid. Then there are rooms at the back—shut off with double doors so as to keep unpleasant odours from pervading the other parts of the establishment—where sulphur, salt, and mud baths can be given. Douche and jet baths in every possible form have also been provided, and to facilitate the reaction after bathing there is a gymnasium. The whole seems very neat, appropriate, and so constructed as to preserve the utmost cleanliness. In respect, however, to the drainage it may be observed this has not been contrived with sufficient care. At Haarlem the old French heresy, which has so often been denounced in these columns, still prevails. The law does not allow direct drainage into the sewers, but sanctions a system which greatly increases the danger that arises from sewers. Rain water and slop water may drain direct into the sewers, but closets must drain into cesspools. As, however, these are not dry closets, but English wash-out closets with a two-gallon flush, the cesspool is, of course, promptly filled; therefore, permission is given to insert an overflow pipe communicating from the cesspool to the sewer. Under such circumstances it would be much safer to drain directly into the sewer, for then the sewer would only receive fresh sewage, which, if the sewer is properly built and flushed, would be carried away so promptly that it would not have time to ferment and cause mischief. As it is, the sewage goes to a cesspool. The heavy substances sink to the bottom of the cesspool, where they remain for weeks fermenting and polluting to a high degree the water, which, after washing over this foul sewage, is allowed to overflow into the public sewer. It is needless to point out that a cesspool with an overflow does not prevent the contamination of a sewer, but greatly increases that contamination, because it pours into the sewer stale instead of fresh sewage. With sewers thus rendered foul and with a cesspool charged with an accumulation of sewage the precaution of very careful disconnexion between the drains of the bathing establishment and the cesspool and the sewers is more than ever requisite. The water from the baths flows into dip traps situated outside the walls of the baths. But these traps are not ventilated; they are also clumsy contrivances likely to become foul. It is not, however, necessary to enter into a full description of the drainage of the baths, for on my pointing out these defects the directors at once promised that they should be remedied. Indeed, after all the ceremonies and

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festivities were concluded the directors and the architect showed me the plans of the drainage, and I pointed out what alterations it seemed to me should be made. Orders were then and there given to at once undertake the works to disconnect and to ventilate every drain pipe and provide both inlet and outlet apertures, so that every drain-pipe may be properly ventilated with a current of air throughout the whole of its course and absolutely disconnected from the cesspool and the sewers.

Haarlem, it is well known, is the great centre of the bulb trade, and just at this moment there are acres upon acres of land covered with beautiful hyacinths and tulips. This suggested that Haarlem, like Nice, might have its battle of flowers. Instead of carriages, however, the carnival was conducted on velocipedes and formed part of the programme for the inauguration of the springs. It is scarcely within my province to describe these festivities. That 40,000 excursionists came from Amsterdam alone to witness the procession is, however, a fact which will suffice to show how much the *fête* was appreciated by the public. There were specimens of velocipedes dating back more than 100 years and others of more recent manufacture down to the most modern improvements, all gaily decked with flowers and mounted by riders in fancy costumes. As they passed the crowd marked its approval by showering flowers upon them. It was an animated, joyful, and pretty sight.

On the following day we were taken to the seaside resort of Zandvoort, which is reached by steam tram from Haarlem in about twenty minutes. Thus it is possible to combine treatment at the mineral springs with sea bathing or healthy exercise on the seashore. A beautiful sandy beach stretches for several miles on either side of Zandvoort, where there are numerous hotels and accommodation for visitors at moderate cost. From this place a pleasant drive brought us to Ymuiden, where the sea canal from Amsterdam falls into the North Sea. Here are some of the largest locks in the world, a new fishing port, and generally much to interest tourists.

It was on the third and last day of our visit that we were taken to the Haarlem Mere to see the springs. After a good long drive we reached that portion of the mere where the springs are situated. A shallow circular well receives the water from the Norton pipe, which is in its centre. At first it consisted only of bricks. These, however, have been carefully covered with cement and concrete and the floor of the well has been treated in the same manner. Thus the surface water cannot penetrate the well. But there was great difficulty in ascertaining what was the depth or length of the Norton iron pipe or what was its actual condition. Ultimately, it was ascertained that the man who throughout this district had sunk these Norton wells had always been obliged to go down to a depth of thirty or forty metres, and there was no reason to believe that this well differed in any way from the others in the neighbourhood. Still, it would have been more satisfactory to have had more positive evidence of the fact. Then there is always the danger that, in the course of time, the iron pipe may so corrode as to admit some small quantity of water from higher levels than that at which the chalybeate water is taken. I, therefore, ventured to suggest that soundings should be made, and, if possible, a glass coating or lining should be introduced within the Norton pipe. The directors endorsed this opinion and promised that measures to this effect should at once be taken. Close at hand there is another spring which contains a much smaller quantity of iron and which has a well constructed in the same manner. This is called the Hollandia spring. The water from this well is placed in iron tanks of 4400 litres capacity and air is blown through for an hour. The air oxidises the iron, which, after twenty-four hours' rest, has all sunk to the bottom of the tank. The water is then filtered through animal charcoal, gravel, and sand, and carbonic acid gas is added. It is then bottled and sold as an aerated table water. It seems to be an excellent water for such a purpose, but the analyses of this spring have not yet been published. The Wilhelmina or Chalybeate spring yields about 60,000 litres in the twenty-four hours, and the Hollandia, or table-water spring, about 40,000 litres.

In the afternoon the Mayor of Haarlem officially opened the pump-room near the casino, where the Wilhelmina water is brought to town through iron pipes, and in the evening a final banquet was given in honour of the guests. At this dinner the director of the company, Mr. J. Scholten, in an eloquent speech, alluded to certain criticisms indicated in this article and promised that the suggested improvements should at once be carried into effect, declaring that no pains would be spared to render the baths and springs of Haarlem perfect in every respect.

Haarlem, April 16th, 1896.

[An analysis of the Wilhelmina saline and chalybeate water was made in our laboratory some time ago and the result was published in THE LANCET of Oct. 6th, 1894. The water was found to be charged with carbonic acid gas under slight pressure, and it was observed that the dissolved iron remained intact for some time; that is to say, the iron did not readily separate in the form of hydrated oxide after the manner of most chalybeates containing iron in the ferrous state. This is probably due to the presence of an important quantity of alkaline salts, consisting chiefly of the chlorides of magnesium and sodium, with a distinct amount also of chloride of ammonium. The presence of these salts, as was pointed out, is doubtless an advantage, especially in regard to the otherwise constipating effect of iron and many of its compounds. The genuine character of the water is established by the fact that a brief examination of the spring made by our correspondent on the spot confirmed, so far as it went, the results obtained with a specimen of the bottled water examined in THE LANCET Laboratory more than a year ago.—ED. L.]

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Ladies' Charity and Lying-in Hospital.

A MOST enthusiastic meeting of the local members of the profession, at which over 200 were present, was held on May 11th at the Medical Institution to consider the recent position taken up by the committee of the Ladies' Charity towards its medical staff, which has involved their entire resignation. The following resolutions were moved in an able and appropriate speech by Mr. Mitchell Banks and carried, the first unanimously and the second with but one dissentient (who, by the way, was completely in accord with the general feeling of the meeting, but differed only in the terms of the resolution):—1. "That this meeting of the medical profession view with much indignation the recent action of the board of management of the Ladies' Charity and desires to express its warm approval of the action of the staff in refusing to hold office under the conditions proposed to them." 2. "That this meeting trusts that while the present regulations are in force at the charity, no member of the medical profession will accept office at that institution or will give assistance on or after the 19th inst. to its officials, either gratuitously or for gain, thus rendering the board of management responsible for any dangerous consequences that may occur to patients treated by their officials." The object of the second resolution was to give timely notice to the board of management that after a certain date—viz., the day following that fixed for receiving applications for the vacant posts—they must not expect any assistance from the late staff. It may be mentioned in passing that the attempts made to induce gentlemen to accept office by the offer of pecuniary considerations were, to say the least, undignified, and it is much to the credit of a respected member of the profession that he declined, when asked to do so, a fact most favourably commented on by his brethren. The meeting mentioned above was attended by two lady doctors, who were in thorough accord with their male brethren. The whole business is discreditable, and it is a matter for much regret that the centenary of the charity should be marred by these unhappy disputes, which in a well-regulated charity ought never to have occurred. It is an additional illustration of the unfortunate consequences which may ensue when the medical staff of any hospital is without a single representative on the managing committee.

Post-graduate Course.

The syllabus of the post-graduate course which has just been issued states that the lectures and demonstrations, of which there are thirty, will commence on May 12th and terminate on June 30th. The lectures will be held in the medical school of University College, Liverpool, on Tuesdays and Fridays from 2 P.M. to 3 P.M. The introductory lecture

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ill be given on May 12th by Professor Patterson, dean of he medical faculty. The demonstrations will also be given n Tuesdays and Fridays; they will be held at the various eneral and special hospitals throughout the city.

Death of Dr. J. M. Packer of Huyton.

It was with much regret that the profession in Liverpool nd Huyton received the intelligence of the death of Dr. . M. Packer, who succumbed on the 1st inst. after a few ays' illness. Dr. Packer was for many years in practice at luyton, where he was highly esteemed by his professional rethren and by his patients, whose confidence he completely njoyed. He was educated at King's College and at St. Mary's lospital, at which latter he was formerly house surgeon. He btained the Membership of the Royal College of Surgeons f England in 1862 and graduated as M.D. at the University f Edinburgh in 1863. He was fifty-eight years of age.

Liverpool Medical Club.

The Liverpool Medical Club, which was recently opened, eld its inaugural dinner at the Adelphi Hotel on the 0th ult., Mr. Mitchell Banks, President of the club, in the hair. It is registered under the Companies Acts, 1862 to 890, whereby the liability of the shareholders is limited to he amount of their shares. It has for its objects the pro- notion of professional unionism and the discussion of thical matters, besides affording the advantages of an rdinary social club. The premises, which are tastefully urnished and supplied with all modern conveniences, are ituated in a central part of the city within easy access of he different railway stations. Dr. Edward Adam is the hairman of the board of directors, the vice-presidents of the lub being Mr. J. E. Burton and Dr. G. G. S. Taylor.

Prosecution under the Glanders and Farcy Act.

Proceedings were taken at the Liverpool police-court on he 29th ult. against a veterinary surgeon for neglecting to otify to the police the existence of glanders in a horse vhich was under treatment in his stables for an injury to one f its legs. At the end of a week it was discovered to be uffering from glanders, and according to the evidence he ept the horse for another week in the same stable with other orses. The prosecution was laid under the Glanders and Farcy Order, 1894, issued by the Board of Agriculture under he Diseases of Animals Act. Persons having charge of an nimal affected with glanders are bound to notify the fact o the police, who then apprise the local authority whose luty it is to order the slaughter of the diseased animal nd its carcase to be buried, covered over with quick-lime, nd with not less than 6 ft. of earth over it. The defendant leaded that it was a doubtful case of glanders as blood- oisoning might have resulted from the kick, and in the arly stages it was difficult to diagnose glanders. He also tated that the horse in question was kept it a loose-box ompletely isolated from other animals on his premises. The ench, however, considered the case proved, and fined the efendant £5 and costs.

A New Parish Hospital for Toxteth-park.

The Toxteth board of guardians are in similar straits with heir brother guardians of the adjoining parish of Liverpool s to the want of accommodation in their workhouse for sick oor. The majority of the guardians at a recent meeting dvocated the building of a new infirmary at a cost of 11,000. It was pointed out that the increase in the number f nurses in recent years was an argument in favour of the roposed extension. It was eventually decided to proceed vith the new building.

West Kirby Convalescent Home.

This convalescent home has been enlarged by the addition f a new wing, which has just been opened. For some time ast the committee have been unable to deal with the umerous applications for admission, and by the generosity f a few friends the funds were provided for erecting the ew wing. It is a handsome red-brick building to match the main block, its chief internal features being the provision of isolation rooms for infectious diseases and a special ward for rippled children. There is also a disinfecting chamber and a large, well-lighted day-room. The building, which has cost £3000, will give accommodation for an additional thirty beds.

May 13th.

WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Bristol Eye Dispensary.

THE first annual meeting of the Eye Dispensary since its reconstruction was held on April 28th. The report stated that 1667 patients had been treated during the past year, giving an average of thirty-two fresh cases every week, exclusively of those already undergoing treatment. The financial statement showed that there was a balance in hand of £40.

The Wellington (Somerset) Board of Guardians and the Medical Officer to the Workhouse.

Recently the Wellington Board of Guardians twice declined to grant an application by the medical officer of the workhouse for an increase of salary from £30 to £50 per annum. The officer accordingly resigned. Advertisements were issued inviting applications for the post, but at the meeting on May 1st the clerk reported that none had been received. The board had now decided to apply to the Local Government Board for sanction to increase the salary from £30 to £40.

Annual Extra-Collegiate Meeting of the Court of the University of Wales.

The annual extra-collegiate meeting of the Court of the University of Wales took place recently at Cardiff, Mr. Humphrys Owen, M.P., presiding. Dr. Isambard Owen and the chairman were re-elected vice-chancellors. Lord Windsor, in welcoming the court of governors said that Cardiff took an interest no less than any other part of Wales in the valuable educational work in which the University was engaged. The estimate of expenditure for the year ending March 31st, 1897, amounted to £4496, and has been submitted to Her Majesty's Treasury. The Court empowered the standing executive committee to take immediate steps to raise funds for the purpose of the foundation of fellowships and scholarships.

The Water-supply of Bath.

At the meeting, held on April 30th, of the Bath Waterworks Committee it was reported that the reservoir at Monkswood was nearly completed and that at the present time there were 17,000,000 gallons already stored.

Bacteriological Researches in Connexion with Cheesemaking.

The committee of the Bath and West and Southern Counties Society have fitted up, on behalf of the Somerset county council, a cheese school at Cossington, near Bridgwater. A laboratory has been added to this, and Mr. F. J. Lloyd, F.C.S., is conducting, under the direction and at the cost of this society, bacteriological and other researches in connexion with cheesemaking. Mr. Lloyd is anxious to give information and assistance to any farmers who discover any difficulties in the making of Cheddar cheese.

An Infectious Hospital for the Carmarthen Asylum.

At the quarterly meeting of the Pembrokeshire county council held last week the council approved the proposal of the committee of visitors of the Carmarthen Asylum to erect a new detached infectious hospital for eight beds at a cost of £1000 on the building.

Hospital Saturday in Bristol.

It has been definitely decided that June 13th shall be observed in Bristol as Hospital Saturday. In addition to the usual street collections on that date a *fête* will be held at the Zoological Gardens, Clifton, when an ambulance corps will give demonstrations and several entertainments will be provided. The charities to be assisted are the Royal Infirmary, General Hospital, Children's Hospital, Eye Hospital and Dispensary. It is stated that Bristol has to maintain five principal medical charities at a total cost of over £30,000 per annum; that the city has a population of 225,000, of whom about 3500 are regular subscribers, and the contributions in subscriptions do not reach £8000, or a little more than one-fourth of the expenditure; and that the charities relieved last year 85,000 people, or nearly two out of every five of the entire population of the city.

Increase in Salaries of Poor-law Surgeons.

At the annual meeting of the Chipping Sodbury board of guardians held on April 30th Sir Gerald Codrington, the

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chairman, stated that during the past year the board had increased the salaries of Mr. H. H. Williams, L.R.C.P., L.R.C.S. Edin., Mr. Alfred Grace, M.R.C.S. Eng, L.S.A., and Mr. W. J. Cox, M.R.C.S. Eng., L.S.A., the medical officers of the various districts of the Chipping Sodbury Union.

May 12th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Large Bequests to Charities.

THE sum of £39,000 has been allocated to Scottish charities from the estate of the late W. A. Guesdon, who died at Clapham on April 4th, 1891, and who bequeathed £400,000 to hospitals, &c., throughout Great Britain. The details for Scotland are:—

Scotland generally.—Queen Victoria Jubilee Hospital for Nurses, £5000; Orphan Homes of Scotland (Mr. Quarrier), £6000.

Edinburgh.—Royal Infirmary, £3000; Hospital for Sick Children, £1500; Orphan Hospital, £1500; Original Ragged School, £500; United Industrial Schools, £500; Edinburgh Hospital and Dispensary for Women and Children, £500.

Glasgow.—Hospital Sunday Fund for Royal Western and Victoria Infirmary, £5000; Hospital for Sick Children, £1500; Institute for Orphans and Destitute Girls, £2000; Sick Poor and Private Nursing Association, £1000; Glasgow United Evangelistic Association, £1000; Glasgow Industrial Schools at Mossbank (boys) and Maryhill (girls), £500.

Aberdeen.—Royal Infirmary, £2000; Royal Samaritan Fund, £1000; Aberdeen Industrial School for Boys (Oakbank), £250; Aberdeen Industrial School for Girls (Whitehall), £250.

Inverness.—Northern Infirmary, £2000; Highland Orphanage, £2000.

Dundee.—Royal Infirmary, £2000; Working Boys' Home, £500; Working Girls' Home, £500.

The Hospital Sunday Fund, Glasgow, gets the residue of the estate.

Glasgow University.

The University is to receive under the will of the late Dr. John Grieve the sum of £8000, which is to be applied at the discretion of the court to the foundation of a lectureship, fellowship, or scholarship. The present demand for teaching in the subject of public health is very inadequately met by the existing laboratory arrangements and the University Court has decided to equip a temporary laboratory until more satisfactory permanent dispositions are possible. Some recent communications with possible benefactors of the University render it probable that a lectureship in geology will shortly be instituted. The athletic side of university life is to be afforded a further opportunity by the erection of fives-courts. The demands which are to be made upon the medical student under the five years' curriculum in connexion with such special subjects as diseases of the eye, ear, throat, skin, &c., have not yet been issued in an authoritative form, though it is understood they have been formulated by the Senate. This delay is a matter for regret and it may lead to considerable inconvenience. The session is now far advanced and it may well be the case that when the additional regulations appear students will find in them requirements which they can now only meet by taking a number of extra classes in their last summer, amidst the anxiety and excitement of the final examination. Had the regulations appeared a few weeks earlier the student could have arranged to attend the compulsory courses during the present session. This would not only have consulted his convenience, but would have also increased the probability of his attendance being a profitable one.

Glasgow Medico-Chirurgical Society.

The following gentlemen have been elected office-bearers for the session 1896-97:—President, Dr. W. L. Reid. Section of Medicine: Vice-President, Dr. Alex. Napier; Councillors, Dr. R. B. Ness and Dr. Maitland Ramsay; Secretary, Dr. Hinshelwood. Section of Surgery: Vice-President, Dr. Newman; Councillors, Dr. Walker Downie and Dr. J. H. Nicoll; Secretary, Dr. John Barlow. Section of Pathology: Vice-President, Dr. T. K. Monro; Councillors, Dr. Lindsay Steven and Dr. Rutherfurd; Secretary, Dr. R. M. Buchanan. Section of Obstetrics: Vice-President, Dr. Samuel Sloan; Councillors, Dr. J. Nigel Stark and Dr. Edgar; Secretary, Dr. Lawrence Oliphant. Treasurer, Mr. Henry E. Clark; General Secretary, Dr. C. O. Hawthorne.

Medical Appointments, Glasgow.

Dr. J. B. McKenzie Anderson has been appointed assistant dispensary physician to the Royal Infirmary. Dr. John Wright is to succeed Dr. J. Boyd as casualty police surgeon in the western police district. The resignation of Dr. Ernest L. Marsh as senior assistant medical officer in the Belvidere Fever Hospital is announced. He is to be succeeded by Dr. Andrew Watson. Dr. Francis Gairdner has been appointed one of the junior medical officers to the hospital.

Broomhill Home for Incurables, Glasgow.

The annual sale of patients' work took place on the 9th inst., the sale being declared open by Sheriff Cowan, Paisley. There are at present in the home about 100 patients and those in receipt of out-door relief number nearly 200, the lack of funds preventing other applicants being placed on the books. The sale was largely attended, many of the best-known practitioners in the west of Scotland being present. The proceeds exceeded £250.

Aberdeen Royal Infirmary.

A three days' sale of work (including a "jumble" sale), promoted by the ladies' working party, took place last week in the Drill Hall, Woolmanhill, Aberdeen. The full proceeds, to be handed over to the Royal Infirmary, amount to rather more than £200. Dr. Robert John Garden, one of the surgeons of the infirmary, and Mrs. Garden took chief charge of the arrangements.

Aberdeen University Buildings Extension.

The executive committee met on May 8th, the Marquis of Huntly in the chair. A financial statement was submitted showing that the amount subscribed at March 20th, 1895 (the date of the late Mr. Charles Mitchell's additional offer of £6000), was £32,167 15*s.* 9*d.* The amount subscribed at the date of the meeting being £42,563 8*s.* 10*d.*, giving a difference of £10,395 13*s.* 1*d.*, the condition that £10,000 must be subscribed to secure the additional gift of £6000 has been fulfilled. The money thus raised will go towards the erection of the south wing. It is now expected that Government will give a further grant of £15,000 towards the scheme. The total sum collected up to May 8th was £109,563 8*s.* 10*d.*

May 12th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Irish Public Health Bill.

THIS Bill has now been received from the Standing Committee on Law in an amended form and provides amongst other matters that the Local Government Board may invest a rural sanitary authority with the power of an urban sanitary one, that sanitary authorities in adjoining districts may combine for the execution of works, and that superannuation allowances to officers may be made in consideration of duties under the Public Health or under this new Act.

The City of Dublin Nursing Institution.

This institution, which is connected with the City of Dublin Hospital, has proved to be a great success. On the 9th inst. a large and very distinguished company were invited to an afternoon entertainment at 27, Upper Baggot-street, on the occasion of the presentation of an address and service of plate to the lady superintendent.

Belfast Hospital for Consumption and Diseases of the Chest.

At a meeting of the supporters of this hospital, held on May 5th, the following resolution was passed unanimously: "That the committee appointed by the resolution passed at an extraordinary general meeting of Feb. 3rd last, to prepare the draft of an agreement to carry out the proposed amalgamation of this hospital with the Forster Green Hospital for Consumption and Diseases of the Chest, having this day submitted same, this meeting approve in all respects of such draft scheme and agree to same, subject to our trustees obtaining the sanction of the Court of Chancery thereto." In accordance with this arrangement there will in the future be only one hospital for consumption and diseases of the chest in Belfast.

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An Ulster Poor-law Board Superseded.

A sealed order has been forwarded by the Local Government Board to the Castleblaney Union removing the present board of guardians of Castleblaney from their office and appointing Mr. Agnew, Local Government Board inspector of Belfast, acting guardian for the time being. The reason for this step is the fact that the Poor-law guardians of that union refused to carry out the instruction of the Local Government Board with reference to the building of labourers' cottages in that union.

The Belfast City and District Lunatic Asylum.

At the meeting of the governors, held on May 11th, Dr. Cuming, in accordance with his notice of motion, moved: "That the commissioners of control be requested to advertise for competitive plans for the erection at Purdysburn of two chronic blocks for the reception of 300 patients, and such portions of the administrative buildings as are necessary for an asylum capable of containing hereafter 800 patients, with facilities for future extension to 1000 patients; and that the Purdysburn committee be requested to negotiate the special manner of carrying out the project, subject to the approval of the board." There can be no doubt that, as pointed out by Dr. Cuming, the present state of things as regards the disposition of lunatics in Belfast is a public scandal. A large number of patients are in the union workhouse who ought to be in the asylum instead of where they are, and we are constantly being confronted with expressions of public opinion to this effect, sometimes in the form of verdicts of coroners' juries and sometimes by other forms of protest. The asylum at present is notoriously overcrowded and the crying necessity for proper accommodation can be no longer put off. Further, owing to the overcrowded state of the asylum and to the statements made from time to time that the workhouse was not a suitable place for insane people, Dr. Cuming said a large number of insane people who ought to be placed in such an institution are being actually kept at their homes. It is high time that this state of affairs should be ended. Dr. Cuming's motion was carried and it is hoped it will tend to end the present deadlock.

The Battle of the Clubs at Cork.

The fight with the clubs at Cork has lost much of its local interest as the newspapers have ceased to insert any correspondence on the subject. The club members generally are anything but pleased with the present state of affairs, and they have been hoping against hope that something may occur to break up the organisation of the medical men, but there is not the slightest indication in that direction—on the contrary, many of the medical men are coming to realise that it would be better for the profession at large if the yearly contract system could be abolished completely and an arrangement instituted in its stead by which small payments per visit would be made by artisans and others who could not pay ordinary fees. The result of the contest in Cork so far has been that the profession has, in the aggregate, received a larger amount of money. Indeed, one Cork gentleman who resigned his clubs states that last year he received more in private fees from club patients than his salary would have amounted to, and his was by no means an isolated experience. The senior medical men, too, now receive fees from wealthy club patients who formerly paid miserable doles to club officers. Experiences of that kind as well as an admirable *esprit de corps* tend to weld together the medical men of Cork in defence of their common interests. The pitiable part of the whole business is that the poorer club members who have been cajoled by their richer brethren are obliged to avail themselves of the services of the imported club medical officers whether they have confidence in them or not. If those three medical men happened to be specialists in every branch of medicine it stands to reason that many of their patients would one time or another desire a change, but now the struggling artisan who is a member of one of their clubs not alone has no choice, but outside the three he cannot even have a consultation. It is very gratifying to the Cork profession to find that the movement of which they have been the pioneers has extended so rapidly over England. One good result they hope for is that a bond of union will be established between medical men all over the United Kingdom, and that thereby the dignity and the interests of the medical profession will be everywhere maintained.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Statistics of Scarlet Fever at the Hôpital des Enfants Malades.

THE Children's Hospital of the Rue de Sèvres received in 1885 256 cases diagnosed as scarlet fever. In nineteen instances there was an error of diagnosis, and two of these children contracted the disease during their sojourn in the wards. Be it noted that it was only as recently as Jan. 1st, 1896, that a separate ward was opened for these doubtful cases. The nett mortality was 5·85 per cent., a great improvement on previous figures, especially when we consider that half of the deaths occur in children brought in in a desperate condition. The other causes of death were broncho-pneumonia (3), secondary infectious sore throat (1), tuberculosis (1), and entero-gastritis of nurselings (2). The most frequently noted complications were early cynanches with white deposit (32 per cent.), generally of a mild type with creamy exudation, sometimes pseudo-membranous, and occasionally accompanied with nasal discharge, suppurating glands, and serious symptoms of infection; secondary cynanches, assuming generally the diphtheria type, but invariably streptococcic (only one of these cases died); suppurative adenitis (7 per cent.); and suppurative otitis (20 per cent.), appearing generally at the moment of the disappearance of the sore throat. Albuminuria was present in 20 per cent. of the cases, but in 8 per cent. this was only transient. In 6 per cent. the albumin was synchronous with the onset of the complication and disappeared with it. In only 6 per cent. was there scarlatinal nephritis properly so called, with anasarca and sometimes hæmaturia and anuria. Two-thirds of these cases of scarlatinal nephritis were acquired outside the hospital, six only contracting it in the wards where all the patients were put on strictly milk regimen. Pulmonary and pleural complications were very rare (broncho-pneumonia, always of a severe type, 5 per cent., and empyemata, 2 per cent.). Cardiac complications were still more rare, only one case of mild endocarditis being noted. Arthralgia (2 per cent.), synovitis (1 per cent.), and suppurative arthritis (1 per cent.) were also infrequent. In one case of suppurative arthritis the streptococcus was discovered, the pus from the rest of the cases being free from micro-organisms. Three-fourths of the cases of scarlet fever occurred between the ages of three and nine years. Above nine years of age the mortality was *nil;* in patients of one and two years of age it ranged from 50 to 11 per cent. The disease was most frequent in spring and summer, the complications most frequent in autumn, and the mortality highest in winter (22 per cent.) and nearly *nil* in summer and autumn (only one death from June to the end of November). Thirty-two children suspected of diphtheria received on their admission 20 c.c. of Roux's serum. Twenty-eight per cent. of these had serum eruptions (generally a fortnight after the injection), these being morbilliform and accompanied with joint-pains. In no instance were these rashes followed by serious symptoms and they invariably disappeared in from twenty-one to twenty-eight hours. Dr. Sevestre's remark that these measly rashes were more commonly associated with streptococcic sore throats was confirmed at the Hôpital des Enfants Malades. Two trials of Marmorek's serum were not encouraging in their results. The routine treatment pursued was strict milk diet, acetate of ammonia (1 or 2 grammes daily during the eruptive stage), buccal irrigation, with aromatised boiled water, and the injection into the nasal fossæ of mentholated oil. Despite these precautions and the low mortality the morbidity in the scarlet fever wards was high, 43 per cent. of the patients having been affected with complications (secondary sore throats, otitis, suppurating glands, albuminuria, broncho-pneumonia, &c.). This morbidity is ascribed to the defective state of the wards, the scarlet fever cases (like the measles cases) being lodged in rooms which are too small, too dark, and generally antiquated, and there being no wards wherein to isolate the children suffering from complications. Funds for the construction of new wards have been set aside for some time by the Assistance Publique, but red-tapeism blocks the way.

Massage in the French Army.

The Minister of War has decreed that hospital orderlies shall in future be taught the art of massage. Classes for

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this purpose will be instituted in Paris (Val-de-Grâce Hospital), at Lyons (Hôpital Desgenettes), and at Algiers (Hôpital du Dey). After a six weeks' course the pupils will be distributed amongst the principal military hospitals.

May 12th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Sanitary Precautions.

THE Public Health Department continues to receive grave intelligence from Egypt as to the spread of cholera, and particularly from Alexandria, where it assumes ever more threatening proportions. The persistence of the epidemic during the winter in the Arab quarters strengthened the anticipation that with the advance of the year, the rise in temperature, and the return of the pilgrims after the feast of Ramadan it would develop accordingly. From the close of December, indeed, the Public Health Department had promulgated precautions of a general kind in advance, and more recently—from the close of February—it had arranged with the Posts and Telegraphs Department that their vessels plying between Massowah and Alexandria should till further notice cease to touch at the latter port. The primary object of this prohibition was to prevent the importation of cholera by means of the military transport services. Further regulations are now in force for special medical surveillance of the vessels plying between Alexandria, Naples, Venice, and Genoa—a "servizio di vigilanza," in fact, conducted on board every arrival at the three last-named ports. In addition to these measures there have just been despatched to all the prefects of the maritime provinces of the kingdom special instructions for the rigorous enforcement of all the regulations established by the central sanitary authority in times of anticipated cholera invasion.

A New Method of Embalming the Dead.

One would have thought that the annually increasing adoption of cremation would have minimised the attempts in which Italy has always been prolific to preserve the dead subject, whether by petrifaction, or mummification, or embalming. But such is not the case. In THE LANCET of Sept. 14th, 1895, was described the perfection to which the lately deceased Neapolitan naturalist, Dr. Girolamo Segato brought the first-named method, his triumphs in petrifying the *cadaver humanum* forming one of the chief attractions of the Florentine Museum. Still more recently Signor Carlo Vercelloni of Lecco has invented another and more ingenious process by which the dead subject is subjected to the slow, continuous action of chemical exhalations liberated from the walls of the coffin in which the corpse is hermetically sealed. After a series of experiments on asses, cats, and birds, he found he could by this means absorb the gases of decomposition and humidity in the dead subject and gradually bring about the mummified state—that of perfect dryness of the subject, retaining every feature exactly as in life. Beginning on July 10th, 1895, with the dead body of a male child of six who had died of meningitis he succeeded in effecting the condition of what he terms "mummimbalsamation"—the head, trunk, and limbs being admirably preserved in the anatomical relief of nature, the expression stereotyped, the hair blonde as in life, only the complexion of the body being of that yellowish copper colour peculiar to mummies, and the eyes, of course, losing their liquid lustre. These, however, being veiled by the eyelids and eyelashes, detract in no way from the look of repose which characterises the *ensemble*. Belonging to the curiosities of science rather than to its utilities, Signor Vercelloni's method may yet be adopted in cases where it is of special interest to preserve the dead subject "in his habit as he lived." But these, as I have indicated, must be rare, and increasingly so with the advance of cremation, itself a revival of an ancient practice. I may add that Signor Vercelloni's experiment is on view at the Ospedale Maggiore in Milan.

May 11th.

MESSRS. THOMAS DE LA RUE AND CO., Limited, of 110, Bunhill-row, E.C., have sent a donation of 100 guineas to the Royal Chest Hospital, City-road, towards the fund now being raised in connexion with the festival dinner to be held at the Hôtel Métropole on the 26th inst.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

Amended Regulations for the Twelfth International Medical Congress.

ALL who have followed the controversy on the subject of the exclusion of English from the languages officially admitted to the discussions at the International Medical Congress will be glad to hear that the executive committee has yielded to the expressions of opinion which have appeared on this subject in both the English and French medical press. Professor Erismann, the general secretary of the Congress, has sent me a formal letter announcing this fact and also the fact that certain specialities which had originally been included under the general headings of medicine or surgery have been raised to the status of independent sections. The letter announcing these changes is written in French, and as it is headed "avec prière d'insertion" I transcribe it *verbatim*.

"Les explications données, il y a environ deux mois, par le Comité exécutif concernant les Sections 7 et 21 du Règlement du Congrès, qui traitent de la question des sections et des langues, ont pu convaincre nos confrères étrangers et russes qu'en discutant et en rédigeant ces sections, ni la Faculté de Médecine de l'Université de Moscou, ni le Comité exécutif n'ont eu l'intention de créer à l'activité des représentants des diverses spécialités et des diverses nationalités plus de difficultés que n'en comportent (comme il nous semblait) la réussite du prochain Congrès et le développement ultérieur des Congrès Internationaux de Médecine en général. Avant de prendre une décision quelconque, nous avions tenu compte des avis que les nombreux et importants organes de la presse médicale avaient fait entendre après le Congrès de Rome. Nous avions cru pouvoir en conclure que nos confrères de tous pays considèrent la multiplicité des langues et un fractionnement trop considérable du Congrès en sections comme des conditions pouvant nuire à ces assemblées et en affaiblir l'importance. Cet avis se trouvant partagé en principe par la majorité des membres de la Faculté de Médecine, celle-ci avait adopté la rédaction connue des Sections 7 et 21. Toutefois, à l'heure actuelle, il est hors de doute pour nous que beaucoup de nos confrères étrangers, de nos futurs hôtes, ne sont pas satisfaits des prescriptions de ces Sections du Règlement et trouvent qu'elles se concilient mal avec les besoins réels du Congrès et sont dangereuses pour son succès. Pénétrés du désir sincère de faire tout ce qu'il est possible dans l'intérêt du prochain Congrès et plaçant sa réussite au-dessus de toute considération personnelle, même basée sur l'idée de faire entrer dans la pratique des Congrès des principes qui nous semblaient essentiels et utiles, nous reconnaissons volontiers que notre tentative était inopportune. C'est pourquoi nous avons décidé de proposer au Comité d'Organisation du Congrès (dont font partie, entre autres, tous les membres de la Faculté de Médecine de notre Université) de donner au Section 7 une rédaction qui exprimât clairement l'indépendance de certaines spécialités, rattachées jusqu'à un certain point à d'autres branches par l'ancienne rédaction, et de modifier la Section 21 de telle façon que la langue anglaise soit admise dans les travaux des sections à l'égal du français, de l'allemand, et du russe. Le Comité d'Organisation a pleinement accepté notre proposition et dans sa séance du 19 Mars, 1896, a adopté la rédaction modifiée des Sections 7 et 21 telle que nous lui avions soumise.

(Signed) "Le Secrétaire-Général, F. ERISMANN."

It will be remembered that originally the Congress was divided into twelve sections, the names of which appeared in THE LANCET of Feb. 22nd (p. 522). They have now been extended to fifteen, as follows: (1) Anatomy (Anthropology, Normal Anatomy, Embryology, and Normal Histology); (2) Physiology (including Medical Chemistry); (3) General Pathology and Pathological Anatomy; (4A) General Therapeutics (including Hydro-therapeutics, Climato-therapeutics, &c.); (4B) Pharmacology; (4C) Pharmacognoscy and Pharmacy; (5) Internal Diseases; (6) Pediatrics; (7) Nervous and Mental Diseases; (8) Dermatology and Venereal Diseases; (9) Surgery; (9A) Odontology; (10) Military Medicine; (11) Ophthalmology; (12A) Otology; (12B) Laryngology and Rhinology; (13) Midwifery and Gynæcology; (14) Hygiene (including Sanitary Statistics, Social Medicine, Epidemiology, Epizootology, and Technical Sanitary Science); and (15) Legal Medicine. The following note is added: "In case of necessity supplementary sections can be organised." It will be observed that there are really in all nineteen sections, but presumably those numbered with letters in addition to numerals—as, for instance, 4A, 4B, and 4C—are intended to rank together as sub-sections of one great section. If this be so, the only specialties which have become independent sections are military medicine, ophthalmology, and the three subjects, otology, laryngology, and rhinology. The paragraph in the regulations relating to languages (Section 21) in its amended form runs as follows: "French is recognised as the official language of the Congress for all international relations. In the general meetings communications will be permitted in other European languages. As regards

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ommunications and discussions in the Sections of the Congress they may take place in French, German, English, and Russian." On this point (the admission of the English anguage) Professor Erismann has, in a private letter to me, ade a request which both he and the executive committee elt some hesitation in making formally and publicly, but hich may fittingly find publicity in the columns of THE ANCET. It is to this effect, that as the Russian hosts will henever possible speak at the Congress in either French or erman rather than in their own language, so they would sk their English guests to similarly refrain from speaking n English whenever they are able to speak in French, which s still the official language of the Congress. A ready comliance with this request would tend to diminish some of the vils which have undoubtedly been felt in previous Congresses rom the use of a multiplicity of languages.

The Russian Jenner Commemoration.

The Russian National Health Society have found it lesirable to postpone the Jenner centenary celebration until October, partly because the extensive preparations which are eing made to ensure the success of the celebration could ot be completed by May 2nd (14th), and partly on ccount of the coronation festivities which will begin very hortly. In all probability the day chosen for the Jenner elebration will be Oct. 12th (24th), the anniversary of he first inoculation of small-pox in Russia. It will be emembered that on that date, in 1768, the Empress Catherine was inoculated by Dr. (afterwards Baron) Dimsdale under circumstances already recorded in THE LANCET.[1]

St. Petersburg, April 26th (May 8th).

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Cholera in Alexandria.

DURING the past fortnight there have been sixteen new admissions into cholera hospitals and nine deaths, besides nineteen deaths outside hospitals. Eleven of these deaths occurred in the last twenty-four hours, and included a well-known Dutch gentleman who was chief secretary to the municipality and who is said to have been restricted to milk diet for some weeks. In Tantah there has been one and in Zagazig there have been two fatal cases; also one at Suez and one at Kinghi Osman, a village near Alexandria. The important point is not so much the greater number of cases, but rather their geographical distribution in several quarters of the town, not excluding the neighbourhood of the Mahmoudieh Canal, which is the only water-supply for the city. Cholera has now been present in Alexandria since December, and no one could have worked harder in trying to stamp it out than Dr. Rogers, who has frequently visited the town, and Dr. Bittar, the local sanitary inspector. But outside the Sanitary Department it is difficult to find anyone to praise. There has been an incredible amount of passive opposition on the part of Egyptians and the lowest class of Europeans. No mild cases have yet been reported to the authorities and there has been habitual concealment of the disease throughout. The ignorant local press, both French and Egyptian, has talked since the beginning in slighting terms of the *soi-disant* cholera, while other papers more hostile have published articles accusing the medical practitioners of turning the hospital into a *morgue*. Small wonder that an ambulance waggon was attacked and that the greatest difficulties have been placed in the sanitary officers' way. Crass ignorance is not confined to the poorest natives, for it was gravely announced at a council of Ministers that the medical men were in the habit of throwing a yellow handkerchief over the face of a suspected cholera patient, of rendering him insensible, and of thus conveying him to the hospital. It is impossible to trace the seed from which this malignant absurdity has sprung, but it reminds one of the dark days about ten years ago when the cholera doctors were stoned in Naples! Last week the Governor of Alexandria permitted a great concourse of Nubians there in honour of a dead Sheikh, and the sole excuse for him is that this annual festival is not officially written upon the list of fairs which were all ordered to be suppressed because of the cholera. The authorities are getting used to dropping cases of the disease and are no longer taking stringent precautions. The European Consuls, excepting the French representative, decided at the beginning of the winter to waive their capitulation rights and to allow the municipality to deal with protected subjects in cholera houses in the same way as with natives. I am glad to be able to report that even the French have allowed a Moor, who is legally under their protection, to be dealt with as if he was an Egyptian subject. The Mahmoudieh canal is being kept under constant supervision by watchmen under the control of Sanitary Inspectors Pinching and Garner, and every precaution is being taken to prevent pollution. The Soudan expedition has already caused great economies in all departments and the much-needed £40,000 for improving the water-supply and the public latrines of Cairo has been withdrawn—let us hope only temporarily.

Filtered Water for Alexandria.

Dr. Bitter has just reported to the municipality the result of his experiments during twelve months, for which £4500 were generously voted. He finds that the ordinary sand filter bed as used in Europe is practically of no avail because the canal water during the whole year holds in suspension excessively fine clay which blocks the filter-beds. Both on financial and technical grounds he reports also against blocks of compressed sand and Breyer's asbestos system. All his experiments tend to show that the water of the Mahmoudieh Canal cannot be well filtered unless the clay is first eliminated. Anderson's iron filings system acts well except at high Nile, but he has found, on the whole, that chemical agents such as permanganate of potash or soda act best by precipitating the clay in suspension before filtration through sand. But before advising the construction of filter-beds and two decanting basins he advises the delay of a few months to see whether underground water cannot be found and supplied to the town at about half the cost of installing filter beds. Borings to the depth of 40 metres have already been made and yield hopeful results. The visitors at Mena House, near the Pyramids, have been drinking very pure water for eight years from a boring in the desert, and it is quite possible that every town in Egypt could be supplied in the same way. But this would require a geological survey and the creation of a special boring department, as already proposed by Rogers Pasha.

British Troops at Wady Halfa.

The North Staffordshire Regiment and details now number 930 men in barracks, and the sick-rate is only 5 per cent., and even that is chiefly venereal. It compares very well with the sick-rate of the troops in Cairo (6·7 per cent.) and those in Alexandria (6 per cent.) There is one case of enteric fever, but that was contracted before arrival at Wady Halfa. Surgeon-Major Sloggett and Surgeon-Captains Holmes and Carr are in medical charge, with one quartermaster and twenty-six hospital orderlies. There is a permanent hospital of 100 beds and an officers' hospital for the English officers of both armies. During the last month three officers have been admitted for hepatitis, dysentery, and conjunctivitis. On the whole the health of the troops is and has been excellent. The average temperature of the first half of April has varied from a minimum at night of 58° or 63° to a maximum by day of 101° F. Fortunately it is very dry, the humidity ranging from 21 to 28 per cent. The medical staff in Egypt has been increased by four officers and all leave has been stopped for the whole summer.

Cairo, May 6th.

FOREIGN UNIVERSITY INTELLIGENCE.—*Copenhagen:* Dr. Bjerrum has been appointed Professor of Ophthalmology in succession to Dr. E. Hansen Grut, resigned.—*Heidelberg:* Dr. Passow of Berlin has been appointed to an Extraordinary Professorship of Otology.—*Leipzig:* Dr. Otto Fischer has been appointed Extraordinary Professor of Physiological Physics.—*Philadelphia (Jefferson College):* Dr. Albert P. Brubaker has been appointed Assistant Professor of Hygiene.—*St. Petersburg (Military Medical Academy):* Dr. M. V. Yanovski has been appointed to the Chair of Diagnosis and General Therapeutics, in succession to the late Professor Chudnovski. Drs. Simanovski and Sirotinin have been promoted to Ordinary Professorships of Laryngology and Clinical Medicine respectively.—*Vienna:* Dr. A. Haberda has been recognised as *privat-docent* in Forensic Medicine.

[1] THE LANCET, Dec. 23rd, 1893, p. 1602.

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Obituary.

JAMES SEATON REID, M.D., L.R.C.S. EDIN., L.S.A. LOND.

WE regret to announce the death of Dr. Seaton Reid, the father of the profession in Belfast, which took place at his residence in that city on May 3rd, the cause being exhaustion following an attack of pneumonia. For some time previous to his decease Dr. Reid had retired from active practice, but for a period of half a century he was one of the leading medical men in the north of Ireland. Dr. Reid, who at the time of his death was in his eighty-fifth year, was born at Ramelton (county Donegal) on July 11th, 1811, his father being a Presbyterian clergyman in that place; while his uncle, after whom he was named, was Professor of Ecclesiastical and Civil History in Glasgow University and wrote a celebrated book, "The History of the Presbyterian Church in Ireland." Dr. Reid, after studying in the old Belfast College, went to Edinburgh, where in 1832 he obtained the L.R.C.S. Edin. and in the following year graduated M.D. of Edinburgh University. He began practice in Londonderry, where from 1833 until 1836 he was house surgeon in the County Infirmary. On leaving Londonderry for a time he was resident medical officer in the General Penitentiary, Millbank. Soon afterwards he went to Belfast, and when in 1840 the board of health opened a second fever hospital he was appointed physician to it. It was here that he first gained an experience in fevers, a form of disease in which he was for years the accepted authority in the north of Ireland. In 1846 he was appointed physician to the fever hospital in connexion with the union workhouse, a post he held for almost half a century and where he had an unrivalled amount of cases of fever and acute disease from which to acquire a great experience. In 1857, on the death of Dr. Horatio Stewart, he was chosen Professor of Materia Medica in Queen's College, Belfast, an appointment which he held until 1890. On the establishment of the Royal University of Ireland he was selected as one of the first examiners in materia medica, and for several years he continued to act in that capacity. He was also for a time physician to the Belfast General (now Royal) Hospital. He wrote Statistical Reports on Contagious Fevers and on the Classification of Irish Fevers, and on Heart Disease, Addison's Disease, and on aneurysm. These communications appeared principally in the *Dublin Quarterly Journal*. He was an ex-president of the Ulster Medical Society and of the Belfast Clinical and Pathological Society. It will be thus seen what varied posts Dr. Reid held during his lengthened professional life and what opportunities he possessed for gaining a sound experience. No one could meet Dr. Reid without feeling he was a very strong personality. Stoutly built, of a florid complexion, with an abundance of snow-white hair, and most punctilious in the care with which he dressed, Dr. Reid in former times was a very striking figure in Belfast. Many of the present younger generation of medical men had no opportunity of knowing him, but those who did could not fail to be struck with the soundness and correctness of his opinion. He certainly believed largely in Sydenham's doctrine that "Tota ars medicinæ est observatio," but old students who attended his private clinique for members of his college class at the Union Hospital will recall his great carefulness in diagnosis. Somewhat dogmatic in manner, always decided in his opinion and action, Dr. Reid was a true friend, a hospitable entertainer, and a most kindly and honourable member of the medical profession. He was buried in the Belfast Cemetery on May 6th, almost all the medical men in that city being at his funeral.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths are announced of the following eminent foreign medical men:—Dr. Richard Hodges, Assistant Professor of Surgery in Harvard University.—Dr. Boffin, Professor of Clinical Surgery in the Nantes Medical School.—Dr. D. van Haren Noman, Professor of Dermatology in the University of Amsterdam.—Dr. A. Sacré, Prosector and Assistant Surgeon of the Brussels hospitals, at the age of thirty-six. He was the son of Professor Sacré, also of Brussels.—Dr. Roberty, formerly Professor of Physiology in the Marseilles Medical School.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the First Professional Examination in Anatomy and Physiology for the diploma of Fellow:—

Monday, the 11th inst.:

James Andrew Neptune Scott, M.R.C.S. Eng., M.D. & C.M. Glasg., L.R.C.P. Lond., Glasgow University; Arthur Godfrey Ince, M.R.C.S. Eng., L.R.C.P. Lond., Charing-cross Hospital; Charles Ernest Mackenzie Kelly, M.R.C.S. Eng., L.R.C.P. Lond.; David Storer Wylie and Harold Holkar Broome, Owens College, Manchester; and Herbert Sherwell Clogg, University College of South Wales, Cardiff.

Fourteen gentlemen were referred back to their professional studies for six months.

Tuesday, the 12th inst.:

Herbert Wolseley-Lewis, M.R.C.S. Eng., L.R.C.P. Lond., Westminster Hospital; Edward Owen Thurston, M.R.C.S. Eng., L.R.C.P. Lond., St. Thomas's Hospital; Henry Allcroft Duffett, M.R.C.S. Eng., L.R.C.P. Lond.; Clarence William Hewlett, M.R.C.S. Eng., L.R.C.P. Lond., and Lancelot Wilkin, Guy's Hospital; George Stanley Dodgson, Cambridge University and Middlesex Hospital; and Edward Joseph Fox, Owens College, Manchester.

Nine gentlemen were referred back to their professional studies for six months.

CONJOINT EXAMINATIONS IN IRELAND BY THE ROYAL COLLEGE OF PHYSICIANS AND THE ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following gentlemen have passed the examination for the diploma in State Medicine:

Frederick Christian Augustus Bushman, L.R.C.P. & S. Irel.
Surgeon-Major Francis Joseph Doyle, F.R.C.S. Irel.

THE UNIVERSITY OF LONDON.—The general meeting of Convocation was held on May 12th at Burlington-gardens, Mr. E. H. Busk, Chairman of Convocation, being in the chair. Mr. H. J. Harris presented the report of the annual committee. It was announced that Mr. T. B. Napier had been elected Fellow in place of the late Sir W. S. Savory, and that the vacancies caused by the deaths of Sir G. Buchanan, Mr. T. H. Huxley, and Sir Julian Goldsmid had been filled by the election of Mr. C. Hubert H. Parry, Mus.D., Professor W. F. R. Weldon, and Mr. Arthur Milman. The vacancy arising from the resignation of Mr. R. H. Hutton will, according to the provisions of the charter, be filled by Convocation in June. Mr. Stanley Boyd moved the reception of the report of the special committee with respect to points in the scheme of the Royal Commission to be presented to the Statutory Commission. The principal recommendation of that report was the appointment of a special committee consisting of the chairman of Convocation, Dr. Allchin, Mr. Bompas, Mr. Stanley Boyd, Dr. Cave, Mr. Cozens-Hardy, Mr. Thiselton Dyer, Dr. Napier, and Dr. S. P. Thompson. The resolution was carried. The following resolutions—(1) "That a special committee of thirteen members, including the Chairman of Convocation, be nominated to prepare for presentation to any Statutory Commission which may be appointed a memorandum of points in the scheme of the Royal Commission in which modification is desirable, and with power to confer with such said Statutory Commission and with the Senate or any committee thereof"; and (2) "That this special committee consist of the following members: the Chairman of Convocation, Dr. Allchin, Dr. Benson, Mr. Bompas, Mr. Stanley Boyd, Dr. Cave, Mr. Cozens-Hardy, Mr. Thiselton Dyer, Dr. Heber Hart, Dr. Napier, Mr. Blake Odgers, Dr. Sansom, Dr. S. P. Thompson"—were also carried. Mr. Stanley Boyd moved: "That the new and enlarged special committee recommended for appointment in the report of the special committee on the memorandum to be presented to such said Statutory Commission should have full powers, if it thinks fit, to prepare amendments to the London University Commission Bill and to have them proposed on behalf of Convocation in either House of Parliament." The resolution was carried.

LITERARY INTELLIGENCE.—Messrs. P. S. King and Son, of King-street, Westminster, announce that they

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have in preparation a General Index to Hansard's Parliamentary Debates from the year 1830 to 1891. These volumes are numbered from 1 to 356 of the Third Series. The index will be published in four royal octavo volumes, price £10 10s. Special pains will be taken to make it exhaustive and the cross references as full and complete as possible. The debates will be indexed both under the subject of the debate, motion, or Bill, and under the name of the peer or member taking part in the debate. A suggestion made by Mr. Gladstone has been adopted—viz., that "the really historical declarations of Ministers and leading men" should be specially indicated. The work is being executed by Miss Nancy Bailey, who was for five sessions (1889-91, 1893-94) the indexer of Hansard's Parliamentary Debates. The index will without doubt be indispensable to politicians, historians, and literary men in general.—We understand that the second and final series of "Illustrations of Pathological Anatomy," by Professors Cast and Rumpel, is in the press, and that Dr. Voelcker, pathologist to the Middlesex Hospital, has undertaken to revise and edit the English edition. The first series, it may be remembered, was edited by Dr. Ruffer before his serious illness which necessitated his departure to Egypt. This work is unique, it being the only one extant in which the illustrations are painted from nature immediately at death, and hence are portrayed exact pathological conditions of disease otherwise unattainable. The English publishers are Messrs. Baillière, Tindall, and Cox.

BEQUESTS AND DONATIONS TO HOSPITALS.—The Barnsley and District Hospital Saturday and Sunday Funds Committee has handed £1000 to the governors of the Beckett Hospital.—The committee of the Great Northern Central Hospital, Holloway-road, has received £1100 from a lady to endow a bed in memory of her late husband, and also, from an anonymous donor, £1050, to endow bed No. 7 in the Victoria Mary Ward.—The workmen of Sir W. G. Armstrong and Co., at Elswick, Newcastle, have contributed £464 6s. 1d. to the local medical charities for the quarter ending March 31st last, of which sum £335 1s. 1d. has been apportioned to the Royal Infirmary.—The Court of Common Council, London, has granted 100 guineas to the East London Hospital for Children, Shadwell.—In response to the appeal for funds to complete the building, furnishing, and equipment of the new hospital, Birmingham, the committee has recently received the following donations: namely, Anon. (A. A.), £500; Mr. W. B. Gibbins, Ettington, £100; Mr. G. S. Albright, £500; Mr. Richard Cadbury, £1000; Mr. J. W. Wilson, M.P., (second donation), £100; Mr. W. A. Albright, £500; Mr. W. H. Lloyd, Wednesbury, £100; and Mrs. Gibbins, £100.—The secretary of the National Hospital for the Paralysed and Epileptic, Albany Memorial, Queen-square, Bloomsbury, has received a donation for the current year of £105, made towards the support of the Convalescent Branch by the Worshipful Company of Mercers on account of the Earl of Northampton's Charity, and also of £100, being the share allotted to this hospital from the residuary estate of the late Miss E. C. Darling, by the executors.—The committee of the Dental Hospital of London, Leicester-square, has received £105 from Sir Henry Peek, Bart.—The late Mr. William E. Yates of Westwood, Leeds, has bequeathed £200 each, free of legacy duty, to the Leeds Public Dispensary and the Leeds Hospital for Women.—The board of management of the National Hospital for Consumption, Ventnor, Isle of Wight, has received a further grant of 100 guineas from the trustees of the Earl of Northampton's Charity.—The treasurers of the Middlesex Hospital have received a donation of 100 guineas from Her Majesty the Queen.

TYLDESLEY NEW SEWAGE WORKS, MANCHESTER.—The area over which the Tyldesley district council has control is 2489 acres in extent, it has a population of about 14,000, its ratable value is £61,000, and the quantity of sewage to be treated averages about 300,000 gallons daily. Some years ago a farm of 132 acres at Astley, about two miles from Tyldesley, was purchased for £14,000 and used as a sewage farm, the sewage being treated by broad irrigation and land filtration. But in 1894 the Mersey and Irwell Joint Committee deemed the works at Morley's Hall Farm unsatisfactory, the tanks being only capable of dealing with 12,000 gallons a day, while the actual flow was about 300,000 gallons, so it is not surprising that the effluent was condemned. Proceedings were taken by the committee in 1894 and the council was fined £20 and costs. Various methods of sewage treatment were examined, and it was decided eventually to adopt the system of the Magnetite Sewage and Water Purification Company of Manchester, who agreed to construct the whole work for £3250. The sewage is carried on to filter-beds composed of layers of "magnetite," a kind of ironstone, with a top layer of sand. These filter-beds are self-regulating, and the top layer of sand is cleansed by reversing the flow of one filter and allowing it to force itself upwards through the next filter. The floating matter from the top of the sand then runs into a well, from which it is pumped into "detritus tanks." After leaving these tanks the precipitant is added to the sewage by means of a Kierby mixer, worked by a water-wheel turned by the flow of the sewage. The cleansed sewage then passes through a "mixing race" to the inlet channels and to the precipitation tanks, which have been constructed with concrete bottoms and with walls faced with salt-glazed brick. There are eight filter-beds, each 33 feet by 16 feet. The precipitant used is "ælite," principally alumina, iron, and oxide of magnesium. The new arrangement is capable of dealing with some half-million gallons daily, so that it is believed that the needs of the township will be satisfied for some years to come. At the recent formal opening of the works Dr. Duncan, the chairman of the council, presided. Dr. Lowe, chairman of the Sewerage Committee, before declaring the works open, was presented with a handsome key on behalf of the Magnetite Company. He stated that the council had a ten years' indemnity from the company against any proceedings by the Mersey and Irwell Joint Committee on condition that the council made use of the company's precipitant. Mr. Sergeant, the medical officer of health for the county of Lancaster, expressed great interest and said the system was a departure from any he had seen before and he hoped it would prove a success. In appearance the effluent was very much like ordinary drinking water, and it is expected to be still better after the works have been in use some little time.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Cost of the Vaccination Commission.

In the course of answering a question across the floor of the House Mr. Hanbury, Secretary to the Treasury, stated that the total cost of the Royal Commission on Vaccination up to March 31st last was £16,792.

Colliery Explosions.

Steps are in progress for securing that the provisions of the Coal Mines Regulation Bill having special reference to coal-dust and the prevention of explosions in mines shall be passed into law in the course of the present session.

Poor-law Officers' Superannuation Bill.

Proposals have been made for the extension of the provisions of this measure to Ireland, and the Government has intimated that it will offer no opposition to them.

Public Health (Scotland) Bill.

During the Committee stage of this measure in the House of Lords the Earl of Rosslyn raised the question of the position of the chief medical officer in Scottish counties, and moved an amendment requiring that all reports by other medical officers in the county and sanitary inspectors should be transmitted to the County Council through him, and that he should have practical control of all matters of sanitation and public health. He pressed the amendment as necessary to avoid friction in the county administration. The Government, however, would not accept the amendment, preferring that the County Council should be left with a free hand to deal with the matter by means of its by-laws.

Accidents with Petroleum Lamps.

A Select Committee of the House of Commons, presided over by Mr. Mundella, is taking evidence with regard to the sale, storeage, and conveyance of petroleum and accidents arising in the use of petroleum lamps, and in the course of the proceedings on Wednesday, May 13th, Mr. Boverton Redwood, the petroleum expert, handed in for the use of the Committee the report of THE LANCET Commission on the subject of dangerous lamps.

HOUSE OF COMMONS.

TUESDAY, MAY 5TH.

Visiting Fever Patients.

Mr. H. C. Richards asked the President of the Local Government Board whether his attention had been called to an inquest held by Mr. Braxton Hicks on Dec. 31st last at Battersea on the body of James Stevens Romaine, who died at his home from malignant scarlet fever, at which it was proved that previously to his death his brother had been

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removed to the Tooting Fever Hospital suffering from the same complaint, and that during the interval both parents had visited the child at the hospital every day, thus going to and from places where infectious disease existed; if he was aware that the jury expressed a strong opinion that the Metropolitan Asylums Board should be asked to revise their rules so as to lessen the risk of infection to the public by disallowing such visits unless under exceptional circumstances; that with regard to visiting patients, by the rules of the Board two visitors are allowed daily to each patient, limited as a rule to a quarter of an hour; that visitors are warned that they run great risk at entering the hospital, but that they are allowed to sit by the bedside; that the only protection to such visitors is a cloak placed over their clothes; and that, on leaving the hospitals, the visitors of necessity return home in public conveyances; and whether, in view of these facts, he would make representations to the managers to revise the rules in accordance with the suggestion of the jury.—Mr. Chaplin replied: I have communicated with the managers of the Metropolitan Asylums District and am informed that there has been no suggestion that the death of the child referred to was due to infection from the hospital, that visits to patients are only allowed under exceptional circumstances—namely, when patients are dangerously ill—and that such visits are limited to the nearest relatives or intimate friends of the patients. With regard to the statement that visitors of necessity return home in public conveyances, it appears that the father and mother in the case in question walked home and did not go into any public conveyance, and the regulations of the managers expressly urge visitors not to enter any omnibus, tramcar, or other public conveyance immediately after leaving the hospital. The managers have stated that the regulations as to the visiting of patients dangerously ill have been found to work smoothly and satisfactorily during the many years they have been in operation and that they see no reason for amending them as was suggested. They added that the enforcement of regulations to prevent parents of patients in the managers' hospitals (most of whom are young children) visiting them when dangerously ill or dying would only have the effect of largely discouraging, even if it did not wholly prevent, many parents from sending their children for isolation to the hospitals and of increasing rather than checking the spread of disease.

THURSDAY, MAY 7TH.

Poor-law Children in Canada.

Mr. Chaplin, in reply to Mr. S. Smith, said that the Canadian Government have provided for an annual inspection of children sent out to Canada by boards of guardians in this country, but not for an inspection of each child each year. It would undoubtedly be very much more satisfactory if the children were more frequently visited, and he would take the necessary steps with a view to communicating with the Dominion Government on the subject.

The Vaccination Question.

Mr. Logan asked the President of the Local Government Board whether his attention had been called to a statement recently made by their clerk to the guardians of the Warminster Union to the effect that he had inquired of the Local Government Board's vaccination inspector what would be the result of the report of the Royal Commission on Vaccination, and that the said inspector informed him that the Act would be so amended that the penalty would be imprisonment after the second offence; and whether such statement was made by the Board's inspector, and, if so, whether with or without authority; and, in the latter case, whether he would give such instructions as should for the future prevent the officials of the Board from spreading unauthorised assertions, which were easily mistaken for official announcements.—Mr. Chaplin said he was informed that the inspector who visited the Warminster Union had no recollection of having made a statement to the clerk of the guardians on the subject referred to in the question, and that if in conversation with the clerk the matter came under discussion it would have been impossible for him to have announced what would be the result of the report of the Royal Commission on Vaccination for the reason that he had no knowledge whatever of the views of the Commissioners.

Old Horses for Food.

Mr. Wootton Isaacson asked the Secretary of State for the Home Department whether his attention had been drawn to a case which recently came before Mr. Mead, at the Thames Police-court, brought by the Royal Society for the Prevention of Cruelty to Animals, when two horses were stopped which were being led to the docks for exportation to Rotterdam, both of which were suffering from disease; whether he was aware that diseased horses were daily shipped to Rotterdam for the purpose of being slaughtered and prepared for human food, when they were reshipped to this country in the form of sausages and tinned meats, and that this practice had been carried on to a considerable extent for some time, and whether he would take means to put a stop to a business so dangerous to health.—Sir Matthew White Ridley replied: I have seen reports in the newspapers of the case referred to and have communicated with the learned magistrate before whom it was heard. The two horses were being conveyed to Rotterdam presumably as they were past work for the purpose of being slaughtered for food. There was no evidence, however, that the horse in respect of which the conviction took place was suffering from any disease rendering it unfit for food; it was lame on one leg in consequence of a contracted tendon and a diseased foot. There is no doubt, I believe, that horses in a similar condition are frequently shipped to Rotterdam, but I have no evidence that a trade in diseased horses is carried on or that the food prepared from their carcasses reaches this country nor have I any power to prevent the business in question.

University of London.

Sir John Gorst, in reply to Sir Albert Rollit, announced that a Bill on the subject of the re-organisation of the University of London was being prepared in the Privy Council Office, but it had not yet received the sanction of the Government. When it had received that sanction it would probably be introduced in the House of Lords.

FRIDAY, MAY 8TH.

London Fever Hospital.

Mr. Chaplin, in answer to Mr. P. O'Brien, said he was informed that the new ward pavilion now being erected on the premises of the London Fever Hospital was intended for the reception of fever patients, that it was to take the place of an existing ward pavilion which was much larger, and that the result of the new erection would be to diminish the number of fever patients received on the hospital site by nearly one-half. The committee of the hospital, acting for the governors of the institution, were, he was informed, responsible for the new erection. The hospital in question had been in existence on the same site for some fifty years past. He assumed, as was the case with all new buildings in London, that plans of the new pavilion had been submitted to the authorities having the control of such matters within the metropolis. He had no power of control or action in the matter.

MONDAY, MAY 11TH.

Treatment of Imbecile Children.

Mr. Luttrell asked the President of the Local Government Board whether his attention had been drawn to a return made by the Poor-law Schools Committee to the effect that there were in the Metropolitan Poor-law schools 105 children mentally deficient, 20 liable to fits, and 8 otherwise disqualified to take part in school work (exclusive of those in the school infirmaries), and what provision the Local Government Board had made or intended to make for the reception, training, and protection of these children.—Mr. Chaplin replied that the managers of the Metropolitan Asylums District had made provision in their school at Darenth for imbecile children, and it was not improbable that some of the cases referred to might be sent to the school. There were no doubt other children whose mental condition was not such as to require their being sent to the Darenth school and for whom it would be desirable to make other provision. This question was an important one, and it was by no means limited to London, and he was not at present in a position to state what course it would be best to adopt. It must be borne in mind that there was some difference of opinion as to whether feeble-minded children might not be helped by association with children who were not similarly defective, and there were some persons who would be in favour of their being retained in the existing schools, special attention being given to their education and training.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ANDERSON, G. REINHARDT, F.R.C.S. Eng., L.R.C.S. Lond., has been appointed Honorary Medical Officer to the Southport Infirmary, vice the late H. D. McNicoll.

ARROL, CHAS., M.D. Glasg., L.R.C.S. Edin., has been appointed Medical Officer of Health for the Borough of Queensborough.

BEHRENDT, M. R. J., L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer of Health by the Scunthorpe Urban District Council.

CAINE, N., M.B., C.M. Edin., has been appointed Junior House Surgeon to the Oldham Infirmary.

CLEGG, J. GRAY, M.D., B.S. Lond., F.R.C.S. Eng., &c., has been appointed Senior House Surgeon to the Manchester Royal Eye Hospital.

COOKSON, F., M.B. Lond., M.R.C.S., L.R.C.P. Eng., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

CROSS, W. F., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Evangelical Protestant Deaconesses' Institution and Training Hospital, South Tottenham.

DAY, E. J., M.R.C.S., has been reappointed Medical Officer of Health for the Borough of Dorchester.

DENING, EDWIN, L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health for the Stowe-on-the-Wold Rural Sanitary District.

DEVANE, THOMAS FRANCIS, L.R.C.P.E., L.R.C.S.E., has been appointed Medical Officer to the Linen and Woollen Drapers' Institute for the Districts of Penge, Anerley, and Sydenham.

DURRANT, THOS. A., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health by the Market Harborough Urban District Council.

EDWARDS, ARNOLD J., M.D. Vict., B.Ch., has been appointed Honorary Surgeon to the Chorlton-upon-Medlock Dispensary, Manchester.

EVERS, CHAS. J., M.D. Durh., M.R.C.S., has been reappointed Medical Officer of Health for the Borough of Faversham and Port Sanitary Authority.

EYTON-JONES, THOMAS, L.S.A., has been appointed Medical Officer for the Ash Sanitary District of the Eastry Union.

FINDLAY, GEO., M.B., C.M. Aberd., has been appointed Medical Officer of Health for the Campden Urban Sanitary District.

GAYLOR, EDWARD, L.R.C.P. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health by the Alfreton Urban District Council.

GOULD, ALFRED PEARCE, M.B. Lond., F.R.C.S., has been appointed Surgeon to the Middlesex Hospital.

GRIFFITH, W. S., M.B. Camb., L.R.C.P. Lond., F.R.C.S., has been appointed Medical Officer of Health by the Milford Haven Urban District Council.

HALL, ALFRED, M.R.C.S., has been reappointed Medical Officer of Health for the Mayfield Rural Sanitary District.

HAMILTON, JOHN, M.D. Durh., L.R.C.P., F.R.C.S. Edin., has been reappointed Medical Officer of Health for the Swadlincote Urban Sanitary District.

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HARRIS, S. O., L.F.P.S., L.M. Glasg., has been reappointed Medical Officer of Health for the Ely Urban Sanitary District.

HAYCROFT, C. H., M.R.C.S., has been reappointed Medical Officer of Health for the Sanitary District of Bow, Devon.

HERBERT, B. H., M.R.C.S., has been reappointed Medical Officer of Health by the Uttoxeter Rural District Council.

JELLY, GEORGE AUBREY, L.S.A., has been appointed Junior House Surgeon to the Macclesfield Infirmary.

JEPSON, E., M.D. Durh., M.R.C.S., has been appointed Honorary Physician to the Durham County Hospital.

KEYWORTH, A. F., L.R.C.P. Irel., M.R.C.S., has been reappointed Medical Officer of Health by the Marple Urban Sanitary Authority.

KIRBY, W. EGMONT, M.D. Brux., L.S.A., has been appointed Medical Electrician to the National Hospital for Diseases of the Heart and Paralysis, Soho-square.

LYDDON, RICHARD, M.R.C.S. Eng., L.S.A. Lond., has been appointed Surgeon and Agent to H.M. Coastguards for the Deal District, vice A. Bruce Payne, deceased.

MARSHALL, W. L. W., M.R.C.S., has been appointed Surgeon to the Huddersfield Infirmary.

MARTIN, SIDNEY, M.D., F.R.S., has been appointed Professor of Pathology in University College, London.

MENZIES, J. ACWORTH, M.D., C.M. Edin., has been appointed Junior House Surgeon to the Manchester Royal Eye Hospital.

MORRISON, C. S., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Superintendent of the County and City Asylum, Hereford, vice T. A. Chapman, retired.

MOYSEY, LEWIS, M.A., B.C. Cantab., has been appointed House Surgeon to the Paddington Green Children's Hospital.

MUDGE, THOS., M.R.C.S., has been appointed Medical Officer of Health for the Hayle Urban Sanitary District, vice J. Mudge, resigned.

NITCH-SMITH, R., M.R.C.S. Eng., L.R.C.P. Lond., has been reappointed Resident House Physician to the Westminster Hospital.

PATON, E. PERCY, M.D., M.S. Lond., F.R.C.S., has been appointed Surgical Registrar to the Westminster Hospital vice P. de Santi.

PURNELL, RICHARD, M.D. St. And., M.R.C.S., has been appointed Medical Officer of Health to the Wells Town Council.

RHODES, JAMES, M.R.C.S., has been appointed Medical Officer of Health for the Glossop Dale Rural Sanitary District.

RICHARDSON, H., L.S.A. Lond., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

RYALL, E. CANNY, L.R.C.P. Lond., has been appointed Curator of the Westminster Hospital Museum.

SELLERS, A. R., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Thornhill Urban Sanitary District.

SMITHIES, J. J., L.F.P.S. Glasg., L.R.C.P. Edin., has been reappointed Medical Officer of Health to the Bowland Rural District Council.

STEWART, J. H., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer of Health for the Borough of Lostwithiel.

SUTTON, JOHN BLAND, F.R.C.S. Eng., has been appointed Surgeon to In-patients at the Chelsea Hospital for Women.

SWAINSON, E. A. C., M.B. Camb., M.R.C.S. Eng., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

THOMPSON, PETER, M.B., Ch.B. Vict. has been appointed Senior Demonstrator in the Department of Anatomy at Owens College, Manchester, vice Arthur Robinson.

TROUP, J. MACDONALD, B.A. Cantab., L.S.A., has been appointed House Physician to the Paddington Green Children's Hospital.

VAWDREY, GEO., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health to the Farnborough Town Council.

WALKER, E. G. A., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health by the Wrotham Urban District Council.

YOUNG, ROBT., M.B., C.M. Aberd., has been appointed Medical Officer of Health for the Rochford Rural Sanitary District, vice G. D. Deeping, resigned.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ABINGDON UNION.—Medical Officer for the Third District of the Union. The salary, £100 per annum, with certain articles, &c., provided by the Guardians. Applications to the Clerk, Union Offices, Abingdon.

BRIDGWATER INFIRMARY.—House Surgeon. Salary £80 per annum, with board and residence.

BRISTOL EYE HOSPITAL.—House Surgeon. Salary £60, with board and residence.

BRISTOL HOSPITAL FOR SICK CHILDREN AND WOMEN.—Assistant House Surgeon, for six months. On the satisfactory completion of that term an honorarium of 25 guineas will be granted. Also two Honorary Surgeons for In-patient Department.

CITY OF BIRMINGHAM.—Medical Superintendent for the City Hospital for Infectious Diseases, Little Bromwich, Birmingham, unmarried. Salary £200 per annum, rising by £20 per annum to £300 per annum, with apartments, rations, and attendance. Applications to the Town Clerk, Council House, Birmingham.

COUNTY ASYLUM, Dorchester.—Senior Assistant Medical Officer, unmarried. Salary £150, rising to £200.

HORTON INFIRMARY, Banbury.—House Surgeon and Dispenser. Salary £60 per annum, with board and lodging.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton. Assistant Resident Medical Officer. Salary £50 per annum, with board and residence.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury.—Resident Medical Superintendent, for one year. Salary £105 a year, with board and residence in the hospital. Also House Surgeon for six months, unmarried. Salary £20, with board and residence in the hospital.

HOSPITAL FOR WOMEN, Soho-square, London. — Assistant House Physician, for three months (non-resident).

LANCASHIRE COUNTY ASYLUM, Rainhill.—Assistant Medical Officer, for the summer months, as locum tenens. Salary, £2 2s. per week, with board and lodgings.

LONDON THROAT HOSPITAL, 204, Great Portland-street, W.—Non-resident House Surgeon, for six months. Salary at the rate of 25 guineas per annum.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART AND PARALYSIS, Soho-square, London, W.—Resident Medical Officer, for six months. Board, residence, laundry, and an honorarium of 10 guineas for that period.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—House Physician for six months. Salary at the rate of £60 per annum. Also Junior House Physician for six months. Board, lodging, and washing provided. Applications to the Secretary at the City Office, 27, Clement's-lane, Lombard-street, E.C.

PADDINGTON GREEN CHILDREN'S HOSPITAL, London, W.—Surgeon to Out-patients. Also Physician to Out-patients.

POPLAR HOSPITAL FOR ACCIDENTS, Blackwall, E —Assistant Resident House Surgeon. Salary £80 per annum, with board, lodging, and washing.

RANGOON MUNICIPALITY. — Health Officer. Salary Rs. 600 per mensem, rising to Rs.1000 per mensem by annual increments of Rs. 50 per mensem. Applications to Messrs. Ogilvy, Gillanders, and Co., Sun-court, 67, Cornhill, London, E.C.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, London.—Professors and Lecturers.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London, E.C.—House Physician, for six months. Salary at the rate of £40 per annum, with board, lodging, and laundry.

ST. GEORGE'S AND ST. JAMES'S DISPENSARY, 60, King-street, Regent-street, London, W.—Surgeon.

STOCKPORT INFIRMARY.—Junior Assistant House Surgeon, for six months. Board and residence and an honorarium of £10 after six months' satisfactory services.

UNIVERSITY COURT OF ST. ANDREWS.—Lecturers.

VICTORIA CHILDREN'S HOSPITAL, Park-street, Hull.—Resident House Surgeon. Salary £50 per annum, with board and laundry.

WESTON-SUPER-MARE HOSPITAL AND DISPENSARY. — Medical Officer to the Provident Dispensary attached to the Hospital. Salary £80 per annum, with board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

HILL.—On May 2nd, at Jasmine Cottage, Frognal, N.W., the wife of Leonard Hill, M.B. Lond., of a son.

LATTER.—On May 6th, at Earl's-avenue, Folkestone, the wife of Cecil Latter, M.D., B.C. Cantab., of a son.

MUSSEN.—On May 6th, at Welford-road, Leicester, the wife of W. Mussen, L.R.C.P. Eng., of a daughter.

SHADWELL.—On May 11th, at Lynhurst, Walthamstow, the wife of St. Clair B. Shadwell, M.D. St. And., of a daughter.

STEPHENSON.—On May 8th, at Welbeck-street, the wife of Sidney Stephenson, M.B. Edin., of a daughter.

VACHELL.—On May 11th, at Charles-street, Cardiff, the wife of Charles Tanfield Vachell, M.D., of a daughter.

WOORE.—On May 8th, at Strathallan, Upper Norwood, the wife of Frank Woore, late Staff Surgeon, R.N., of a daughter.

MARRIAGES.

BLAKE—HARRIS.—On May 11th, at the City Temple, Victor John Blake, M.B., B.S. Lond., M.R.C.S. Eng., L.R.C.P. Lond., of Elsinore, Ventnor, I. of W., to Amy Katharine Harris, eldest daughter of B. Harris, of Wrexham.

THOMSON—DOUGLAS.—On May 7th, at Algiers, William Thomson, M.D. Edin., to Clara Douglas, daughter of the late W. Douglas, of Ilkley Hall, Yorkshire.

DEATHS.

BALL.—On May 10th, at Croxby House, Hounslow, William Montague Ball, M.B. Aberd., aged 41.

COOPER.—On May 7th, at 106, Gower-street, W.C., in her 31st year, Vernon, *née* Wilkinson, formerly of the nursing staff of Charing-cross Hospital, wife of Ernest Frederick Cooper, M.R.C.S., late of 10, Belsize-road, N.W.

MCCREADY.—On May 6th, at the Glebe, Ballynahinch, Ireland, the Rev. Edward McConkey McCready, A.B., M.B. Dubl., aged 67 years.

MOXEY.—On May 8th, at Paris, David Anderson Moxey, M.D., M.R.C.P. Lond., Fulton Lecturer on Elocution, New College, Edinburgh.

STATTER.—On May 9th, at Snapethorpe Hall, near Wakefield, William Statter, J.P., F.R.C.S., in his 90th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (18th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.).

TUESDAY (19th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (20th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY (21st).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Great Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (22nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.). St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.) Gt. Northern Central (2.30 P.M.).

SATURDAY (23rd).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (18th).—VICTORIA INSTITUTE (8, Adelphi-terrace, Strand).—4.30 P.M. A Paper on Climate in Egypt in Geological, Prehistoric, and Ancient Historic Times, by H.E. Grant Bey, will be read by Dr. D. Macgregor.

SOCIETY OF ARTS.—8 P.M. Mr. J. Swinburne: Applied Electro-Chemistry. (Cantor Lecture.)

MEDICAL SOCIETY OF LONDON.—Annual Conversazione.—8.30 P.M. Oration: Dr. W. H. Allchin: The Breaking Strain.

TUESDAY (19th).—PATHOLOGICAL SOCIETY OF LONDON.—Papers: Mr. Thorburn (Manchester) and Mr. Westmacott (Manchester): On Hypertrophic Pulmonary Osteo-arthropathy.—Dr. Fielder: Osteitis Deformans.—Mr. Edmunds: Thyroid Body in Graves's Disease.—Dr. N. Moore: Growth of Transverse Colon. Card Specimens: Dr. Tyson (Folkestone): Elongated Appendix with Calculus.—Mr. Shattock: Cultured Variation in Streptococcus Pyogenes Bovis.—Dr. Seligmann: Streptothrix Maduræ.—Mr. J. Smith: Filariæ from Lymph Scrotum.—Dr. Rolleston: (1) Mediastinal Growth from Thymus: (2) Large Cyst in Carcinoma Mammæ.—Dr. Hawkins: (1) Perforation of Gall Bladder in Enterica; (2) Horseshoe Kidney.

SOCIETY OF ARTS.—8 P.M. Mr. G. Simonds: Bronze Casting in Europe.

WEDNESDAY (20th).—DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND (20, Hanover-square, W.)—4.45 P.M. Annual Meeting and Conference. Election of Officers. Introductory Address by President. Paper: Dr. W. G. Smith (Dublin): Notes upon Chrysorobin and Chrysophanic Acid.—5.45 P.M. Cases.

ROYAL MICROSCOPICAL SOCIETY (20, Hanover-sq., W.).—8 P.M. Meeting.

SOCIETY OF ARTS.—8 P.M. Capt. W. de W. Abney: Orthochromatic Photography.

FRIDAY (22nd).—CLINICAL SOCIETY OF LONDON.—8.30 P.M. Annual General Meeting. Election of Officers for Session 1896-1897. Dr. Clemow: A Case of Typhoid Fever with Hyperpyrexia and Cardiac Dilatation; Venesection; Recovery.—Dr. Rolleston and Mr. Haward: A Case of Chronic Dilatation of the Colon.—Mr. W. G. Spencer: Punctured Wound of Right Ventricle of Heart through Second Left Intercostal Space, severe Primary and three Secondary Hæmorrhages, Healing of the Wound, subsequent Post-mortem Examination after Death from Disease.—Mr. G. R. Baldwin: A Case of Central Sarcoma of the Femur with Early Dissemination.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (18th).—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. Woakes: Ear Disease during Dentition and the Exanthemata.

WEDNESDAY (20th).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Dr. Ormerod: Friedreich's Ataxia.

HOSPITAL FOR CONSUMPTION, &c. (Brompton):—4 P.M. Mr. Godlee: Bone and Joint Disease associated with Chest Affections.

LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Payne: Herpes and Allied Diseases.

THURSDAY (21st).—LONDON POST-GRADUATE COURSE.—Brit. Inst. of Preventive Medicine, Gt. Russell-st., W.C., 3.30 P.M., Dr. Allan Macfadyen and Mr. A. G. Foulerton: Qualitative Tests for Albumins.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. J. Hutchinson: Clinical Lecture.

VICTORIA HOSPITAL FOR CHILDREN (Tite-street, S.W.).—4 P.M. Dr. M. Murray: Selected Medical Cases.

FRIDAY (22nd).—LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Anthrax and Malignant Œdema.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL.—4 P.M. Dr. Holloway: Anæsthetics, as employed in the practice of the Hospital.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 14th, 1896.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
May 8	30·26	N.E.	49	47	101	61	46	...	Overcast
,, 9	30·16	N.E.	55	50	113	69	46	...	Fine
,, 10	30·17	N.E.	57	53	115	72	47	...	Fine
,, 11	30·29	N.E.	53	49	117	75	47	...	Fine
,, 12	30·39	N.E.	60	53	115	79	50	...	Fine
,, 13	30·35	N.E.	53	50	99	73	50	...	Cloudy
,, 14	30·16	S.W.	55	52	100	70	49	...	Cloudy

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

"THE DOOM OF THE SILKWORM."

MR. THOMAS CHRISTY, of 25, Lime-street, referring to the annotation in THE LANCET of May 9th, encloses us a few observations by a prominent member of the silk trade. He says that silk made from wood as described in the *Times* is no novelty, a factory having existed for some years at Besançon for producing this article, but the French, he adds, have up to the present discovered little use for it, much money having been lost at this factory. Again, he says: "Lyons manufactories have not used the article because it is scarcely any cheaper than raw silk owing to the expense of the solvents used in its production. So far the only market where it has been used is St. Chamoud, where it has been employed in the production of braids. The quantity, however, used in France at the present time is not more than 150 to 200 kilos per week. The great objection to the use of artificial silk is if wetted after being woven it tears like paper, and it cannot be charged or weighted in the dye as raw silk." With this communication we have received a sample of artificial silk. We do not find it to be specially inflammable; indeed, it does not burn with the rapidity and energy of a nitro-compound. This is not surprising when, as we have already stated, the product is denitrated by means of ammonium sulphide before it is finished. While we are not able to confirm the statement that when wet it tears like paper, yet under this condition it is certainly more easily torn than natural silk is. It should be remarked that natural silk requires care, which most people scrupulously take, to preserve it from the deteriorating influences of wet. We may add that although the *Times* devoted considerable space to the description of this process, yet it has formed the theme of many excellent papers contributed to the Society of Chemical Industry by Mr. Cross and Mr. Bevan, the last paper having been read so recently as Monday, the 4th inst.

Dr. J. D. M.—We think that B. would do well to take the fee. It is clear that he ought to be paid for his services. The payment ought to have come from P., but it is not B.'s fault that it will have a different origin.

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"WANTED, A SUGGESTION FOR TREATMENT."

To the Editors of THE LANCET.

SIRS,—In answer to "Puzzled" asking for suggestions as to treatment of warts on the face I would recommend him to try five minims of Fowler's solution three times a day and continue for a lengthened period. I am, Sirs, yours truly,

South Hampstead, N.W., May 9th, 1896. MACADAM GREGOR.

To the Editors of THE LANCET.

SIRS,—Your correspondent may have mistaken sycosis for verrucæ. When I was house surgeon at the London Lock Hospital Mr. Berkeley Hill's favourite remedy was exsiccated (caustic) sulphate of zinc. I should advise sulphur sublimatum, one of the best and safest dusting powders in the case in question, to be applied as a strong ointment with lanoline at night, and cleansed off in the morning with crumb of bread poultice for an hour or more, then dusted with sulphur rice starch, 1 in 50, or SO_2 (B.P.) to commence with, and applied, diluted, three or four times a day. I am, Sirs, yours truly,

Fleetwood, May 12th, 1896. W. G. TILEY, M.R.C.S. Eng.

Omega.—We do not answer such questions.

"AN INSURANCE COMPANY AND A MEDICAL REFEREE."

WE have received from the manager of the insurance company to which we alluded under this heading in THE LANCET of May 2nd a communication commenting upon our account of the matter. The manager asserts that Dr. Bontor was offered 7*s.* 6*d.* in the beginning and not 5*s.* and that that gentleman had an opportunity of declining to make the examination. "The scale of fees," says the manager, "has been determined upon by leading members of the medical profession; and from time immemorial life offices have paid one fee for small policies and one for large."

MR. LEET'S PAMPHLET ON DAIRY MILK: ITS DANGERS AND THE REMEDIES, WITH THE OPINIONS OF TWENTY EMINENT BRITISH PHYSICIANS UPON STERILISED MILK FOR INFANT FEEDING.

To the Editors of THE LANCET.

SIRS,—Sir Dyce Duckworth, physician to St. Bartholomew's Hospital, London, writes to me thus on the 2nd inst.: "I must request you to write to THE LANCET and the *British Medical Journal* to the effect that you have unwarrantably published some remarks of mine in your pamphlet without my permission, remarks taken from a private letter in reply to a simple inquiry on your part."

The following cutting from page 23 contains the passage alluded to by Sir Dyce Duckworth:

"APPENDIX.

"OPINIONS OF TWENTY EMINENT BRITISH PHYSICIANS UPON THE SUBJECT OF STERILISED MILK FOR INFANTS.

"1.—Sir Dyce Duckworth, Physician to St. Bartholomew's, London:—'There is an excellent form of Milk Steriliser, known as Professor Soxhlet's. There are now one or two Milk Companies here which send out Sterilised Milk daily at 5*d.* per quart. The working of the steriliser is very simple, and the advantages very great. If you do not know it I would advise you to read Sir W. Priestley's address on the subject, *British Medical Journal*, December 7th, 1895.'"

Then follow the opinions of eighteen other physicians. From the last page of the pamphlet the following cutting will explain the reason why it was published.

"N.B.—These valuable 'Opinions,' chiefly brief replies on the post-cards enclosed to each of these eminent medical men, politely requesting the name of the Milk Steriliser they recommend, are now published upon the grounds of the 'present distress,' when the purveyor of 'Dairy Milk' can defy the laws and poison hundreds of British children by the dirty, diseased, and watered compound he dares to call 'Fresh New Milk.' Is the family physician to look on at all this and take fees for prescribing physic that does not, cannot, kill the poisonous Milk?"

The question of professional ethics was inadvertently forgotten in the anxiety to make known to "nurses and mothers" (to whom the pamphlet has been dedicated) some hitherto unpublished advantages in the treatment of sick children, and of adults with gastric troubles, from the use of a cooler for hot sterilised milk—a simple tin pan apparatus, furnished with inlet and outlet pipes for running water from the house main tap, in which can be immersed any milk steriliser, and in some five minutes the milk temperature be reduced over 50°, the burnt taste of cooked milk avoided, no scum coagulation on its surface, and post-scalding microbic contamination held in check more simply and inexpensively than I have otherwise seen described. Having given daily personal attention to this subject in our private medical home for twelve months I trust my explanation and apology will be accepted by Sir Dyce Duckworth and by any of the other eighteen physicians should they object to their opinions having been published in the pamphlet.

I am, Sirs, yours truly,

CHARLES H. LEET, F.R.C.S. Eng.,

Waterloo, Liverpool, May 7th, 1896. Late Surgeon-Major A.M.S.

Etiquette is referred to an answer to "M.R.C.S." Attendance upon such a club in no way contravenes the dignity of the profession.

"A NOVEL METHOD OF INTRODUCING A NEWLY-QUALIFIED MAN."

To the Editors of THE LANCET.

SIRS,—Thank you for sending me THE LANCET containing the letter of "Vindicator." The plate was an ordinary brass plate with name only; on another small plate—not wood and about the size of a sheet of foolscap—the hours of attendance, &c., were given. A copy is appended for your perusal and judgment. Owing to correspondence in connexion with an appointment (correspondence enclosed) it was known to all the inhabitants that J—— was up for his final examination at Edinburgh on April 13th, and "Vindicator," as a medical man, would know that the examinations terminated on Friday, April 17th. Reports were disseminated on the same Friday night and the following morning that J—— had failed to pass the examination, and were so industriously circulated that within twenty-four hours every one in the place was certain they were true. After the false gossip had full swing the truth of J——'s success became known. The villagers, after their own fashion, employed the crier to strangle the lie as soon after its birth as possible; but of all this poor J—— at Edinburgh and his father eight miles off were as innocent as the Editors of THE LANCET, nor did they have any intimation of what took place until the Tuesday following, when three days had elapsed. It seems too absurd to have to repudiate or disavow such ridiculous proceedings, in which J—— and those responsible for him took no act or part, and were guilty of no fault either of commission or omission, but if such be deemed necessary it is hereby emphatically repudiated. I am, Sirs, yours faithfully,

May 4th, 1896. VERACITY.

*** Neither Dr. J—— nor his friends can be held responsible for the spontaneous action of the villagers, and we are glad to print this satisfactory explanation. The legend on the brass plate is not offensive. THE LANCET was not sent from this office to "Veracity", the highly contentious conclusion to whose letter has no bearing on the case and has therefore been omitted.—ED. L.

M.R.C.S.—It is preferable that a medical man's business should not be interfered with by a lay committee; but our correspondent's appointment otherwise seems unobjectionable. The fact that he examines all new candidates as to their physical and pecuniary conditions before admitting them to the benefits of the association is a very important one, for he is able to guard his services from gross abuse.

THE WRIGHT DEFENCH FUND.

To the Editors of THE LANCET.

SIRS,—The following additional subscriptions have been promised or received for the above fund since your issue of May 9th:—

Mr. J. B. Stuart, J.P., F.R.C.S.Ed. (Wigan) ...	1	1	0	Mr. J. G. Dunn (Preston)	10	0	
Mr. Thomas Jones, F.R.C.S. Eng. (Manchester)	3	3	0	Dr. G. B. Barron, J.P., (Southport)	10	6	
Mr. T. Brayton (Hindley)	1	1	0	Dr. Benson (Wigan), additional	10	6	
Mr. Bentham (Abram) ...	1	1	0	Mr. Barnes (Bolton)	5	0	
				Previous List	30	17	0

As £150 is required the committee will be pleased to receive further subscriptions, but are desirous to close the list by June 1st. Thanking you for your previous insertion of the appeal.

I am, Sirs, yours truly,

Wigan, May 13th, 1896. WM. BERRY.

Dr. John McClymont is thanked for his communication. There are practical reasons why it would not be politic to print this at the present moment, but later we may notice the point.

One of the Profession.—The cases are not of sufficient frequency, we are thankful to say, to make any drastic methods of remedy widely called for.

An Interested Layman should consult his regular medical attendant.

During the week marked copies of the following newspapers have been received:—*Craven Herald, Hereford Times, Somerset County Herald, Hampshire Telegraph, Cheltenham Mercury, North British Agriculturist, Cornishman, Standard, Elgin Courant, Eochdale Observer, Wakefield Herald, Midland Free Press, Glasgow Herald, South Wales Daily News, Northern Whig, Leicester Post, Yorkshire Herald, Manchester Guardian, Derby Express, Birmingham Post, Newcastle Leader, Harrogate Advertiser, Worcestershire Chronicle, Preston Herald, Retford News, Eastern Daily News, Liverpool Daily Post, Carlisle Journal, Scotsman, Dover Express, Jackson's Oxford Journal, Leeds Mercury, Sussex Daily News, Blackpool Gazette, East Essex Times, Cambridge Express, Yorkshire Post, Royal Cornwall Gazette, Sheffield Independent, Bristol Mercury, Architect, Times of India, Local Government Chronicle, Builder, Pioneer Mail, Weekly Free Press and Aberdeen Herald, Christian World, Lincolnshire Echo, Reading Mercury, Citizen, Hertfordshire Mercury, Mining Journal, City Press, Rossendale Gazette, Kilrush Herald, Leitrim Observer, West Middlesex Standard, Guy's Hospital Gazette, Local Government Journal, Gloucestershire Chronicle, Surrey Advertiser, Montreal Daily Star, Isle of Ely Advertiser, Ulverston Advertiser, Shrewsbury Chronicle, Times (Philadelphia), North Eastern Daily Gazette, Clevedon Mercury, Pall Mall Gazette, Devon and Exeter Gazette, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Dr. F. J. Allen, Birmingham; Dr. W. H. Allchin, Lond.; Mr. W. Armstrong, Egremont; Mr. C. K. Anstin, Paris; Mr. F. C. Allsop, Lond.; Mr. F. Algar, Lond; Messrs. Arnold and Sons, Lond.

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The Arris and Gale Lectures

ON THE

PHYSIOLOGICAL FACTORS INVOLVED IN THE CAUSATION OF DROPSY.

Delivered before the Royal College of Surgeons of England on Feb. 17th, 19th, and 21st, 1896,

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LECTURE III.[1]

THE CAUSATION OF DROPSY.

MR. PRESIDENT AND GENTLEMEN,—Having in the two preceding lectures given a sketch of the working in the normal animal of the processes of lymph-production and lymph-absorption, I wish now to point out briefly the deviations in these processes which are found in the various pathological conditions associated with dropsy and which are responsible for the production of the dropsy. For the better understanding of this question I have drawn up a table of the various changes in the normal conditions of the body which will bring about, or help to bring about, an abnormal distension of the connective tissue spaces with lymph. In this table the changes which are the most important for the production of dropsy are italicised.

FACTORS INVOLVED IN THE CAUSATION OF DROPSY.

I.—Factors causing increased transudation:—
- A. *Increased intra-capillary pressure:—*
  - *a. Venous obstruction.*
  - *b.* Vasodilatation.
  - *c.* Plethora.
- B. *Increased permeability of vessel wall:—*
  - *a. Local injury* by mechanical irritants.
  - ,, ,, ,, thermal ,,
  - ,, ,, ,, chemical ,,
  - *b. Malnutrition.*
  - *c. General injury by circulating poisons (?).*
- C. Watery condition of blood (hydræmia).

II.—Factors causing *diminished absorption:—*
- A. By lymphatics:—
  - *a.* Paralysis of limbs.
  - *b.* Obstruction of lymphatic trunks.
- B. By veins:—
  - *a.* Venous obstruction.
  - *b.* Watery condition of blood.
  - *c.* Concentrated transudations.

It is important to remember that probably under no circumstances can dropsy be ascribed to an abnormal change in one of these processes. This, however, can also be said of any other diseased condition of the body. We know that the organism responds to a destruction of a considerable part of the excretory apparatus of the kidney by sending up the general blood-pressure, and so driving an increased amount of blood through the still healthy glomeruli. We cannot thus say that two-thirds of the kidneys are practically inactive under normal conditions because excision of two-thirds causes no change in the general condition of the animal or any appreciable heaping up of urea in the blood. In the same way we find that the organism has various powers of accommodating itself to changed conditions in its lymphatic apparatus, so that it is in most situations difficult to upset the normal balance—i.e., cause dropsy—by altering only one of these factors, unless the alteration be of a very extreme degree. In nearly all cases we shall find that the dropsy is due to the simultaneous alteration of two or more of these factors. In the following lecture I shall try to show, so far as our imperfect experimental knowledge allows, which of these factors are affected in the chief forms of dropsy known clinically, and also to show how the normal balance between production and absorption has been in each case upset.

The form of dropsy which is simplest in its pathology is that which is due to venous obstruction. Clinically one meets with dropsy of one extremity due to obstruction of the veins draining that part, either in consequence of pressure by growths or of thrombosis occurring in the vein itself. It would be natural to ascribe this dropsy to the increased lymph-production consequent on the raised intra-capillary pressure behind the obstruction. On investigating the subject experimentally, however, one finds that the causation is not quite so simple. Here, as in nearly all other cases, more than one factor is at work. It is a well-known fact that although obstruction of the femoral vein by a thrombus will give rise to pronounced œdema of the leg, yet ligature of the femoral vein in a healthy man may have no ill-effects whatever. On investigating the subject experimentally we find that ligature of the femoral vein, or even of the lower end of the inferior vena cava, in dogs produces no œdema of the legs. We can, however, produce an œdema if we raise the intra-capillary pressure still higher than in these experiments. Paschutin showed that ligature of all the venous trunks of the dog's leg caused œdema of the foot and ankle. Ranvier has shown that if, after ligature of the inferior vena cava, the sciatic nerve be divided on one side so as to produce dilatation of arterioles on that side, the limb in which the nerve has been divided will become œdematous. Cohnheim has shown that œdema may be brought about by injecting the veins of the leg with plaster-of-Paris. We see, then, that we can produce œdema in a limb provided we raise the intra-capillary pressure to a sufficiently high point. If only one or two veins be obstructed the outflow by the collateral circulation is sufficient in a healthy animal to ward off any œdema. If the lymph be collected by placing a cannula in one of the lymphatics of the leg it will be observed that after these severe obstructions it becomes red from the presence of red blood-corpuscles. In my first lecture I mentioned that the presence of a quantity of red blood-corpuscles in the lymph showed that the rise of intra-capillary blood-pressure was, so to speak, hyperphysiological, and that one could obtain a very definite increase in the lymph-flow without the appearance of any red blood-corpuscles by raising the intra-capillary blood-pressure to a somewhat less degree. Why, then, do we not obtain œdema of the dog's leg by a simple ligature of the vena cava or femoral vein? In man we know that obstruction of either of these two vessels frequently brings about œdema of the lower extremities and that the œdema fluid present in the interstices of the tissues is colourless and free from red blood-corpuscles—i.e., corresponds to the lymph of moderate venous obstruction. The apparent discrepancy which is found here between clinical observations and the results of experiment depends on the fact which I have emphasised at the beginning of this lecture—viz., that it is impossible to upset the physiological balance, which prevents the occurrence of dropsy, by a moderate disturbance of either of the factors, lymph-production or lymph-absorption. Such an enormous rise of capillary pressure as is produced by filling all the veins of the leg with plaster-of-Paris probably rarely or never occurs under clinical conditions. The occurrence of dropsy in man in consequence of venous obstruction is nearly always due to the simultaneous working of two or more factors. We have therefore to decide, in the first place, why in a healthy animal with a moderate venous obstruction no œdema is produced; and, secondly, what are the subsidiary factors which in man combine with the venous obstruction to bring about an œdema.

In considering the first point, it is essential to remember that in the case of œdema of the limbs we are dealing with the most impermeable capillaries in the body, so that under normal conditions a considerable capillary pressure is required to separate the lymph from the blood, and the lymph so separated has lost the greater part of its proteid. I have already shown how, in consequence of this difference of composition between plasma and lymph, there is an accurate balance between the force tending to produce exudation—i.e., the capillary pressure, and the force tending to produce absorption—i.e., the difference of osmotic pressures between blood plasma and lymph. Now if in a normal animal a vein be obstructed the first effect is a rise of capillary pressure and increased exudation. Since, however, in the affected capillaries and veins the onward flow of blood is checked, the increased exudation must be at the expense of

[1] Lectures I. and II. were published in THE LANCET of May 9th and 16th, 1896, respectively.

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an increased concentration of the blood plasma. This increase in concentration must cause an increase in the difference between the osmotic pressures of plasma and lymph and the absorbing force—i.e., the osmotic pressure of the plasma—will rise until it is equal to the driving-out force—i.e., the capillary pressure. In a normal dog with normal vessels the processes tending to cause œdema will be pulled up almost as soon as they have started, and no œdema will result from moderate venous congestion. It is easy now to see how we might cause œdema by venous congestion. In the normal animal the factor which restrains the appearance of œdema is the impermeability of the vessel wall, since it is this impermeability which maintains the difference in osmotic pressure between blood and lymph. If, therefore, we can increase the permeability in any way the balance of processes will be lost, exudation will predominate over absorption, and œdema will result. In my first lecture I mentioned to you several methods by which the permeability of the capillaries might be increased, with increased lymph-formation as the result. A much more trifling change in the vessel-wall than is produced by the agents mentioned in that lecture will suffice to cause marked effects on lymph-production where the intra-capillary pressure is considerably raised by venous congestion. Now it must be remembered that the capillary wall is alive and is composed of cells which have a metabolism of their own, and which, like all other cells of the body, are dependent for their proper nutrition on a free supply of oxygen and nutrient material and a free exit for their waste products. Their only function, so far as we know, is the maintenance of their integrity as a membrane with certain properties differing according to the region of the body in which they happen to be situated. If they are injured in any way the resistance of the membrane is diminished and its permeability is increased. Such an injury will follow if they be deprived for some time of fresh supply of nutrient material and oxygen. Cohnheim showed that after long-continued anæmia of the rabbit's ear the vessels became so permeable that the restoration of the normal circulation was followed by pronounced œdema of all the tissues. If the anæmia be of shorter duration no œdema is caused by restoration of the normal circulation, but can be called forth at once by ligaturing the principal vein draining the part. Now a long-continued venous obstruction must affect the vessel-walls in the same way as anæmia, since here also the cells will be starved or asphyxiated. Hence it is that in the chronic conditions which give rise to venous obstruction in man we have the production of œdema. Moreover, in the cases in man in which we obtain dropsy as the result of venous obstruction there are generally other conditions present which tend to damage the vessel-wall and so increase its permeability. Thus the mere occurrence of thrombosis points to a probable diminution of nutrition of the vascular endothelium, and occurs most frequently in patients suffering from anæmia or allied changes in the blood. The occurrence of malignant growths in the neighbourhood of a vein is, moreover, usually associated with a condition of cachexia, and therefore with an impoverished blood-supply to the endothelium. Now we have experimental evidence that the circulation of watery blood through the vessels, if continued for some length of time, alters the vessel-wall to such an extent that a moderate venous obstruction will produce œdema. I have already mentioned that ligature of the femoral vein in a healthy dog causes no œdema. Cohnheim has shown that if the dog be first rendered hydræmic by bleeding repeatedly at intervals of a few days ligature of the femoral vein will then be followed by œdema. It must be remembered that in this case we have still a third factor which helps in the production of œdema. There is no doubt that a more watery plasma will filter more easily through the vessel-wall, and the diminution of proteids in the plasma must be accompanied by a diminution of the osmotic pressure in the plasma, which is active in absorption. To sum up, we may say that œdema can never be brought about in the limbs by a moderate rise of venous pressure, provided that the capillaries retain their normal impermeability. Œdema will occur as soon as the permeability of the vessels is increased. The injury leading to this increase in permeability may be brought about in any of the following ways: (1) long-continued venous congestion (asphyxia of cells); (2) an excessive rise of intra-capillary pressure breaking down the normal resistance of the cells; and (3) mal-nutrition due to an impoverished state of the blood.

There is one method of producing œdema experimentally about which I must say a few words. Wooldridge showed that if a femoral vein in the dog be ligatured and a solution of tissue fibrinogen then injected, a considerable dropsy of the leg was produced, provided the dog survived the experiment. He ascribed this effect to the production of a disturbed relationship between the blood and the vascular wall. Now it is important to remember that the presence of fibrinogen in the blood has very little importance for the production of lymph. If we "kill" the blood by defibrinating it several times and reinjecting it, the lymph-flow from the thoracic duct remains unaltered. In this experiment of Wooldridge we have a concurrence of several factors. The most important of these is the occurrence of thrombosis in the veins of the leg, and this thrombosis is due, as Wright showed, to the fact that venous obstruction causes a heaping up of CO_2 in the blood, and therefore an increased susceptibility to the effects of tissue-fibrinogen. In repeating this experiment I have always found that the veins in the œdematous parts of the leg were thrombosed, and I am, therefore, inclined to look upon this experiment as very nearly analogous to Cohnheim's plaster-of-Paris experiment. We probably at the same time have an increased permeability of the vessels due to the poison injected, but that this direct action of the poison on the filtering membrane is of subsidiary importance is shown by the fact that if we inject the tissue-fibrinogen into a dog whose blood is defibrinated, so obviating the intravascular clotting, we escape at the same time the production of any œdema.

Much more frequent than the œdema due to local venous obstruction is the œdema which occurs as a consequence of uncompensated or imperfectly compensated heart disease. In this class of cases we have much more complicated conditions than in the class I have just discussed. The œdema of heart disease is generally looked upon as obviously due to a rise in venous pressure and consequent venous obstruction. Taking the existence of a high venous pressure in such cases as a fact, we have to inquire into the causes for this rise of pressure and whether this rise of pressure will extend to the capillaries. To investigate the causation of the dropsy in heart disease, therefore, we must first take into account the alterations in the circulation as well as the alterations in the absorption and production of lymph. The vascular system in an animal can be looked upon as a closed system of tubes having a definite capacity. If the circulation were brought to a standstill the pressures at all parts of the system would become the same. This pressure is called the mean systemic pressure, and in a dog is equal to about 10 mm. Hg. Now in such a system it is evident that the height of this mean pressure depends solely on the relation between the amount of contained fluid and the capacity of the system. If circulation be established by means of the heart's beat, the relation between the capacity and the volume of blood remaining unchanged, no alteration can occur in the mean pressure. All we have is an alteration in the distribution of the pressure. Behind the heart—that is to say, on its venous side—the pressure will sink below the mean systemic pressure; on the arterial side the pressure will be raised above the mean pressure. If after the establishment of the circulation the action of the heart pump be interfered with, as by damage to the valves, or be checked altogether, the pressures on each side will tend to return to the zero of the system—i.e., the mean systemic pressure. There will therefore be a fall of arterial pressure and a rise of venous pressure to this point. It becomes important, therefore, to know at what point in the system the pressure, while the circulation is going on, is equal to the mean systemic pressure. We find by experiment that this turning point of the circulation, so to speak, is situated in the region of the hepatic capillaries, in the abdomen, and about the level of Poupart's ligament in the femoral vein. Failure of the heart pump would therefore cause a rise of pressure in the vena cava and in the large veins of the neck, but a fall of pressure in the portal vein, in the peripheral veins of the legs, as well as in the arteries. It would seem, therefore, that failure of the heart's action, to whatever cause it may be due, can only bring about a fall of pressure in the capillaries of the intestines and peripheral parts of the body. How is it, then, that in morbus cordis we obtain such distinct signs of raised venous pressure in the peripheral parts of the body? The clue to this difficulty is, I believe, to be found in the fact that all cases of uncompensated cardiac lesions are associated with hydræmic plethora. This association has been shown actually to exist by the observations of Stintzing and Gumprecht. I wish, however, to show you how such a condition of hydræmic plethora must be

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an inevitable physiological consequence of the failure of the heart pump. We have just seen that heart failure causes a fall of pressure on both sides of the intestinal capillaries and limb capillaries, so that the first effect on these capillaries must be a fall of pressure. This fall of pressure, like that consequent on artificial anæmia, will disturb the relationship between the blood and the lymph; there will be an absorption of lymph from the tissue spaces, the blood will be increased in volume, and there will be, therefore, a certain rise of the mean systemic pressure and a shifting of the neutral point towards the periphery. The first effect of heart disease on the limbs will thus be to make them less full of lymph than they normally are, and a new condition of equilibrium will be established between the capillary pressure and the lymph absorption. This sucking of fluid from the tissues will affect also the alimentary canal. The extreme thirst—i.e., the increased absorption of fluid from the alimentary canal—which follows loss of blood is a familiar phenomenon. Now this increased absorption of fluid from the alimentary canal will tend to continue until the pressure in the capillaries of the mucous membrane is restored to its normal height. We have, therefore, as the effect of heart failure an initial absorption of fluid from the connective tissues of the limbs and a continued absorption of fluid from the alimentary canal. At the same time, in consequence of the low arterial pressure, the loss of fluid to the body by way of the kidneys is diminished. The result of these last two factors is to cause a continual increase in the amount of circulating fluid—an increase which must theoretically go on until the capillary pressures in the intestines and kidneys are restored to their normal heights. The ultimate result of heart failure is a condition of hydræmic plethora and, therefore, a raising of the mean systemic pressure above its normal height. With the ever-growing balance in favour of absorption of fluid into the bloodvessels the rise of venous pressure extends further and further towards the periphery until the rise affects also the capillary pressure, and in all dependent parts of the body exudation predominates over absorption. The effect of this continued absorption is that the over-full veins present more and more blood to the heart—the heart which was unable to send onwards into the arteries even its normal quantity. It is evident that here we have a vicious circle of events tending to the death of the animal. If, however, the animal be freed from the normal struggle for existence the heart may be able to empty itself and so gradually undergo hypertrophy, and the cardiac disease may be compensated.

It is probable that in the production of the œdema of heart disease we have a concurrence of the same subsidiary factors as were mentioned when dealing with the subject of venous obstruction. In consequence of the failing circulation there is a stagnation of blood in the vessels, and the oxygenation and nutrition of the capillary walls cannot be normally carried out, so that their permeability is increased. We have here, moreover, a factor which was not present in simple venous obstruction—viz., an obstruction to the outflow by the lymphatics in consequence of the raised venous pressure at the opening of the thoracic duct. We see, then, that the production of dropsy in heart disease is by no means so simple as it at first appears, but that it is due to a complicated series of interacting mechanisms, all of which tend to the death of the organism. We may sum up the sequence of events which ensue on failure of compensation as follows:—Stage 1.—Heart-pump failure; fall of arterial pressure; rise of pressure in the venous trunks near the heart; fall of capillary pressures in the peripheral parts of the body, in the kidneys, and in the intestine; and absorption of fluid by bloodvessels from intestines and peripheral tissues. Stage 2.—Continued absorption from the alimentary canal with diminished excretion from the kidneys, and production of hydræmic plethora with rise of mean systemic pressure. This leads to Stage 3—rise of capillary pressure in all dependent parts of the body, capillaries injured by malnutrition, and excessive transudation, leading to dropsy. Stage 4.—The continued hydræmic plethora leads to ever-increasing over-filling of the heart cavities and to ultimate failure of the already incompetent heart.

I have already described to you Wooldridge's experiment on the production of œdema by the injection of tissue fibrinogen. This observer ascribed the dropsy of heart disease chiefly to an auto-intoxication of the organism by the fibrinogens contained in its lymph. Now it is apparent that the enormous rise of pressure in the liver in heart disease, which is instanced by the swelling and pulsation of this organ, must give rise to a greatly increased flow of lymph from the thoracic duct into the blood, so that we have the conditions present which are necessary for this auto-intoxication to take place. It is possible that there may be a certain amount of poisoning of the organism effected in this way, but in the light of my experiments, which I described to you recently, I do not think that this auto-intoxication can be looked upon as at any rate the chief factor in the production of the dropsy. I believe that careful experimental investigation will show that the production of the dropsy can be perfectly explained by an upset of the balance between the physical conditions which normally control filtration from, and absorption by, the bloodvessels in different regions of the body.

In these two classes of dropsy the primary factor is an alteration in the mechanical conditions of the circulation, bringing about a rise of capillary pressure and increased exudation in the part affected. In the next class with which we have to deal the primary change affects, not the intra-capillary pressure, but the vessel-wall. A change of the filtering membrane is thus produced, so that it becomes more permeable and allows, under normal capillary pressures, an excessive exudation, and the exudation is richer in proteids than is the normal lymph of the region in question. Since an alteration of the vessel-wall is one of the main features of inflammation Cohnheim has classed all œdemas in which the primary affection is that of the vessel-wall as inflammatory œdemas. In my first lecture I pointed out various means by which the permeability of the capillary wall might be increased, and showed how, under these circumstances, the limb capillaries might be reduced to the condition of liver capillaries. Here, as in all other cases in which œdema occurs, we have more than one factor at work. The capillary pressure of the part remaining at its normal height, the increased permeability allows of a largely increased exudation—there is increased lymph-production. The lymph, however, contains more proteids than normal, so that the difference of osmotic pressure between it and the circulating plasma is diminished, thereby causing a diminution of the absorbing force. In all cases of inflammatory œdema these two factors are at work concurrently—increased production and diminished absorption. This alteration of the vessel-wall may be brought about in two ways: either by the application of injurious agents to the vessels of any given part or by the introduction of poisonous substances into the blood-stream. Thus a local alteration of the vessel-wall may be caused by application of mechanical violence, crushing the tissues. It is possible that in this case we have at work, not only the direct result of the injury on the vessel-wall, but also a secondary injury of the capillaries in consequence of the development of poisonous products of disintegration in the bruised tissues surrounding the capillaries—e.g., tissue fibrinogens. We can produce the same change by exposing the tissues for a few minutes to a temperature of over 50° C. or by depriving them for some time of the normal blood-flow. All the local œdemas produced by inoculation of chemical or microbic poisons at the point of inoculation are of this nature. The swelling produced by the sting of a bee or by the inoculation of anthrax is due to the deleterious effects of the poison injected on the capillary walls at the point of inoculation. Metchnikoff has shown that the emigration of white blood-corpuscles occurring in inflammation is to be looked upon as a physiological reaction of the organism directed to its preservation, and it seems probable that the salutary import of this process may also hold good for the local œdema. As the result of the injury of the capillary walls a more concentrated lymph is poured out—i.e., a lymph containing more proteids to serve for the nutrition of the cells of the part. Whether or not this is the case, the presence of this concentrated lymph must be of great use to the organism in the regeneration of tissue which follows on inflammation.

We know less clinically of the cases in which the injury to the vessel-wall is brought about by a poison circulating in the blood. I have already described to you the class of animal poisons which were grouped together by Heidenhain as his first class of lymphagogues. I showed in my first lecture that the chief action of these bodies was on the capillaries of the liver. Their action, however, is not absolutely confined to this organ. I have experimental evidence that there is a certain degree of increased permeability of the intestinal capillaries after the injection of these bodies—an increased permeability which is brought into evidence only after raising to a certain extent the pressure in these

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capillaries. These bodies, however, can also affect the capillaries of the skin. In a number of the experiments in which these bodies have been injected we may observe a rapid development of an urticarial eruption on the skin, and you are all familiar with the fact that the ingestion of the animals from which these bodies are derived (mussels, crayfish, lobster) is often followed in man by an eruption of urticaria, which may or may not be accompanied by other symptoms of poisoning. The sudden onset of urticaria and similar eruptions in man, combined with the fact that their distribution may correspond with that of a certain nerve, has given rise to the supposition that these œdemas may be nervous in origin; that, in fact, we have an increased production of lymph under the direct influence of the nervous system.

If lymph were to be looked upon as a secretion we should expect from analogy with other secretions to find it subject to the central nervous system, and at the time when I was fully imbued with the new faith, the secretory hypothesis, I made diligent search for direct evidence of the influence of the nervous system on lymph-formation. The results of my experiments were, however, opposed to such a hypothesis. In every case where nerve section or excitation gave rise to increased lymph-production in any part, I found that the increase was due primarily to a rise of capillary pressure in the part and was, therefore, only a secondary effect of the interference with the nerve. The best-marked case of so-called nervous œdema is the unilateral œdema of the tongue, which may be produced by stimulating one lingual nerve. Now the stimulation of the lingual nerve causes extreme vaso-dilatation of the vessels of the tongue, and the increased lymph-production in the tongue is evidently the direct result of this vaso-dilatation and consequently increased capillary pressure. Here, as in all other cases where one wishes to produce œdema, one must not rely simply upon one factor. In the majority of cases the œdema produced by stimulating the lingual nerve—i.e., by a simple rise of capillary pressure—is but slightly marked. One can, however, produce a very fine œdema of the tongue if one aids the filtration process and diminishes the forces tending to absorption by the injection of a large amount of normal saline solution into the circulation. I believe that all cases of so-called nervous œdema can be explained by the circulation of some lymphagogue substance in the blood combined with local vaso-dilatation, which may often be hysterical or central in origin.

One of the most important forms of dropsy—i.e., that which accompanies renal disease—was placed by Cohnheim in the category of inflammatory dropsies, and this seems a necessary conclusion in view of the fact that we are unable to trace any adequate mechanical cause, such as raised capillary pressure, for the increased transudation. We know very little more about this form of dropsy than was known in Cohnheim's time. The discovery of lymphagogues naturally suggests that the change in the vascular endothelium in Bright's disease, which leads to its increased permeability, may be due to the circulation in the blood of some poisonous substance belonging to this group of bodies. This possibility is favoured by the results of one experiment in which I injected blood serum from a uræmic patient into a dog and obtained marked quickening of the lymph-flow from the thoracic duct. The conditions in Bright's disease are, however, much too complicated for us to come to any conclusions without carrying out a long series of experiments on the subject.

This cursory examination of the alterations of physiological conditions present in the various forms of dropsy brings to light one important fact—a fact on which much stress has already been laid by Cohnheim. In all cases the primary cause of œdema is an increased transudation. The normal mechanism of absorption may for some time hold this process in check, but in all cases where the increased exudation endures any length of time subsidiary events cause a breakdown of the absorbing mechanism and the occurrence of œdema. On the other hand we know of very few cases in which œdema can be ascribed primarily to a diminished absorption. Obstruction of the lymphatics can rarely occur, owing to the multitudinous anastomoses of these canals; when a complete obstruction does occur the result seems to be rather a general hypertrophy of the connective tissues (as in elephantiasis) than a true œdema. In all cases, however, where we find dropsy we may say that in addition to the primary increased exudation there is also a derangement of some part of the absorbing mechanism.

The Annual Oration

Delivered before the Medical Society of London on May 18th, 1896.

"THE BREAKING STRAIN."

BY W. H. ALLCHIN, M.D., F.R.C.P. LOND.,
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MR. PRESIDENT AND GENTLEMEN,—Among the many and varied phenomena presented to our observation by living beings there is no one that recurs with such persistent frequency, no one that our experience leads us so inevitably to anticipate, as that such a being will in time, whether long or short, cease to exhibit those manifestations in virtue of which we speak of it as living, or, in other words, will die. It has seemed to me that I might, and I hope without too great presumption, profitably occupy the occasion which the courtesy of the council of this society has extended to me in putting before you some considerations which are connected with the investigation of this problem. A fundamental explanation of it I do not pretend to—that were impossible, as impossible, indeed, as it is to affirm the "why" of any other "of the sense impressions distinguished by our perceptive faculty." But it at least is as capable of scientific treatment as other phenomena, whether they be associated with living or non-living material. And the collection and classification of the facts connected therewith, as well as the recognition of the sequence and relative significance of these facts, are as much called for and as reasonably to be expected as in any other problem of natural science.

The immediate practical bearing and importance of so difficult and recondite a question in physiology may perhaps be far to seek, even for a body of medical men actively engaged in the practice of their profession and eager to avail themselves of any new weapon that science may furnish them with in their contest with disease. But I think now and then a short time may be advantageously spent in the consideration of subjects which, though not of immediate practical use, do seem to furnish some principles of general application, and to suggest some lines of coherence among the many scattered and apparently isolated observations which we are so constantly recording. It is pleasant occasionally to dissipate in generalities, to see what bearing phenomena may have to one another, and indulge therein by way of relaxation from the laborious accumulation of individual facts. The Medical Society, no less than other societies which claim to be scientific, regards, and properly regards, with some hesitancy of approval the time devoted to theory and speculation. But we have to-night reached the end of an active session, and the knowledge of this as well as the recollection that my present contribution is not followed by discussion has led me to take, not, I hope, an undue advantage of your forbearance by offering some remarks upon a subject which, I fear, may have been already dubbed by some of you impractical and transcendental.

It will be well to obtain at the outset as complete an objective conception of the phenomena as we can—to ascertain and realise as far as possible the facts of the case. To begin with it is clear that we mean by death a condition of matter when it has ceased to exhibit any of the properties which we call living. For a thing to be dead implies, properly speaking, that the thing has lived, and the term is inapplicable—or should be, were we precise in our language—to material that has not been just previously living. It will be impossible, therefore, to enter on the consideration of death without some preliminary agreement in notion of what is meant by life, which, after all, is only another aspect of the same problem.

Conformably to the principles of modern science we seek—*pace* the new vitalism—to refer the investigation of "vital phenomena to their physical and chemical counterparts or analogies"[1]—to refuse, in fact, to consider vital problems as

[1] Ludwig and Modern Physiology, by Professor Burdon Sanderson, F.R.S. Science Progress, March, 1896.

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understood that cannot be measured by the standards and methods employed in the investigation of physical and chemical manifestations, fully conscious that our results merely end in description and not in explanation, and result only in ranging our "perceptual experience" within the scope of postulated natural laws, and not pretending to assert a supersensuous causation. It is also obvious that to form any idea of life and its correlative death it will not suffice to confine one's attention to the higher animals and plants, still less to man only, but that to obtain a thoroughly comprehensive notion the investigation of the simplest forms of both kingdoms must be included, and so, by excluding the highly specialised functional manifestations exhibited in the most developed, ascertain what is common to all from the simplest to the most complex, thereby reducing the phenomena to their simplest terms. So regarded, we find that the essential facts of vitality as ascertained by observation, experiment, and experience are: 1. The invariable presence of a certain material of very easily recognised physical properties, but of a highly complex but as yet undetermined chemical composition and molecular structure, known as protoplasm, which recent investigation has tended to show is not so homogeneous as was originally thought, though the details of its arrangement the microscope as yet has imperfectly revealed. 2. Such material occurs in isolated and distinct particles of exceeding minuteness, probably always, even in its simplest form, differentiated into cytoplasm and nucleus—the cell; or as aggregations of such particles, frequently in association with other materials less complex in composition and not possessing the properties we call life. 3. Given this substance, we call it living when it exhibits certain special forms of energy to which the collective term "irritability" may be applied, or more specifically "contractility," "nerve power" and "secretion." They are accompanied invariably by the liberation of heat and probably always, certainly often, by electrical manifestations, both of which are identical in nature and measurable by the same means as the heat of our fires or the electricity produced by our batteries. I am not concerned now to discuss how far these living energies are mutually convertible, or whether they are or are not correlated to the associated heat and electricity; it is sufficient to say that matter which presents these characters is called living, and unless they be present life is absent. Further, it would seem that for their manifestation there must be some immediate antecedent existing agent, some stimulus, whether that be of a gross and obvious character brought to bear from outside or more subtle and obscure arising intrinsically. For the display of these properties and essentially included in the conception of life is the presence in the cell of an adequate supply of non-living material—food, whereby its nutrition, as we say, is maintained. Regarded more closely, the three-fold functions above enumerated are the outcome of, or the expression of, protoplasmic nutrition, and as they are the essentials of vitality, nutrition and life may be to that extent regarded as synonymous terms. So far what I have said is within the range of verification by observation. The simplest speck of living matter, call we it animal or plant (or multiply the difficulty by speaking of an intermediate group, the Protista), equally with the highest known organism, may be seen to move, not infrequently in a manner strongly suggestive of purpose, to avoid or pursue in its movements this or that object, to engulph other material upon which it feeds and upon the presence of which its continued existence as living matter is absolutely dependent. Equally is it known by observation and experiment no less than by experience that the manifestation of life is subject to certain conditions of the environment of the cell, conditions that are familiarly known as temperature, moisture, sunlight, and atmosphere, including a due supply of oxygen and the like, certain degrees of which are favourable, as others are fatal, to the vitality of the protoplasm. Experience provides us with no knowledge of vitality apart from these conditions, and the vital phenomena we are familiar with may be regarded as the resultant of these external influences brought to bear upon the nutritive changes taking place in protoplasm. But just as for purposes of clearness of thought and to obtain the desired objective conception of our subject we consider the intrinsic proteplasmic changes apart from the influence of the extrinsic environment, so we have further to recognise that the range of variation within which the latter is consistent with life is very considerable and that the living protoplasm has a considerable range of adaptability by which it adjusts itself to altered conditions. This power of adaptation we are in the habit of regarding as an inherent property of living matter, a factor of its vitality, just as the power of self-nutrition and the manifestation of irritability are other factors, all inextricably involved and perhaps but different aspects of one and the same. If to these qualities be added the tendency to death which sooner or later asserts itself we have a summary of the characters by which we affirm that a given object lives.

It is necessary to consider a little more in detail what was just now spoken of as nutrition to ascertain, as far as may be, the intricate nature of the processes therein included as bearing on their relation to the particular subject of my present remarks. That the living being is dependent on food, that this food undergoes certain changes in the living tissue, and that certain waste products of such changes are thrown off, are among the commonplaces of our experience and are questioned by none any more than the fact that, associated with this continuous ingestion, change, and excretion, there are evolved certain energies, some of which are peculiar to living substance. Indeed, so precise is most of our knowledge on this point that what has been called the balance-sheet of energy, in which the work done by the body (in this case the body of some one of the higher animals) is accounted for by the food-stuffs used, has been prepared with such an approach to accuracy as to justify the expectation that it will ultimately be capable of being presented in such a form as to satisfy the most critical physiological auditor. But beyond such a view—a very superficial view—of the question there remain deeper aspects of the problem where we are not nearly on such firm ground and where hypothesis and conjecture do duty at present for more positive knowledge; but so long as these hypotheses are admitted as such and are in harmony with, or at all events not flagrantly opposed to, other fundamental concepts, we may claim to be pursuing the right path, at all events for the present, and until we are brought to a stop by the proof or even strong probability that our assumptions are erroneous. It is in respect to the exact relationship which exists between the ingesta and the living elements of the tissues in the course of those changes which eventuate in the liberation of vital energy that conjecture prevails, and, as may be supposed, no single hypothesis is wholly accepted. Are we to consider that the living protoplasm, whatever may be its ultimate structure, behaves as regards the pabulum supplied to it as does a piece of machinery, say a steam engine, where the water and fuel are so disposed as to furnish steam power, with the result of a slight wear and tear of the mechanism and a discharge of waste in ashes and smoke, and that the machine is merely a suitable arrangement for effecting the required changes in the material consumed, itself undergoing no—or practically little—alteration in the process? The relationship of the living structure (mechanism) to its fuel seems scarcely so simple as this; some at least of the food-stuffs duly elaborated in the processes of digestion, in the lymph and blood channels, and, possibly, also in the liver through which they pass before reaching the tissue elements, would seem to be incorporated in the very tissue itself, to form an integral part of it, to be raised up to that height of molecular complexity and corresponding instability which pertains to the living particle, which is no sooner reached than it over-topples, so to speak, to be as continuously replaced, falling from the zenith of complexity to some more stable construction, disengaging energy in the change, and so passing from the pinnacle at which it may be pronounced living, which is no sooner reached than it breaks down into the condition again of non-living matter from which it had just been built up. In such a fashion it may be conceived that this living material is maintained, that the progressive stages of construction (anabolism or assimilation) passing over at a certain point, as yet not grasped, into a rearrangement of molecules of the destructive or catabolic order, constituting thereby a perpetual succession of interchanges, a "cyclosis in which the organism returns after every cycle to the same point of departure, ever changing yet ever the same"[2]—in fact, life itself.

It would seem that but a small proportion of the nutritive ingesta is destined to actual living tissue construction, and

[2] Address in the Section of Biology at the meeting of the British Association for the Advancement of Science, 1859, by Professor J. Burdon Sanderson, M.D., F.R.S.

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that proportionately only a little of the total resulting vital energy is associated with the interchanges here postulated; but no hypothesis, as far as I am aware, has yet ventured to suggest exactly which of the specific energies are thus liberated, or, indeed, how far, if at all, they are independent of the probably less complex interchanges which take place in that major portion of the ingesta which are regarded as never becoming actual constituents of tissue, but which consist mainly of an oxidation process carried out within the range of influence of the protoplasmic metabolism. The terms "fixed" and "circulating"—the former singularly inapt—have been used to denominate these two varieties of food as it finally reaches the tissues. Such, then, in summary, is what we mean by life, the processes of which are the subject matter of the physiologist's inquiry, to become the province of the pathologist when they overstep the ill-defined line which separates health from disease. By experiment and observation, constantly aided by the progressive advance of chemistry and physics, is our knowledge becoming more accurate and precise. But at the beginning and end of the subject, so to speak, are questions to which as yet but the most uncertain answer can be offered. Given the living protoplasm, given this material with its vitality, how has it come into being, how does it come to an end? With the "why" as an explanation true science has no concern, but the "how" is its legitimate scope of inquiry. Different as these questions may be at first sight they are not, I venture to think, as different as they may appear to be, and I suspect any knowledge of the one will materially assist to a comprehension of the other.

Before proceeding to consider the nature of death, what is implied by it, and how it comes about, it is worth while to inquire whether death is an invariable termination to life, whether, in short, every being that lives does sooner or later die. If we confine ourselves to the higher forms of life the reply would undoubtedly be "Yes," but this cannot be so readily affirmed if we regard the simplest forms of existence. Here we note a close connexion between the mode of origin of life and the conditions of its termination. Universal experience shows that such beings as propagate sexually, whether animals or plants—or, in other words, beings which originate from the union of distinct sexual elements and themselves consist of aggregations of cells and cell derivatives resulting from this union—will sooner or later die, even though, so far as can be recognised, their surroundings and conditions of existence remain the same as when their vitality was at its prime. On the other hand, those organisms which reproduce by a process of fission cannot, with a possible partial exception to be presently noted, be said to die, but to continue their existence in their progeny, which primarily consists of the constituent material of their parents, the whole of the parent body being used up in the formation of the descendants. If we regard, as I think we are entitled to do, fissuring of a protoplasmic unit (cell) as the exhibition of an extreme and peculiar form of the power of contractility, which is possessed in some degree by all matter that is living (induced by some stimulus the nature of which is quite unknown), but only manifested on certain occasions, then we bring the reproductive act of these asexual organisms into line with the common properties of living matter and facilitate its consideration and description. If each resulting portion of a fissured cell continues to exhibit after its separate existence the characteristics of all living material as possessed by its parent, its power of self-nutrition with all therein implied, and its powers of adaptability within limits to varying conditions, and in due time to subdivide into two portions, each again continuing the *rôle*, then, indeed, such beings cannot be said to die except by accident and are essentially immortal. No greater difference in identity exists between parent cell and progeny than exists in the parent cell itself at successive periods of its own existence, consisting as that existence does of ceaseless changing with continuity of character. All unicellular organisms, however, do not appear to be capable of unlimited propagation by fission. It has been long known that the infusoria, which are among the highest developed of the protozoa, do after a series of such multiplications gradually exhibit a slackness in their fissuring until at length the act is no longer repeated and the individual dies. But should the infusorian meet with another of its kind in a like state of enfeeblement, and a temporary conjugation between the two occur, they will then separate, reinvigorated with a new lease of vitality, and continue their propagation by fission until again exhausted. Such a condition is one of less complete immortality than obtains in other protozoa and protophyta, but it falls considerably short of the inherent mortality that pertains to all forms of multicellular life. Among the metazoa and metaphyta by no means can senescence and death be averted, however favourable may be the conditions for their continued existence. But even then some multicellular organisms do not wholly die. The body of the individual undoubtedly perishes, but the sexual elements contained therein, and for the production and care of which the individual soma finds its chief *raison d'être*, whereby the species may be maintained, continue to live, given only suitable conditions, and the fertilised ovum resulting from these elements, consisting as it does of integral parts of the parents, develops and grows, thus maintaining generation to generation in structural continuity. Death, therefore, which is a condition only known in the higher divisions of living beings, comes to mean a cessation of some only of the activities possessed by these beings—the greater proportion of their activities it must be admitted, and those which concern the maintenance and well-being of the individual as opposed to those by which the race is continued. It is the mass of the body that dies, that which lives or can live, conditions being favourable, constituting but a minute fragment compared thereto, in the highest forms of all a mere particle, and this participates in its partner's death unless removed to suitable surroundings. I need scarcely say that I make no reference to organisms being killed, that is to say, being subjected to unfavourable conditions of the environment. Countless myriads of immortal protozoa die, but that is due to the nature of their surroundings, they do not contain within themselves the inevitable destiny of death which they cannot avoid. Similarly myriads of the equally immortal sperm and germ elements of the higher and highest developed forms perish from like causes. My remarks obviously apply to death as a natural phenomenon, and as such it has a somewhat more restricted scope than at first appears.

The relationship of the sexual element to the enveloping and protecting soma is worth a moment's thought. Possessing as it does when suitably blended a potentiality of growth and development to the parent form, and dependent on the soma for such nourishment as it may require, it nevertheless maintains a passive existence in the midst of its surroundings, waiting, so to speak, its chances, which accident may prevent from ever coming to it. Meanwhile, the body continues to exhibit the functional activities of its vitality, however simple, however complex, until these processes of themselves gradually fail and finally cease. We are accustomed to recognise in the course of existence of a living being three stages: one of growth and development, one of maintained maturity, and a third of decline and senility terminating in death. For the most part, if not absolutely, these stages are characterised by very considerable differences both in respect to the origin of life and to the cessation of it. During the first period the multiplication of the tissue elements and their individual increase in size, and more remarkably their differentiation of structure and specialisation of function, are all at the maximum, fresh living tissue elements are formed by the division of pre-existing ones, and the generation and development of material prevail everywhere, notably, however, in one situation in a laggard fashion and sometimes scarcely at all—viz., among the portions which will ultimately give rise to the reproductive elements. Their inactivity is in marked contrast to the often rapid development of surrounding structures, they multiply but little, and differentiate scarcely at all, retaining throughout this period an embryonic character, such as they have possessed since they underwent the first stages that followed their separation from their parents. At this stage, when all efforts are put forth on behalf of the individual, its reproductive power is but slight or entirely wanting, and in the natural sequence of events, and accidents apart, death is unknown. When, however, full development is attained and the individual is complete then a difference in the relative properties of these phases is seen. The efforts of the soma are directed to the maintenance of its structural integrity. The fully differentiated tissues exhibit their own functions and harmoniously work to the same end—viz., the life of the individual. Now the reproductive elements are mature, and the individual is capable of taking part in reproducing its kind. In a vast number of living beings the sexual elements are produced in the same individual, when self-fertilisation may or may not occur; in the highest forms they are borne in different

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bodies; but, be that as it may, the stage of maturity is that in which the sexual power of the individual is at its maximum, the formative functions of the tissue have largely diminished or even ceased, and death again except from mischance does not occur. Finally, after this stage has lasted a certain time more or less peculiar to each species, and not, perhaps, wholly unconnected as regards duration with the length of the preceding period, the organism begins to fail in its activities, to live less perfectly, and, as we say, to grow old, the tissue elements are no longer or but imperfectly renewed, those that remain atrophy and degenerate, the power of reproduction has departed, the individual has fulfilled its destiny, it has lived and reproduced, it now remains but to die. But death now is not an accident, it is an inevitable, inexorable event. Such a course is altogether in harmony with the principles which we recognise as natural selection and the survival of the fittest. The being that has filled its mission only cumbers the ground, consumes nourishment required for those still in the fulness of their powers, and occupies valuable space; death for such is the fittest that can happen.

In this sketch of the successive periods of existence, and for the moment confining our attention to human existence, there may be noted with advantage the relation they bear to the incidence of disease. Disease, which is but a departure from normal living, such departure being detrimental or even fatal to the well-being of the individual, associated with some changes from the normal structure, ill defined in its limits because normal structure and function are ill defined and not accurately known, induced by some unsuitability in the conditions of the environment or imperfection in the original germ plasm whence the individual developed—disease, I say, has, like death, no natural connexion with the stages of growth and maturity. All maladies occurring at this time are non-natural and are, or should be, preventable, and, apart from hereditary or congenital affections, the causes of which should have been averted in the parents or should have been prevented from perpetuation, are wholly due to external influences. On the other hand, during the decline of life disease as signifying a functional shortcoming from the normal standard of the prime is a natural incident. We may be able to show that a healthy old age is free from many of the ills commonly ascribed to it and even that some not inconsiderable reparative power may be retained by the tissues; but nevertheless it is in the natural course of things for the tissues generally, some more than others, to degenerate, to become, that is to say, less complex in chemical composition and therefore more fixed and less capable functionally. One may be surprised now and then with exceptional cases in which the nervous or even the muscular energies have been unusually prolonged, just as the procreative power is occasionally sustained until an advanced age, but however long beyond the usual they may survive there is a limit to their manifestations. Did time allow it would be interesting to compare the clinical features of the diseases as they occur at these age periods, but I content myself with pointing out the normal incidence of disease, which in all cases approximates towards dissolution, as occurring simultaneously with the natural tendency to death.

If now we pass from the soma as a whole to consider the various constituent tissues as they exist in the highest forms of life we are struck by several notable circumstances. Among the varied component parts of the mature soma, all derived from the fertilised ovum and in their earliest beginnings identical in appearance, the widest range of ultimate differentiation is attained. Whilst some, such as nerve cells and muscle fibres, represent the maximum of departure from the primary embryonic elements and with that the highest specialisation of function, others, like the white blood corpuscles and the simpler cell elements of the connective tissues or of the deeper layers of some epithelial surfaces, are but slightly removed in appearance from their embryonic ancestors, have differentiated but little, and are possessed of a far inferior range of vital capability. But a further and striking contrast exists between these two groups—viz., in respect to their ability to reproduce their kind. A fully developed nerve cell or muscle fibre is not known to divide and multiply either in health or under the conditions of disease, but when once its full structure is attained by a process of continued fission and progressive differentiation the tissue element undergoes only such changes as are involved in its nutritive activity until overtaken by disease and death. Not so the simpler forms; they are constantly multiplying, much indeed as free unicellular organisms, and for the most part their successive progenies resemble almost or quite exactly the parents. With this one cannot but remember that the simpler tissue elements here mentioned appear to be equally and perhaps mutually active in effecting those reparative changes which are necessitated by accident or disease, reverting in so doing nearer and nearer to the embryonic form, and so giving rise to the healing tissue. Here, then, from this point of view, it will be seen that the highly differentiated tissue elements, like the more complex individual, invariably die, whilst the simpler forms, in proportion as they approximate to the germinal elements and as such to unicellular organisms, retain the power of multiplication and so escape from death the longest, though they have not the potentiality of developing into an entire individual such as is possessed by the germ.

From the foregoing considerations we are now in the position to make these general statements:—1. That death as an incident in the evolutionary cycle is not inevitable to all living beings. 2. That whilst unicellular organisms are immortal those of any higher grade of structure of inherent necessity die. 3. That these latter are, given favourable conditions, continuously propagated by specialised portions of their own substance, the individual itself, apart from these portions, perishing. 4. That the power of self-division and hence of perpetuation with avoidance of death is lost by cells which have advanced beyond the most rudimentary stage of differentiation, such power being restricted to those elements which retain their embryonic character and most completely by those which form the sexual elements.

From such conclusions, then, naturally follows the question which is at the root of the subject, How is it that the vital processes decline and cease after a manifestation over a tolerably definite period more or less peculiar to each species of animal and plant, peculiar to them in the same sense as a specific size or shape is peculiar? What is the immediate antecedent to the cessation of vital activity as invariably seen in sexually propagating organisms? Whence comes, and what is the nature of, the breaking strain which disrupts the ceaseless interchanges which constitute life? It may be at once admitted that no satisfactory answer can be given, and any attempt thereat, however reasonable, only pushes the question a step further back; but even that, if sure and certain, is a gain—it would be one more stage in the ascertainment of the sequence of phenomena which is the function of science, though leaving the "first cause" still unknown as being beyond the range of our perceptive faculty. To begin with, it has been shown that all protoplasm, all living matter, is not of necessity mortal. It is only certain specialised forms of protoplasm that are so distinguished, only certain individual living beings which inevitably die. If these two groups of individuals be contrasted some clearer definition of the problem may be forthcoming. In the one case the individuals consist of but single isolated and independent particles of living matter (cytoplasm and nucleus), each possessing and manifesting all the phenomena which make up life; each particle is irritable, responsive to a stimulus and exhibiting contractility (usually so disposed as to effect its locomotion) and some solvent (secretory) action on the foreign matter which constitutes its necessary food and in virtue of which its nutrition is maintained. Each particle is endowed with a certain degree of the power of adaptation to its surroundings, which in turn exerts a modifying influence upon it; and, lastly, it can and does possess the capability of self-division, splitting its entire self into two similar parts which differ from the parent individual only in bulk—a difference that is rapidly lost by simple growth from suitable ingesta.[3] Such individual beings, then, are all capable, all living, each one is complete in its vitality, and never except by accident dies.

The individual of the other group consists not of one but of many cells aggregated into colonies and masses of countless sizes and shapes; such cells, incapable for the most part of independent existence and mutually dependent for their well-being, collectively constitute the living individual. The organism thus constructed, so far as living goes, does no more than the simpler unicellular being, but it lives more perfectly, more elaborately, its vital processes of movement, of nervous manifestation, of secretion—in short, of its entire nutrition—are developed and exhibited at a higher pitch of perfection; its range of adaptability to

[3] It cannot reasonably be argued that this division into two is a virtual death of the parent individual in anything like the same sense that we speak of the death of a higher animal or plant, or that the progeny of the latter perpetuate their parents in the same sense that the resulting halves of a fissured cell do so.

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the environment, of resistance or yielding to surrounding influences, may be greater, but in the long run it attains no further object than that accomplished by its simpler neighbour—viz., the propagation of its species, whilst the price it pays for its greater elaborateness of living is its inevitable death. Thus stated it would seem that the differences between these groups are of degree rather than of kind. The more complex vitality of the one is associated with a greater complexity and differentiation of structure, a subdivision of labour, that is, special functions being associated for their more perfect performance with more highly specialised structures, though these same structures, in proportion as they are differentiated, lose the power of self-division which is possessed in common with the other vital powers by the simplest form of protoplasm. These are but grades, and all intervening degrees are to be found between the highest and lowest beings. Nor is the difference as regards the incidence of death fundamental; whilst the one individual lives wholly in his immediate descendants, the other lives but in part, his own identity being lost in his death. But however much this mode of stating the case may conduce to a clearer understanding of the problem at issue, there still remains the unsatisfied question, How is it (or in common phrase, what is the cause of?) the organism, once that it has reached its maturity, in the full plenitude of its powers both for its own existence and for its own perpetuation, gradually comes to fail, grow old, and die? Why should it not, when once fully established, so continue for all time and remain immortal itself as well as perpetuated in its descendants? Wherein is the explanation to be sought? Is it in the continued effect of surrounding circumstances and conditions the adverse influence of which gradually prevails, or is it from some inherent defect in the vital processes which becomes intensified by time and constant repetition? In whatever direction the source and nature of the disturbing influence are to be looked for, it would assuredly seem to be in that same region where are to be found the conditions which determine the chemical and molecular changes that constitute nutrition and vitality itself; and inasmuch as cell division, which is the essential of propagation, is but a phase of that aspect of nutrition known as contractility, it would appear that what knowledge we may come to acquire of the intimate nature of life will equally provide us with the explanation of the conditions of its origin and of its termination, inextricably linked as these phenomena are. Conceiving as we do that the energies of vitality are the sensible expression of continuous interchange in a highly complicated material, one phase of which is a building up, or assimilation, to be succeeded at some higher degree of complexity and instability by a breaking down and disassimilation, is it in the anabolic stages that the inherent antecedent that finally arrests the metabolism, and with it life, is to be found? or is it that in the catabolic descent materials may be formed which exert a slowly increasing pernicious influence on the entire process, autogenetic poisons, in fact, that are invariable accompaniments of protoplasmic change? Or, lastly, may it be some failure in the stimulus, the existence of which is involved in our conception of this same protoplasmic activity? Conformably with our fundamental hypothesis of the nature of nutrition it is difficult to see any other direction in which to look for our desired antecedent. Expressed in terms more in accordance with our grosser conceptions of physiology, does death result from some imperfection in the nutritive material (ingesta) or in some toxic product of waste (egesta), or for want of the needful stimulus to the very changes which involve the material and determine the products? That it is the soma that dies and that the life of the soma or individual is identical with its nutrition would, consistently with our present hypothesis, make it probable that somewhere within these concepts what we are seeking is to be found.

As may be supposed, many suggestions have been offered which find their place in one or other of these categories. Some, with Mr. Herbert Spencer, have sought to explain the phenomena by assuming a failure in the nutritive supply or in the ability to appropriate the ingesta on the part of the organism, the same conditions, in fact, as those which determine the limits of size peculiar to each living being. However true this may be, it gives no explanation for the inability displayed by the tissues. Among the theories which are based upon the determining cause of death being produced in the course of the changes which constitute life may be mentioned that of Lendl. According to him the protoplasm in the course of its living forms waste products from which the germ plasm at first starting is free; as the cell divides these materials—termed by him "ballast"—are restricted to one of the resulting pair, and in the course of the subsequent growth and development of the organism those morphological units which form the perishable soma are loaded with ballast, whilst those which are destined to the perpetuation of the species, whether they be limited to the sexual elements, as is usually the case, or form a part of the general structure, as seen in some leaves—e.g., begonia—are free from the noxious material and in consequence escape death. It need scarcely be said that no proof of this hypothesis exists any more than there does of the suggestion that it is the presence of an aldehyde in living protoplasms which serves as the stimulus to its activities and that death is caused by a want of this substance. Others have assumed that the stimulus to vitality emanates from the nucleus which in the process of living becomes gradually exhausted and is finally extinguished.[4] There is one circumstance which seems to bear a very constant relation to the onset of death—viz., the reproductive effort. In very many beings this effort is made but once, and then as a rule death soon follows. In others the effort is capable of being repeated over a period (maturity) of varying length, but when it fails senescence sets in. A review of all the circumstances would seem to show that failing vitality follows the cessation of reproductive capability rather than that this latter fails because of approaching death, and, if we may speculate with others, it appears to be among the possibilities that the lacking stimulus is to be found in connexion with the sexual elements themselves—some ferment, may be, such as we assume to exist in those lately recognised internal secretions the potency and influence of which in respect to nutritive processes we are but just gaining a glimpse of. An analogue for my suggestion is perhaps to be found in the case of the thyroid and thymus glands which exercise a profound control over tissue nutrition and even over growth itself. So may it be with the reproductive organs and their products. Exhausted by their efforts to perpetuate the individual, they no longer liberate that stimulus (call it provisionally ferment, internal secretion, or what you will till more precise knowledge defines it) which is needful for the maintenance of the nutritive processes of maturity, and for lack of which the individual deteriorates and dies. May it be that there is a real truth embodied in the experiments of Brown-Séquard, however incomplete they have hitherto been in results?

Based on some such considerations as these I have put forward must be, I take it, the full comprehension of the nature of death as we are in the habit of witnessing it at the bedside. We speak of cardiac failure, of fatal intoxication, whether from within or without, of arrested nerve influence and the like, but the real meaning of such phrases, imperfect as they are and often quite inadequate to explain why death should have happened, must be somewhere in the region I have now been groping in. Moreover, the very foundations of prognosis, if not of treatment, so far as this may attempt to modify nutritive processes by drugs or other reagents, must be built upon an understanding of the intimate nature of life and the inherent causes of its failure and cessation.

A NOTE ON SURGEON-LIEUTENANT-COLONEL LAWRIE'S ADDRESS ON THE CAUSE OF MALARIA.

BY GEORGE THIN, M.D. ST. AND.

IF, as I believe, the man who stimulates interest in a new subject is a public benefactor, Surgeon-Lieutenant-Colonel Lawrie deserves the title. Amongst the many in whom such interest is excited there is almost the certainty that some few individuals will be induced to apply themselves to its study, and there is thus a great likelihood of fresh knowledge being obtained. The celebrated telegrams to the *Times* intimated to the whole world that Surgeon-Lieutenant-Colonel Lawrie was engaged in the study of malaria, and thousands of readers for the first time learnt from these telegrams that the Italian physicians believed that malaria

[4] For the discussion of various theories on the intimate nature of death see La Structure du Protoplasme et les Théories sur l'Hérédité par Professor Delage, 1895.

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was caused by a parasite, and by reading them many medical men doubtless learnt for the first time that there might legitimately be two sides to this question. If I judge by my own experience, Surgeon-Lieutenant-Colonel Lawrie's lecture at Bombay, reported in the *Times of India*, the *Indian Lancet*, the *British Medical Journal*, and in THE LANCET of May 16th, has fully sustained this interest. As an evidence of this, I may remark that I have received three copies of the *Times of India* from different sources and one of the *Indian Lancet*, and some urgent requests for information as to what it all means. I am not sure that even this would have induced me to solicit the courtesy of the pages of THE LANCET were it not that, although my name is not mentioned in Surgeon-Lieutenant-Colonel Lawrie's lecture, some pungent remarks are made in it which have direct reference to a publication for which I am responsible; and I do not consider that I should be doing either myself or Surgeon-Lieutenant-Colonel Lawrie justice if I were to pass over his criticisms without remark. The reading of a paper on the Parasite of Malaria by Dr. Marshall of Rio Tinto and myself at a meeting of the Royal Medical and Chirurgical Society was used by the Council as an introduction to a discussion on the whole subject, and I undertook the duty of prefacing the reading of the paper by a short exposition of the views at present held regarding the relation of the parasite to the various forms of malarial fever. To render my remarks more intelligible I used diagrams, copied from the works of the authors whose views I endeavoured to explain, and in order that the readers of THE LANCET and *British Medical Journal* might more easily grasp the meaning of the brief reports of my introductory speech, reduced engravings of the diagrams were printed at the head of the report. Surgeon-Lieutenant-Colonel Lawrie remarks of these engravings that Laveran's bodies (the term by which he designates what we call the parasite) "are not such cells as are depicted in the pictures of THE LANCET and *British Medical Journal* of Feb. 15th, 1896. These are not correct representations of Laveran's bodies. Some of them appear to be drawn from the imagination, others, especially the rosette form, are caricatures of vacuoles and crenating or disintegrating blood-cells." Now, will the readers of THE LANCET imagine for a moment what this criticism implies? It signifies either that the person employed to make the drawings for the diagrams misrepresented the bodies he was employed to copy or that Marchiafava and Bignami are not familiar with vacuoles and crenating or disintegrating blood-cells. As a diagram is only intended to represent the leading features of a drawing, mine may not have been exact copies in every detail of the original drawings, but the references to Marchiafava and Bignami's works will show that they are correct in every important particular. If this is conceded, Surgeon-Lieutenant-Colonel Lawrie's statement can only be justified by assuming that Marchiafava, a Professor of Pathology of long and great experience, who has been studying blood for considerably more than a decade, and Bignami, the chief assistant in the Pathological Laboratory of the University of Rome, who has also been engaged for several years in the study of blood, does not know a vacuole in a red blood-cell when he sees it, and cannot recognise a crenating or disintegrating blood-cell. The mere expression of the supposition shows its absurdity. Such mistakes are possible by imperfectly instructed beginnners. Nay, I have even seen them made in illustrations of a paper on malaria (not published in Europe), but errors of this kind could not be put on record in Italy where learned societies know something of the value of the observations for whose publication they are responsible. What I have said ought to be enough to show what weight should be attached to Surgeon-Lieutenant-Colonel Lawrie's criticism, but if it is likely to serve any useful purpose I may be pardoned for observing that all the appearances in the challenged pictures, except the appearances of a sporulating crescent from Grassi and Feletti's work, have been verified by myself, and if any student of the subject who is interested will procure a copy of Dr. Marshall's and my paper he will find it illustrated by a plate which shows not only these phases but many intermediate ones. The drawings answer in the affirmative Surgeon-Lieutenant-Colonel Lawrie's question as to whether the successive stages of the development of each species of parasite shown in the reduced diagrams belong to the same body in different phases of its existence. This paper has just been published in the Transactions of the Royal Medical and Chirurgical Society, the papers in which are now to be had separately at a nominal price, and in this one, which I believe costs a shilling, will be found a coloured plate showing the different developmental stages of four varieties of the parasites of malaria. The successive phases were drawn from nature, their continuous development in a selected patient being in each case chosen for illustration. For Dr. Marshall and myself I absolutely disclaim the imputation of not being able to distinguish vacuoles and crenating or disintegrating blood-cells.

Human nature being what it is, it is impossible for any investigation to engage the attention of various observers without a certain amount of the personal element making itself manifest. Nor is this altogether to be regretted. Rivalry within certain limits whets the desire and capacity to work, and science is the gainer; but these limits are very easily passed, and I am not sure that we are not passing them now in this malaria discussion. I would hardly refer to this element in Surgeon-Lieutenant-Colonel Lawrie's paper if it did not recall a remark that is printed in the report of the discussion in London. As a corresponding impression appears to have been made simultaneously in Bombay, I may explain now that in omitting the names of English and American authors it was not from any disposition on the part of Dr. Marshall and myself to overlook the claims of Anglo-Saxon workers as compared with an undue tendency to overestimate the claims to consideration of the Italian physicians and naturalists whose views we had been quoting. Surgeon-Lieutenant-Colonel Lawrie's remark about the "devoted worshipper of parasites and foreigners," although it is not addressed to us, was probably suggested by our frequent reference to Italian names. I think these expressions are suggested by a mistaken idea. Already the modern literature of malaria has become so extensive that only the authors of bibliographies can be expected to enumerate all the men who have been industriously working at the subject. Those workers who may prove successful in adding a solid contribution to our knowledge will get the credit of their work irrespectively of authors and of nationalities. In quoting an author in my introductory speech, what was in my mind was not his nationality but what he had done. Now what are the great things that have been done in connexion with the malarial parasite? When speaking of the discovery of its existence is it possible to avoid mentioning Laveran? When speaking of the discovery of the quartan and tertian parasite as separate species is it possible to be silent over the name of Golgi? When mentioning the virulence of the irregular and pernicious fevers of Southern Italy and many other parts of the world is it possible to pass over the name of Marchiafava, who has shown that the parasite which causes them exists as a distinct variety? When discussing the crescent body, that enigmatical form, how is it possible not to explain the views of Grassi and Feletti? Not even excepting Laveran, whose position is unique, these men may from an insular point of view be spoken of as foreigners, and there are people to whom their names may not seem homely; but whatever their names and whatever their nationality both their names and their nationality are linked indissolubly with the discoveries which they have made. True they are mostly Italians, but we ought to be pleased to acknowledge that after Laveran's discovery all the important work has been done in Italy. How much of our knowledge of malaria would still be wanting in precision if it were not for the experiments by which it was shown that if the blood of a man which contains one species of the parasite is injected into the veins of a healthy man that man will develop malarial fever of the type from which the first man suffers, and that in his blood there will develop the same species of parasite that is contained in the blood used for inoculation. By these experiments the existence of separate species of the parasite of malaria was definitely established, and all these experiments were done in Italy. What is there of the first importance that so far has been done in the other countries of Europe and in America? All that we have done is to verify the work of the Italians and endeavour to find methods by which the clinical observer may more readily discover the existence of the parasite and to speculate as to the directions in which future work may throw light upon the yet unsolved problems. The great question as to how the parasite of malaria gets admission into the human body is yet unsolved and offers an attractive field for investigation to workers in four continents.

The countrymen of John Hunter, Jenner, and Lister can well afford to applaud ungrudgingly the great and laborious work of the Italian physicians, and I hope we shall hear no

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more of comparisons which have nothing better to justify them than the sound of a name or a nationality.

What is the proof of a certain appearance being that of a parasite? Amongst other evidences the chief point is that an organism or organic structure grows and multiplies and reproduces its kind. This can be absolutely proven in regard to what we call the malarial parasite, and what Surgeon-Lieutenant-Colonel Lawrie thinks is a degenerative blood-cell. The proof of this is already abundantly given in the Italian writings, and an excellent *résumé* with original illustrations will be found in Mannaberg's book. A similar proof will be found in the drawings illustrating the paper by Dr. Marshall and myself, and additional evidence will be found in the plate which will shortly be published illustrating my paper on the parasite of the pernicious fever of Sierra Leone in the same volume. The whole cycle of the organism, from the nucleated spore, *not developing within the red corpuscle to begin with*, but coming in contact with it, then entering it, becoming larger, and developing in it separate nucleated spores, is illustrated in these two papers, in complete confirmation of previous descriptions, if confirmation is necessary. Surgeon-Lieutenant-Colonel Lawrie only found some of the stages in the patient whom he showed at Bombay, and the sporulating stage was not seen; but this does not justify the remark that "no evidence has been adduced to support the theory that Laveran's bodies sporulate, or, if they do, that the act of sporulation is periodic." I need not again refer to the Italian writers who have all described and drawn the sporulating parasite, but content myself with stating that I demonstrated under the microscope, at the meeting of the Royal Medical and Chirurgical Society, all the phases of the parasite, from the spore stage to the sporulating stage, and Dr. Pringle, by the use of his beautiful photographs, showed us these stages on the screen with the lantern. I shall be pleased to demonstrate these or similar preparations to anyone who has the praiseworthy curiosity to wish to satisfy himself by actual examination of microscopical preparations. The intra- and extra-corpuscular cells described by Surgeon-Lieutenant-Colonel Lawrie as being found in his patients' blood are, with the crescents, all that is usually to be found in blood taken from the finger of patients affected with the forms of malaria produced by the parasite of irregular fevers discovered by Marchiafava, and of themselves I admit their nature might be well open to discussion. If Surgeon-Lieutenant-Colonel Lawrie has not seen more than he describes in this case or shows in his diagrams I can quite understand his scepticism. But if blood is taken from the spleen in these cases the sporulating stage will be found, and it is another merit of the Italian physicians to have shown this. To satisfy oneself that the malarial parasite is indeed a parasite, having an independent cycle of existence, it is necessary to examine blood from the finger in quartan or tertian ague, or blood from the spleen in the fevers caused by hæmamœba præcox, the parasite of the summer-autumn fevers of Rome. In some cases these can hardly be found even in the spleen, and I have verified by post-mortem examination that the brain may contain numbers of parasites and the spleen and peripheral circulation be almost entirely free from them. The localisation in irregular fevers of the pernicious parasite in special organs and its rarity, or even absence, in the peripheral circulation is a reason why examinations of blood taken from the finger in fevers in India and elsewhere so often show no parasites. I have satisfied myself that it is often very difficult in Indian fevers to find a parasite in the blood from the finger, although the pigment-laden white corpuscles often show clearly the nature of the case, and are a proof that the parasite is propagating itself in the blood in some internal organ.

The first studies of the malarial parasite should be made on quartan and tertian fevers, in which all the phases can be found in the finger blood. In the irregular fevers common in India the knowledge that can be acquired from the blood from the finger is often very incomplete.

Fortunately for my present purpose it is unnecessary to follow Surgeon-Lieutenant-Colonel Lawrie in his statements regarding the formation of the formed elements of the blood. The fact that he observes a swarming movement in the white corpuscles of the frog similar to the swarming movement of pigment granules of the malarial parasite proves nothing either for or against his views. It shows the liability of very minute inert bodies to oscillate in a fluid medium. There are two kinds of movement of the minute pigment granules to be observed in the parasite. There is the active oscillation which is due to physical causes, and which is similar to a movement of minute granules often seen in leucocytes, quite different from any protoplasmic movement associated with life. There is another kind of movement of pigment in the living malarial parasite in which the granules follow each other in fixed directions, evidently indicating streams in the protoplasm, and of a totally different character from the oscillatory movement with which we are all familar, and which, I may safely say, has never been observed by Surgeon-Lieutenant-Colonel Lawrie in the white corpuscles of the frog.

Histologists are all familiar with the clear spaces seen in the fine meshwork of the protoplasm of a white corpuscle when it is examined by a high power, which Surgeon-Lieutenant-Colonel Lawrie appears to consider to be cellular in their nature. They are found in the protoplasma of amœbæ, and that they are not young cells can be shown by the fact that they contain no nuclear elements. In stained preparations it would be impossible to confound them with a sporulating parasite, in which, when the staining is properly done, each spore is seen to contain a well-marked nuclear body. (For the technique best adapted for this demonstration I refer to my paper in THE LANCET of July 6th, 1895.)

I am far from wishing to prejudice the value of Surgeon-Lieutenant-Colonel Lawrie's investigations into the development of the blood, but it cannot be estimated correctly until he gives us a more detailed description of the objects he describes than is to be found in his address, and until they are fully illustrated by coloured representations drawn to scale. As this is a field of study in which much remains to be done it is to be hoped that Surgeon-Lieutenant-Colonel Lawrie will continue the studies that he has begun with so much zeal and energy, and eventually present the results which he obtains in a form in which they can be appreciated by physiologists. His views on this subject, however, whether they are right or wrong, have no real bearing on the question of the existence of the parasite of malaria. The most characteristic form in which we see this parasite—the sporulating body—has apparently not been seen by him, and of course we cannot expect him to trace for us its development from a white corpuscle. Even the forms which he has seen he has not traced in any form of development from a white corpuscle, and only infers their genetic relation from the trifling and unimportant fact that both bodies contain minute granules in active movement. The repeated demonstrations of the development by multiplication inside the red blood cells of the young amœbæ to the formation of from eight to twenty spores, according to the species of parasite, is only got over by an unhappy attempt to throw doubt on the power to observe and to describe of a great number of highly-trained histologists and pathologists. The existence of the parasite of malaria rests on the same kind of evidence and on as good evidence as the belief that cancer is caused by an abnormal epithelial growth. The latter doctrine must have been accepted at one time by thousands of medical men, who, although they never saw a section of cancerous tissue, wisely gave their confidence to observers whom they knew to be competent. Surgeon-Lieutenant-Colonel Lawrie in his address has given no reason why a similar amount of confidence should not be given to the competency and honesty of the scores of highly-trained men in Europe and America who have described the complete development or cycle of the parasite of malaria.

It is with pleasure that I refer to Surgeon-Lieutenant-Colonel Lawrie's valuable experimental work when he injected malarial blood into dogs and monkeys. He found that this did not lead to a multiplication of Laveran's bodies, which is valuable confirmation of previous work done in the same direction.

Before closing these remarks I should like to be permitted to say something regarding what may be expected from India in relation to these studies. I do not see that we had any reason to expect much more to have been done than has been done already. Doubtless there are many medical men in India and much malaria, but there are many medical men in England and much phthisis, yet how few of them have contributed anything important to our knowledge of tuberculosis and the tubercle bacillus. I have worked at both these subjects, and it may be of some use if I say that the parasite of malaria is a much more difficult subject of study than the tubercle bacillus. I do not think anyone will add much to our knowledge of the parasite of malaria who is not a trained pathologist and has had long experience in the study of blood, whose routine duties do not leave him time for original work, as well as the opportunity of examining

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patients, and who is not skilled in the use of very high powers of the microscope. These form a combination of qualities which will never be found largely represented in the members of the medical profession in any country. I believe the best thing that could be done in the present circumstances would be to send a selection of the young men chosen for the Indian Medical Service for six months to Rome or Catania, where they would not only get plenty of cases for continuous study, but would have the assistance of teachers trained in general pathology as well as specially expert as regards the parasite of malaria. Better still, perhaps, would be three months at Catania and three months at Rome, the best season at each being chosen. These men when sent to India could be specially attached to the medical schools of the large cities, charged with the duty of investigating the whole subject of malaria and of teaching the *technique* required by practitioners for diagnostic purposes. If a measure of this kind were carried through there is every reason to believe that India would in time contribute its quota to the furthering our knowledge of the disease in which, of all others, it has the greatest interest.

Queen Anne-street, W.

THE VACCINATION LAWS.

By JOHN C. McVAIL, M.D., D.P.H.,
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JENNER performed his first vaccination on May 14th, 1796. The centenary of this event has been the subject of national celebration at St. Petersburg. In Berlin, the capital of a country in which vaccination and revaccination are practically universal and small-pox practically non-existent, Virchow and Koch and Von Bergmann and other men of world-wide reputation have held a great gathering in honour of a "benefactor of the universe." In Jenner's own country the circumstances are different. A Royal Commission on Vaccination has been in existence for nearly seven years and has not yet reported, the delay, it may safely be assumed, being due to the determination of the Commissioners to do their work thoroughly when they are at it. Compulsory vaccination in England has, however, in the meantime become a matter of local option, and in an increasing number of places the option, as expressed in the election of boards of guardians, is taking the form of non-compulsion. The growing neglect of vaccination in England is roughly indicated by the returns published annually by the Medical Department of the Local Government Board. The percentage of cases "not accounted for"—that is, infants who have neither been vaccinated nor died—was in 1872 8·8 in London and 4·5 in the rest of England. For London low-water mark was reached in 1881, when only 5 7 per cent. were not accounted for. For the rest of England the lowest year was 1875, when the percentage not accounted for was only 3 8. By 1888 the London and "rest of England" percentages had reached 10 3 and 8·2 per cent. respectively, and by 1891 (the latest year for which the data are available) the default had mounted to 16·4 and 12·9 per cent. respectively. No doubt for more recent years the results are still less satisfactory. These high figures are due mainly to neglect of vaccination in particular localities. In many places there is practically no omission to vaccinate, and such percentages as 0·0, 0·1, and 0 4 are not unknown. But in Gloucester the "not accounted for" were in 1891 no less than 84 per cent. of the total, in Keighley 83, in Leicester and Northampton 80, in Oldham 78, in Luton 77, in Kettering 75, and so on. In the metropolitan districts the worst figures are for Mile-end Old Town, 50 per cent.; for Hackney, 40; Bethnal Green, 38; Poplar, Greenwich, and Stepney, 19; and Paddington, Camberwell, and Westminster, 17. It is not my present purpose to discuss the value of vaccination and revaccination. I believe that vaccination is of essential importance as a preventive of small-pox, and that perhaps no greater physical boon than the Jennerian prophylactic has ever been conferred on humanity. It is from this standpoint that the question of the vaccination laws is here viewed.

These laws are at present utterly unsatisfactory. Though called compulsory they do not compel. At the most they offer a choice between submission to vaccination on the one hand and payment of a money penalty on the other. The enforcement of this choice is in the hands of boards of guardians, whose practice is anything but uniform. While one board insists on prosecutions and fines repeated regarding the same unvaccinated child so long and so often as a fixed age limit permits, an adjoining board may be satisfied with a single prosecution, and yet another may absolutely decline to take any action, while every election of guardians may suddenly reverse whatever custom has previously prevailed in the district. Elections *ad hoc* with all their recognised disadvantages are not infrequent. It thus results that the option to refuse vaccination without prosecution or penalty is not that of the individual, but that of the electoral division in which he resides, while if there is to be any option at all it obviously ought to be personal and not collective. Nor in districts where penalties are inflicted is the choice given between submission and penalty naturally a fair one, as the maximum fine, while bearing heavily on the agricultural labourer, is a trifle in the case of the well-to-do. Cheap martyrdom has temptations for many minds, and the vaccination laws present the opportunity for the desired notoriety. The fine imposed, however trifling, is not paid, imprisonment follows, and the subsequent release is celebrated by music from the local brass band, a demonstration, stump speeches, and a presentation. Carried away by the influence of what Carlyle, speaking Teutonically, calls "swarmery," such scenes result in the wholesale manufacture of anti-vaccination sentiment.

Another defect in the present law is that it says nothing whatever as to the thoroughness of the vaccinal operation. No fact in medical science is better attested than that the amount of protection depends largely on the sufficiency of the protective procedure. Every small-pox hospital bears witness to this, and the evidence applies to every period of life. In illustration it may be recalled that Dr. Gayton, who treated over 10,000 cases of small-pox in the metropolitan hospitals, found that in patients under fifteen years of age 706 who had "good marks" of vaccination had only 7 deaths among them, or less than 1 per cent.; while 2192 who had "bad marks," or though alleged to be vaccinated showed no marks at all, had 209 deaths among them, or over 9 per cent. Among 1504 cases admittedly unvaccinated at the same ages the deaths were 639, or 42 per cent. The amended law should provide that whoever is vaccinated should be sufficiently vaccinated. No mere sham vaccination ought to be any longer possible to swell the ranks of those who, though registered as protected, are ready to succumb to the first approach of small-pox infection.

In addition to being both irritating and inefficient the law is utterly illogical. In 1853, when the first compulsory Act was passed, the need for revaccination was not sufficiently known. The recognition of its necessity has, indeed largely grown from the experience of the protective results of infantile vaccination following on the operation of the law of that year. Primary vaccination had previously been performed at any age, but in 1853 the systematic protection of infants was begun, and we now have learned that that protection cannot be relied on to last in full amount throughout the whole of life. And here it may be desirable to note shortly what are the teachings of experience regarding the amount and duration of vaccinal protection. Loss of protection due to a first vaccination varies with varying circumstances. If the operation be performed in infancy then its influence appears to be gradually weakened or diluted by the growth and development of the tissues and increase in bulk of the body. If it be performed later in life, when development is approaching completion or is already complete, its influence is much more lasting. If, therefore, revaccination be desirable, say, at ten years of age, it does not follow that a third and fourth vaccination should be done at twenty and thirty years of age, and so on. In Germany since 1874 vaccination has been compulsory both on males and females in infancy and again at eleven or twelve years of age. On healthy males a third vaccination is performed when they enter the army, but no evidence has yet been produced of excessive prevalence of small-pox among the female population of Germany through their want of a third vaccination. All the same, circumstances may arise—such as exposure to the infection of epidemic small-pox in a given population—rendering a third vaccination a wise precaution in adult life, if the second vaccination has been done a very long time previously. But the mention of ten to twelve years of age as the proper time for a second

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vaccination is apt to mislead. It is not to be assumed that the influence of infantile vaccination has disappeared by that age. The diminution of protective power is graduated both as to quality and time. The first manifestation of the drift towards small-pox consists in a return of susceptibility to the local effect of vaccination. Immediately after the completion of the vaccinal process there is no reaction to the insertion of vaccine virus. But by-and-bye a successful local vaccination becomes possible, so that it was found in Bordeaux that attempts to revaccinate at six years of age were in 40 out of every 100 children successful in producing the vaccine vesicle. This does not mean that these children were susceptible to infection of small-pox in the ordinary way. In the Sheffield epidemic of 1887 in houses actually invaded by small-pox, and where the activity of the small-pox poison was manifested by the fact that about 90 per cent. of unvaccinated inmates were seized by the disease, it was found that among the vaccinated inmates of the same houses the attacks between ten and fifteen years of age were not 98 per cent., as in the unvaccinated inmates at that age, but only 25 per cent.; and between five and ten years of age not 92 per cent., as in the unvaccinated at that age, but less than 10 per cent. Thus susceptibility of the vaccinated to attack by small-pox returns at a later age than does susceptibility to the local effects of the vaccinal operation. But this is not all, for resistance of the vaccinated to *death* by small-pox outlasts very considerably resistance to *attack* by small-pox. At Sheffield under twenty years of age the percentage of deaths to attacks among the vaccinated ranged from 0·8 to 2·2; between twenty and thirty years the percentage was 5·4; and it was only over thirty years that the deaths reached 10·6 per cent. of the attacks. Yet such percentages both of attacks and deaths furnish abundant evidence of the need for revaccination. The liability of 25 per cent. of persons over ten years of age to be attacked, and the further liability of a small fraction of this 25 per cent. to die from small-pox, make the age of from ten to twelve years a proper time during which to renew the protection. I repeat, therefore, that the present law is utterly illogical in so far as it takes no cognisance of the need for revaccination. The protection of adults is as important as the protection of children, and whatever degree of insistence should be maintained in respect of infantile vaccination should also be maintained in respect of revaccination.

What degree of insistence ought to be maintained? That, no doubt, is one of the principal questions, if not the principal question, before the Royal Commission. The object of the Legislature should be to get as many persons as possible as well vaccinated as possible. That object, however, should be carried out in accordance with the spirit which governs present-day legislation in England. Russian methods are not for these realms, and the ways of the twentieth century will not be those of the tenth. There is even a difference since 1853, when the first obligatory enactment was passed. In this connexion due weight, but not more than due weight, must be given to the existing opposition to vaccination in many parts of the country. As regards compulsory vaccinal legislation, it is beside the point to argue that the anti-vaccination movement is carried on mainly by cranks, and that the public is simply being gulled by their persistent misrepresentations and mis-statements. All that, and much more, may easily be granted without altering the hard fact that a very appreciable number of people have been misled into doubting or denying the value of vaccination, and into the fear that vaccination may cause all kinds of unknown evils to their children. A still larger number of persons, while not themselves objecting to vaccination, object to the prosecution and penalising of their neighbours who have "conscientious objections" to the operation. In quite a number of localities, as has already been indicated, the law is at present a dead letter, and in at least a few of these it is probable that it could not be generally brought into operation again excepting by forcibly taking the child from the mother's arms and vaccinating the child in spite of her protests. It goes without saying that this course is repugnant to all present-day notions, and is in itself altogether objectionable.

The law, therefore, must allow some degree of option. How little and how much? *In limine*, a clear distinction must be drawn between the conscientious objector and the parent who is merely indifferent. The former, utterly wrong though he be, must have his scruples yielded to. On his behalf, and in the best interests of vaccination itself, I would abolish, not only imprisonment for unpaid fines, not only repeated prosecutions and penalties, but all prosecutions and penalties whatsoever directed against any man for refusal to allow vaccination of those for whom he is responsible. But what is to become of the protection of children whose parents are merely indifferent, to whom the whole question is the trouble, first of making up their minds to do a particular thing on a particular day and then of carrying out their intention so formed? For them, and also incidentally for the conscientious objector, the inconvenience attending on refusal of vaccination must be made at least as great as the inconvenience of going to the station for vaccination and a week later going a second time to have the vaccinated arm inspected. A national register of the unvaccinated should be established, and in order to get a name entered in this register the parent or guardian should have to go personally to a magistrate and make a sworn affidavit of his conscientious objection to vaccination. Having got a certificate from the magistrate he should then have to go personally to the registrar's office to have the necessary entry made there. No doubt the whole procedure could be made so elaborate as to be no less troublesome than that involved in the vaccination itself. It may be suggested here that a registration fee should also have to be paid, but this might be looked on as a fine, and my own view is that money fines for "conscientious objection" should be abolished.

Several advantages would belong to some such system as this: (*a*) It would be possible to enact that if vaccination were to be done at all it would have to be sufficiently done. There would be no hardship in insisting on a given number of insertions or of a given area of insertion when every parent would have the right of declining vaccination altogether. (*b*) The result would be that those who were themselves thoroughly protected would have no cause for fear from small-pox among the unvaccinated. At present there is in the presence of small-pox constant anxiety as to the risks of children who have been only imperfectly and insufficiently vaccinated. (*c*) The different behaviour of small-pox as between the vaccinated and the unvaccinated would, as a consequence of the increased efficiency of the vaccinations and of the registration of the unvaccinated, be demonstrated even more clearly than at present, and statistics on a national scale would soon be available for the consideration of conscientious objectors whose judgment might be capable of being influenced by facts. (*d*) The supply of martyrs in the cause of anti-vaccination would cease. No satisfactory amount of local indignation and enthusiasm could be got up for a parent whose worst hardship would consist in the infliction of a fine for his refusal to call on a magistrate and a registrar to get his conscientious objections recorded. I do not suggest that all the leaders of the agitation would be either satisfied or silenced; but the opposition to vaccination, fanned as it is by tales of martyrdom and by the whole system of prosecutions and penalties for non-vaccination, would largely die out in spite of all efforts to maintain it. (*e*) But another consideration, much more important than any of these, remains to be adduced. Compulsion being abolished, the above-described alternative of vaccination, or registration of non-vaccination, could and should be made universally applicable, not only to infants, but also at ten or twelve years of age. In this way a national system of revaccination would be established on exactly the same lines as the proposed system of infantile vaccination. Whether an infant had been originally vaccinated or registered as unvaccinated, the law ought again to come into operation on the child reaching the age of, say, twelve years. If the child had been primarily vaccinated the option would now be between revaccination on the one hand and registration of conscientious objection to revaccination on the other. If the child had been originally registered as unvaccinated the parent or guardian would now require to make the choice between primary vaccination of the child of twelve and renewed registration of conscientious objection. The ultimate effect of this renewed offer would be to add immensely to the total amount of vaccinal protection in this country, and I am inclined to believe that the gain in revaccination would more than atone for any diminution in primary vaccination which might be a first effect of alteration of the present law. However that may be, the new law would at least be logical in recognising the fact that revaccination is a necessity in addition to primary vaccination. At present there are hundreds of thousands of persons in this country who have a "pious opinion" that revaccination is an essential precaution

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against small-pox. But the precaution is delayed indefinitely owing to its never being brought before them as a duty requiring immediate performance. Under the system as here set forth this off-putting would come to an end. One administrative difficulty suggests itself as to this scheme—namely, the ascertaining of the exact time of each child's reaching the age for revaccination. How this is done in Germany I do not know, but with the aid of school boards and of the census (which, by the way, ought to be quinquennial and not decennial) there should be no insuperable obstacle. There is yet another set of circumstances in which the law should again interfere to obtain, with regard to unvaccinated and unrevaccinated persons, either a declaration of conscientious objection or submission to the protective operation. When small-pox threatens to become epidemic in any community the Local Government Board should have power to issue an order bringing into force this provision of the suggested Vaccination Act, and it is certain that great benefit would result. In any large city where agitation against vaccination has been active and effective, at any given date there might be found even under the new law a large number of children who had been registered as unvaccinated, and a large number of persons over twelve years old who had been registered as unrevaccinated. It may be urged that in the case of a local epidemic of small-pox even under the new law there should be a resort to penalties for non-vaccination, and that here at least it would be the bounden duty of the State to compel the operation. That is a view from which, on the whole, I would dissent. Having once adopted the principle that there should be no money penalties for non-vaccination the principle should be adhered to. But the fact is that in the presence of actual small-pox "conscientious objections" are apt to be set aside, and many parents would not care to take the responsibility of again refusing on behalf of their offspring the proffered protection. With regard to such persons it is easy to say, "Serve them right; let them get the small-pox"; but the object of the State must be to afford protection wherever it will be accepted, even to those who, in the absence of the bane, have declared their disbelief in the antidote. And always it has to keep in view that the main sufferers from anti-vaccination are the little children, the helpless victims of the wrong-headedness of their parents. In a stricken community the offer of vaccination would not of course be withheld even from adults who already, both in infancy and at twelve years of age, had undergone the operation.

In revising the vaccination laws it is important that everything possible should be done to allay fears as to possible evil consequences from the operation. In England the total number of births in any year is about 900,000 and the number of deaths from all causes under one year old is about 140 for every 1000 births, or, in other words, of 1000 children born only 860 reach one year of age. The mortality is greatest of all in the first months of life. The age fixed by law for vaccination in England is under three months, and as the vaccinal process, dating from the operation to the fall of the crust, occupies about three weeks, it is obvious that a considerable number of deaths from ordinary infantile ailments must occur "under vaccination," and it may be assumed that, at least in places where there is an organised opposition, in the case of many of these deaths vaccination has to act as the scapegoat. That will be the case to some extent no matter at what age the operation is performed, but there is no reasonable doubt that vaccination would be less blamed if the operation were deferred until death had done its work among the weakly and ailing under one year of age. Among the survivors most of the cases of skin eruption due to dentition would by that time have developed themselves, so that here, too, the *post hoc propter hoc* argument of vaccinal origin of such cases would not be available. In Scotland the vaccination age is six months, not three months, as in England, and there certainly is much less opposition to vaccination in the northern kingdom, though to what extent the age question is a factor here it is difficult to say. Anyhow, there is a sentimental objection to operating on babies a few weeks old, and I am of opinion that vaccination should not be insisted on until the child is about to complete its first year. In presence of small-pox, however, the Local Government Board should have power to issue in any locality an order fixing the compulsory age at three months or six months. In Germany the operation has to be done during the first calendar year following the birth of the child. Thus a child born any time between Jan. 1st and Dec. 31st, 1896, must be vaccinated some time between Jan. 1st and Dec. 31st, 1897, so that the average age is probably a little under eighteen months.

While there is nothing of any importance that human beings can do which is absolutely without risk of some sort, vaccination is yet an exceedingly safe proceeding. Taking all the death registrations in which it is mentioned as having any part in the matter (and in many of such cases it is a mere incident), there are not much more than one-twentieth of the deaths set down to it that are set down to the suffocation of children by bedclothes. Nevertheless, as a result mainly of an active propaganda, vaccination has in some districts to bear the blame of many of the ailments which befall children in the course of their ordinary upbringing. There is in the minds of some people an impression that "humanised" lymph is apt to convey all kinds of diseases from the vaccinifer to the vaccinee. Among medical men no such fear prevails, and in their own families they no not hesitate to use lymph taken from a healthy child. But there is no reason why consideration should be refused even to this ill-founded fear. In calf-lymph we have an inoculative material at least equally safe (theoretically even safer) and not necessarily less convenient. On the Continent (where probably arm-to-arm vaccination was not performed with the same care and caution as in this country) calf lymph is now almost universally used. It is quite free from one particular risk, which though almost infinitely unlikely of realisation is yet most serious when realised. In one respect calf lymph possesses a great advantage over arm-to-arm lymph; in emergency it is capable of indefinite multiplication, so that material for the vaccination of a whole city can be prepared within a very short time by the simple expedient of vaccinating from one or two calves as many more calves as may be required for the purpose. With humanised lymph this is impossible, as the whole stock obtainable on any one day from the largest vaccination station in the kingdom would suffice for only a very limited number of fresh operations. In an epidemic, moreover, many of the vaccinees are adults and these should never be used as vaccinifers. When this question of the substitution of calf lymph for humanised lymph was first raised in England it was objected that a considerable proportion of the insertions of calf lymph would fail in producing proper vaccine vesicles—that the insertion-success would not be so great as in arm-to-arm vaccination. So far as calf lymph is concerned this fear has been found groundless. An experienced vaccinator can produce good vesicles up to within a fraction per cent. of his insertions. With stored calf lymph, however, the success is probably not so great. On the other hand, it is urged in favour of preserved calf lymph that the glycerin with which it is commonly mixed has the effect of destroying extraneous infection, such as that of erysipelas, which is about the only genuine risk that ever really does accompany vaccination, and, rare as is serious vaccinal erysipelas, it is yet very important that so far as may be it should be avoided. The point is one on which I do not venture to express an opinion, but no doubt the comparative merits of fresh calf lymph and stored calf lymph will be considered by the Royal Commission. In France fresh calf lymph is used, and it is held there that careful antiseptic precautions have left no fear or risk of erysipelas. If this be so then probably fresh lymph ought to be selected. In the French vaccination system the vaccinator proceeds from village to village, previous public intimation having been given of his itinerary. The calf to be used is conveyed in a specially constructed vehicle and the lymph is applied directly from calf to arm.

By what machinery could such a scheme of national vaccination as is here advocated be carried out? At present in Scotland, unless for certain exceptions in some of the largest cities, every medical man vaccinates the children within his own practice, and as a family medical man is selected on account of the confidence which is felt in his skill there is much less tendency to rush to *post hoc* conclusions than in England, where from one-half to two-thirds of the vaccinations are done by public vaccinators specially appointed. Yet if calf lymph were to be generally adopted it would be a matter of practical necessity that in any calf-to-arm system the work should be done by medical men specially appointed and even confined to vaccination duty. At present in England the local authority in charge of public vaccination and public vaccinators is the board of guardians. This is an anomaly which ought to be remedied. Vaccination is a public health provision and ought to be

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under the charge of a public health board. When small-pox prevails it is absurd that the authority which has charge of hospital arrangements, disinfection, &c., should have to go hat in hand to the Poor-law guardians with regard to increase of facilities for vaccination, especially as the two bodies do not always see eye to eye on so essential a preventive measure. But as to the authority which ought to supply the calf lymph I am not quite so clear. It is out of the question that every public health department, urban and rural, should maintain a calf lymph establishment of its own. The duty ought to be entrusted to the Local Government Board or to the county councils, and the experience of foreign countries will be available to the Commission in deciding which course would be the more efficacious and the more economical. Personally, I would be inclined to place the responsibility as high up as possible—with the Whitehall Board rather than with county councils; but it is conceivable that there might be practical difficulties with regard to the transportation to remote districts of vaccinated calves. English counties are of such diverse areas and population that they do not strike one as suitable administrative units for such a purpose. No doubt combination of counties could be made, but joint boards are not free from objection, and the whole country might as easily be divided into large districts for central administration as grouped into counties for joint county government. Even under the latter arrangement there would have to be supervision from Whitehall, and I see no sufficient reason why Whitehall should not take charge of the whole business. The question, however, is for consideration by the Commission, which has at its disposal all available sources of information.

Such is the general scheme of legislation which seems to me best suited to meet the circumstances of the present time in this country. It would do away with all the irritation and ill-feeling consequent on prosecutions and fines, single or repeated, for neglect of vaccination; it would provide in the case of those who have conscientious objections a national register of the unvaccinated; it would at the same time be designed to prevent non-vaccination as a result of mere parental indifference; it would offer calf lymph to all who might choose to have it; it would (subject to the option of the register) provide for revaccination at twelve years of age and also in presence of epidemics in particular communities; it would insist that vaccination when done at all should be efficiently done; and it would postpone to twelve months the age at which primary vaccination should be formally demanded. Against this scheme it may be urged that its first and immediate effect might be to produce a diminution in the amount of infantile vaccination. This would be easier to urge than to establish, for it is to be kept in view that in many places at present where boards of guardians take no action no definite pressure is brought to bear on the merely indifferent. It is not to be supposed that in Gloucester, Keighley, Leicester, Northampton, &c., 80 per cent. of the population are conscientious objectors, and great part of the neglect is no doubt due to sheer carelessness or to the fashion of the locality. Possibly, however, taking the country as a whole, the fear might be realised that there would be, as a first result of the new law, some diminution in the amount of infantile vaccination with, as a result, recrudescence of small-pox and loss of lives which vaccination would have saved—lives mainly of helpless children suffering death for the folly of their parents. But the fact must be faced that even at present, material is accumulating for a small-pox epidemic and it almost looks as if the death toll were already beginning to be exacted. The further fact must be faced that owing to a combination of causes which have been already indicated there has been arising in this country a considerable amount of prejudice against the present vaccination laws. There is a deliverance of Burke which has been already quoted by a foremost opponent of vaccination and which will bear requotation here: "It would be dreadful indeed if there were any power in the nation capable of resisting its unanimous desire or even the desire of any very great and decided majority of the people. The people may be deceived in their choice of an object; but I can scarcely conceive any choice they can make to be so very mischievous as the existence of any force capable of resisting it." It is hard to say exactly where Burke would have drawn the line in regard to the present question. Where does the duty of the State end to enforce on children what it believes to be an important sanitary measure, and where does the right of the parent with conscientious objections begin, to refuse to submit his child to what he supposes may be a very dangerous proceeding? We have had compulsory education since Burke's day, and I do not for a moment believe that the majority of the people are opposed to vaccination, but I do believe that the opposition has become so considerable that it would be unwise to attempt universal enforcement of vaccination. If it is too much to hope that the operation of the scheme sketched in this article would not diminish infantile vaccination (and even that hope I would not care to abandon until the scheme had been tried), it is at least a reasonable expectation that revaccination would be much more largely resorted to than heretofore, and that loss of child life might in the national economy be compensated for by saving of adult life. And though it is a hard thing to say, the prevalence of small-pox in the young would have this beneficial effect, that it would educate the parents of this generation into an acquaintance with, and a horror of, small-pox which are almost unknown nowadays owing to the very success of the Jennerian prophylaxis. The ultimate result might therefore be that vaccination would once more become almost universal and that revaccination would obtain a prevalence which it never has yet possessed in these realms.

Perhaps, before closing this article, I should refer to a proposal which is coming to be more and more mentioned in connexion with the prevention of small-pox—namely, compulsory hospital isolation. Let it be observed, in the first place, that this, though it would be a most useful adjunct to any incomplete and partial system of national vaccination, could never become a substitute for vaccination. Even putting aside the known fact that small-pox hospitals have often themselves proved centres of infection to surrounding unprotected populations, it is obvious that such a hospital requires a staff of attendants, and that these, if not themselves protected, would fall victims to infection, and that they in their turn would require another staff of attendants, and so on indefinitely; but if it be urged that in the absence of vaccination there would be no lack of surviving small-pox-protected nurses, I have no word to say in reply; of patients, at any rate, there certainly would by-and-bye be a superabundance. Let it be observed, in the second place, that the compulsion of universal hospital isolation would soon raise up against it the same outcry that has accompanied compulsory vaccination. Already, as the results of attempts at this method of prevention in ill-vaccinated neighbourhoods, we read of the burning down or other destructive injury by infuriated mobs of two intended small-pox hospitals in the West of England. And if the system of compulsory isolation which is at present only tentatively resorted to were formally established by law it would have directed against it all the artillery of anti-compulsion. Already some of the leaders of the anti-vaccination movement do not hesitate to state that their opposition to the one scheme would be as active as to the other. If, then, it be suggested that optional removal to hospital should be followed as a system of small-pox prevention, where do we land ourselves? Supposing that ninety go to hospital and ten stay at home, the ten will soon be surrounded by ninety more, and the ninety by nine hundred, and so on indefinitely. There would be no protection for anybody, while optional vaccination has at least the advantage that it protects those who choose to accept protection. The wise in the community must, therefore, in the meantime be satisfied with thorough protection of themselves and their offspring, and with doing their best to teach the truth about vaccination to their deluded neighbours, at the same time that the Legislature continues to bring to bear on the population at large such pressure as shall be most likely to produce, with regard both to vaccination and revaccination, a maximum of result with a minimum of friction. This is not a heroic remedy. Perhaps it is mere opportunism; but I believe that in the end it will most nearly fulfil the desideratum with which I set out, that in this country there should be as many people as possible as well vaccinated as possible.

EAST LONDON CHILDREN'S HOSPITAL.—The anniversary dinner of the East London Hospital for Children was held on May 13th, at the Hôtel Cecil. Mr. John Aird, M.P., presided. Cardinal Vaughan, in proposing the toast of "The Board of Management," said he was specially indebted to this hospital, all his clergy testifying to the great benefits it conferred on their extremely poor people. Donations amounting to £1240 were announced, including 100 guineas from the City Corporation.

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ON AN

INTERESTING ANOMALY OF THE OCULAR MUSCLES: A CLINICAL STUDY.[1]

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THE case forming the basis of this communication is a marked example of a class not really very rare in its less pronounced forms, which has not hitherto received much attention from ophthalmic surgeons generally, although it has been most carefully investigated and described by Dr. G. T. Stevens of New York.[2] I refer to that class of anomaly in which there is a tendency to deviate, or an actual turning of one visual line from the other in a vertical, or in a combined vertical and horizontal direction. It is no part of my purpose to explain Dr. Stevens' papers. They explain themselves in the clearest possible manner. But it may be well, in order to avoid repetition, to refer to his classification of the anomalies of the ocular muscles.

Orthophoria means a tending of the visual lines in the correct direction. Since the terminology is based upon the positions of the visual lines in distant fixation (under which condition they are normally parallel), orthophoria means that the visual lines remain parallel on distant fixation, even though binocular single vision be abolished by screening one eye, or rendered useless by destroying the similarity of the images received by the two retinæ.

Heterophoria means a tending in some other direction. It means that under ordinary conditions, when both eyes are directed to a distant point, the visual lines habitually remain parallel; but that when one eye is screened, or binocular single vision is rendered useless or impossible, the visual lines tend to take up some position other than that of parallelism. Under ordinary conditions parallelism is maintained, but with difficulty. When the conditions of vision cease to be ordinary the visual lines cease to be parallel.

Heterophoria is subdivided into—esophoria, a tending of the visual lines inward; exophoria, a tending of the visual lines outward; and hyperphoria, a tending of one visual line in a direction above the other (right or left hyperphoria).

Strabismus is called heterotropia, which means a turning in some direction other than that of parallelism; but the line between occasional heterotropia on the one hand and heterophoria on the other is not a hard and fast one. Heterotropia is similarly subdivided into esotropia, exotropia, and hypertropia—inward, outward, and vertical strabismus. Deviations or tendencies which are partly lateral and partly vertical are named hyperesotropia, hyperexotropia, and hyperesophoria, hyperexophoria—right or left, as the case may be.

The patient, a man aged thirty years, who consulted me first in November, 1895, complained of defective sight since boyhood, gradually becoming worse; of headache, of inability to read for any length of time, and of some difficulty in seeing at night. On examination ophthalmoscopically there was found to be compound myopic astigmatism which admitted of the following correction: Right – 1·25 D sph.◯— 2 D cyl. axis 175° V = ⅓; left – 4 D sph.◯—1·75 D cyl. axis 35° V = ⅓. The fundus was apparently healthy except for a moderate degree of staphyloma posticum. But before estimating the refraction I had observed the peculiar fact that the right optic disc was unusually high up and the left unusually low down in the direct ophthalmoscopic picture, and had made the provisional diagnosis of vertical error. Following up this clue—1. The patient, an intelligent, observant man, states that when reading his evening paper, if an illustration occur in the text below and to the right of the line which he is reading, that illustration sometimes floats upwards and to the left and becomes superimposed on the print to which his attention is directed, so that he sees the print through the illustration; this statement exactly tallies with the undoubted fact that he reads with the more myopic left eye and allows the right eye to rotate downwards and to the right. 2. If the right eye be covered while the left fixes a spot of light at some distance (in this case barely 5 metres, the width of the consulting-room), this right eye rotates downwards and slightly to the right, readjusting upwards and to the left when the cover is removed, provided that the patient be stimulated to make an effort at fixation. If not so stimulated the eye sometimes remains in its faulty position until some new movement of the eyes is required. If the left eye be covered while the right fixes, this left eye rotates upwards and slightly to the left and readjusts on removing the cover. 3. An actual strabismus, chiefly vertical, can sometimes, but not by any means always, be detected on inspection. The deviation varies according to the distance of the fixation point and the consequent choice of one or other eye for fixing. 4. If, while an effort at binocular distant fixation is made, the ophthalmoscope be quickly slipped in front of one eye it is quite easy to watch the optic disc rotating, the right upwards and the left downwards, to the position of rest. The lateral movement is much less obvious.

Early in the investigation it became apparent, as indicated by the statement about the illustration, that binocular fixation at near points either does not exist or exists only momentarily. There is, however, a question raised by the above-mentioned four points—namely, Does binocular fixation exist at all, even for distance? If it does, is such fixation habitual? If not habitual, is squinting the rule or the exception? The determination of these questions is necessary in order to exactly name the condition with which we are dealing. The diplopia tests lead one to the answer: 1. The room having been darkened except for a single distant spot of light which the patient fixes, a red glass is quickly slipped in front of the right eye and accurate observation of the result requested. The reply is that he notices a red spot (false image) which appears almost instantly to start from the white spot (true image) and moves upwards and to the left. Similarly, with the red glass before the left eye the red spot jumps away downwards and to the right. 2. It is sometimes possible to make the patient conscious of two spots without the aid of the red glass. He then fuses them by an effort which does not seem to continue long, confusion begins, he winks and rubs the eyes, then makes a fresh effort. 3. Using the Maddox rod and tangent scale the following amounts of deviation are ascertainable. The vertical deviation is very great, varying on different days from 7° to 10° (actual deviation, not prism). Similarly, the horizontal deviation varies on different days from 2° to 6° (outwards). The horizontal and vertical deviations vary in the same sense; on one occasion the horizontal was 2·5° and the vertical 7°; on another occasion the maxima were obtained as horizontal 6° and vertical 10°. The readings are equal whichever eye be under observation. In these diplopia tests the wearing of the correcting glasses does not materially affect the amount of error. In the spot tests, since the left eye is myopic 4D, they must be worn in order to properly bring out the diplopia.

The question regarding binocular vision may now be put in the following form: Is it possible that a person whose visual lines in distant fixation tend to deviate from parallelism 10° in the vertical and 6° in the horizontal direction, in whom, further, the mere red colouration of one retinal image is sufficient to abolish binocular single vision, can, as a rule, have such binocular vision? I think, with Dr. Stevens, that such a high vertical error excludes habitual binocular fixation and makes even its occasional accomplishment, as in this case, somewhat paradoxical.

Before stating the conclusions drawn from the ascertained facts it may be interesting in view of treatment to study the muscles involved. It is obvious that here, as contrasted with the comparatively common combination of horizontal and vertical error, where the principal deviation is horizontal the vertical error is the one which chiefly claims attention. Exophoria is a common condition generally known under the titles "insufficiency of the internal recti," "insufficiency of convergence," and "latent divergence," and one is justified in stating as a result of the diplopia tests that such want of equilibration between the convergence muscles and their antagonists, the externi, exists here in combination with a vertical want of balance between opposing groups of still higher degree. In studying the vertical error one may assume, for simplicity's sake, that an actual strabismus exists. The strabismus is concomitant, for the disturbance of equilibrium is shared by

[1] A paper read at a meeting of the Glasgow Medico-Chirurgical Society, January, 1896.

[2] The Anomalies of the Ocular Muscles, Archives of Ophthalmology, 1887, 1888, 1889, 1891.

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both eyes equally. The excess of elevating power relative to the plane of fixation which is due to some mechanical advantage of the elevators of the upward turning left eye over their antagonists is immediately transferable, when a call for fixation is made on the left eye, in an equal degree to the depressors of the right eye. It might be said with equal truth that the excess of depressing power of the depressors of the downward turning right eye is transferred, when the right eye is called upon for fixation, to the elevators of the left eye; but since, as a matter of fact, the left eye is always (save under the exceptional circumstances when the visual lines are parallel) on a higher level than the right, it is convenient to speak of the condition as a left deviation upwards rather than as a right deviation downwards, which would necessitate the use of another prefix "hypo."

Next one comes to the actual muscles involved in the vertical deviation. The left superior rectus and inferior oblique (elevators of the left eye) possess, relatively to their antagonists, a static advantage of some kind over their associates, the right inferior oblique and superior rectus (elevators of the right eye), consequently an equal nerve impulse to both eyes causes a greater result—i.e., greater elevation of the left eye, the right fixing. It might with equal truth be said, when the left eye fixes, that the right inferior rectus and superior oblique (depressors of the right eye) have, relatively to their antagonists, a static advantage over their associates, the left superior oblique and inferior rectus (depressors of the left eye), and that an equal nerve impulse gives a greater result, greater depression of the right eye.

It can now be understood that when the patient succeeds in fixing a distant spot of light binocularly he does so through an extraordinary effort on the part of the less advantageously situated muscles of both eyes—that is to say, while the right superior rectus and inferior oblique oppose an unusual amount of resistance to the right superior oblique and inferior rectus and for a time prevent this eye rolling downwards, at the same time the left inferior rectus and superior oblique oppose an unusual resistance to the left inferior oblique and superior rectus and prevent this eye from rolling upwards. Parallelism is thus maintained until fatigue overtakes the weaker muscles, or the desire for fusion is lessened or destroyed by altering the appearance of the images or occluding one eye.

I may now summarise the case. 1. There is sometimes binocular single vision for distance. At other times, probably more often than not, there is diplopia with mental suppression of one image, but the deviation is not maximal. 2. In near vision there is always diplopia, usually with suppression of one image; but when a conspicuous object casts its image on the deviating macula the two totally dissimilar images may be superposed and cause confusion. 3. The deviation is concomitant. 4. In distant fixation the left eye tends to turn, or actually turns to a greater or less degree, upwards and outwards, while the right eye fixes. 5. In reading and near work the more myopic left eye is preferred and the right deviates. 6. The condition may be called left hyperexotropia, with the proviso that orthotropia (correct turning as contrasted with orthophoria, correct tendency) is possible at times. It is worth remarking that on certain occasions the error is less in degree than on others, the variation being probably due to variations of the nervous system as to fatigue.

Treatment. — There seem to be four courses open in such a case as this: to do nothing, to shade the right eye when reading, to correct with prisms, and to operate. The two first are, of course, unsatisfactory. The third, though apparently feasible, is not really so, because the weight of the necessary prisms, the colour disturbances produced by them, and the increase of deviation likely to follow their use make them quite impracticable. Even comparatively low prisms lent to the patient for trial proved a source of annoyance and seemed to have no beneficial effect. Of the four courses probably by far the best is that introduced systematically by Dr. Stevens—namely, graduated tenotomy of the superior rectus of the upward turning eye. Then in this case when the vertical error had been removed it would have been necessary to consider the question of operation on the lateral muscles. This is the treatment I proposed. It was rejected, however, and the patient is content at present to go through life with two eyes which, when corrected as to refraction, have fair acuity, but are incapable of working harmoniously together.

Glasgow.

THE TOXINE THEORY OF SYPHILIS.

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(*Concluded from p. 1348.*)

IN my last paper I brought my consideration of syphilis in the light of the toxine theory up to the dying away of the first outbreak of secondaries. I arrived at the conclusion that the leucocytes must attain a measure of toleration and so be able to encapsule the invading microbes. There appear now to be three courses open: the cells may sooner or later utterly destroy the microbes and end the disease; they may be unable to restrain them, and recurrent outbreaks occur with the production of larger and deeper lesions, profound anæmia, asthenia, and death; or an intermediate course may be imagined, in which the semi-tolerant cells may prove to be such an unfavourable environment that the microbes will enter the spore state. In the first case the total destruction of the infection will rarely follow the first general outbreak even in the most resistant individuals. Here and there local outbreaks, "reminders," will occur, often to be attributed to local depressing causes, such as friction of a rough vest, shampooing, the growth of other microbes in the mouth or tonsils, irritation of the hands in working people, the irritation of hat-linings or neglect of the scalp. Even in a case under treatment I have seen an acute and extensive ecthyma follow semi-starvation in consequence of the unfortunate man falling out of work. This case opened my eyes to the enormous importance of good food. In this class of case under a proper *régime* the local cells will gradually get the upper hand and the lesions disappear. The occurrence of ring-shaped and serpiginous lesions indicates that a local microbic invasion may occur, starting from a centre and growing over a considerable area of tissue, leaving the local cells so resistant that a second invasion of microbes from a neighbouring centre cannot gain foothold. Ultimately the recurrence of lesions ceases, and there is no reason to doubt that in many cases a total extinction of the infection results. It is to be noted that the cases in which the infection is quickly overcome are just the ones in which re-infection occurs. Toleration is quickly acquired and quickly lost, leaving the organism unprotected.

The next class of case, the worst of which are described as galloping or malignant syphilis, are those in which resistance is feeble from idiosyncrasy or some debilitating circumstance. It is interesting to remember that tuberculous people are very susceptible, when the experiments showing acute reaction of syphilitic lesions to the injection of tuberculin are borne in mind. In these malignant cases the toxine tide in the blood apparently never falls and toleration is never acquired, the secondary foci grow larger and larger, and ulcerations with probably local growth of other microbes and septic absorption follow. The eyes and other organs are invaded, infiltration and sloughing of the palate and other parts, with osteitis, necrosis, nervous lesions, and so on, combine with general toxæmia and lardaceous degeneration to kill the patient.

Early lesions involving the brain are generally due to hæmorrhage or thrombosis consequent on the softening of the coats of small arteries from, I suggest, the growth of foci on and through the walls; the coats consequently become permeated with round cells, which collect also outside and inside the vessel. Here they may occlude the lumen and cause thrombosis, or the softened wall may distend into an aneurysm and ultimately burst. Other foci may be established at the foramina of the skull, at which points of terminal circulation microbes may be expected to have been stranded, and here cause pressure symptoms. The iris may be the seat of lesions, with consequent collections of cells forming the plastic exudation, and adhesions may result. The occurrence of foci in the choroid similarly accounts for the circular patches of exudation followed by organisation and atrophy. In this way I would account for all secondary phenomena, special symptoms being due to the anatomical situation of the foci. The occurrence of alopecia I regard as due to foci growing in the scalp, but the general falling of the hair I suggest is due to general toxæmia, as similar conditions follow acute fevers.

In less acute cases the later secondary lesions may grow larger and deeper here and there. At this stage the toxine

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tide will be fairly low since the local lesions are fewer in number, a corresponding activity of chemotaxic cell infiltration will occur, and consequent overcrowding and disintegration follow. The slow ulceration of rupia will thus result and give an opening to saphrophytic microbes to grow and form absorbable poisonous products. The tongue or the eyes or other regions may be more or less intensely invaded and corresponding lesions produced. The rule seems to be that the fewer the foci the larger the lesion, and the greater the infiltration and tendency to ulceration. Whether the lesions are slight and tend to disappear, or grave and tend to ulcerate, seems to depend on the resisting power of the individual, and this can be increased by treatment and diet or depressed by their absence.

The middle course in which the two forces are evenly balanced can easily be imagined. Here the cells will encapsule the microbes and not be able to destroy their vitality, but will form a sufficiently unfavourable environment to reduce them to the spore state. The tubercle bacillus is also a spore-bearing organism and undergoes this change with caseation. Considering the resemblance between the two toxines and between the granulomatous lesions in the two diseases I see no difficulty in taking this view. It is also the only explanation that can be offered for the occurrence of tertiary lesions, since it seems most unlikely that microbes could remain encapsuled for forty years perhaps, or that if multitudes were so existant that they would not form toxine enough to prevent the patient enjoying perfect health. As spores, however, they would rest inert like particles of pigment in the cells, the production of toxine would cease, and the cells wander away from the foci carrying their burden of spores among the fixed fibrous tissue cells. These would, I imagine, absorb the leucocytes and so receive the spores, or take them up on the death of their original hosts, or these last may become fixed as fibrous tissue cells. In some such way the fixed cells must take up the spores, since it is among them that the tertiary lesions develop. These take the form of gummata or infiltrations, the one tending to disintegrate and the other to organise. In the skin and subcutaneous tissues, where fibrous tissue cells abound and consequently spores would be thickly sown, gummata are the rule, while in the viscera, where the fibrous tissues are more sparse and the blood-supply more free, infiltrations are, perhaps, more common. Gummata, however, are not infrequent and the acuteness of the process must depend, one would think, on the density of the spore infection. These processes, I believe, are identical in essence and strictly analogous to the infiltrations of the primary and secondary lesions.

I suggest that a gumma can form somewhat in this way; some local depression of vitality, often a traumatism, determines the bursting into vitality of one or more spores; these form a colony and form toxine; this toxine as it diffuses depresses the vitality of neighbouring cells, and the spores resting in these awake and form further toxine, this process extending indefinitely in all directions. Chemotaxis naturally following, the focus would become packed with leucocytes, and since again we have a single huge focus the toxine would diffuse freely, and the cells, having lost most of their tolerance, as the possibility of re-infection indicates, would respond as in the case of the primary sore. Hence the induration may again be nearly as dense. At first some attempt at vascularisation, with formation of new vessels, takes place, but later the cells crowding in will be unable to penetrate beyond the vessel walls, the vessels will become blocked with them, and thrombosis be established. The central parts of the gumma will then disintegrate, and an ulcer result presenting the imperfectly fibrosed outer parts of the gumma in the shape of macerated "wash-leather" sloughs. The infiltration of more vascular structures, like the skin or viscera, will occur by a similar process, but since the blood-supply is better fibrosis will follow instead of disintegration. This profuse lighting up of a large area accounts for the extensive cutaneous "lupoid" infiltrations, which may extend over square feet of the surface, with irregular ulceration of the superficial parts. Again, subcutaneous gummata may start at several points, and so form by coalescence the deep serpiginous ulceration so often seen. It is obvious that a very slight cause may in this way start an extensive lesion, just as a spark may start a forest fire. In these tertiary skin lesions there is no tendency to dying down of the process in the centre, as in the decadent late secondary ones, but infiltration progresses till ulceration occurs. Though tending to the circular form at first, the process later becomes more active at one part than another, and very irregular lesions may result. I therefore think that a severely circular lesion is probably a secondary one, produced by peripheral growth of a single colony, fighting against more or less tolerant surroundings, while a tertiary one progresses more irregularly by peripheral lighting up of spores resting in neighbouring cells. The infiltrations of viscera, the nervous system, and bones can all, I suggest, be referred to this process. In the liver, for instance, gummata may alternate with tracts of infiltration, pointing, I suppose, to an unequal distribution of spores. In a case of sporing, I imagine, the process will be more or less universal, since a traumatism establishing a gumma may occur at any point of the body, and the long arm of coincidence could hardly inflict the injury on the one situation where spores were resting. The anatomical structure of the various parts being considered I think that the above process may well explain all tertiary phenomena. The probability of secondary infections of ulcers by other microbes, with consequent septic absorption, must never be forgotten, since many cases of lardaceous disease and nervous degenerations may be partly due to this cause. I have already referred in my paper on Latency to Dr. Weber's observation of a zone of lardaceous change surrounding gummata of the liver. I can well believe that the amount of toxine diffusing from these large foci might cause this as well as more general degeneration with lardaceous change in the intestinal villi, which I have seen cause death at the Lock Hospital. The "quarternary" lesions, nervous degenerations, ataxia, &c., may well be due to prolonged toxine poisoning without any question of microbial local growth, and naturally these are found to resist treatment.

On the question of treatment and the action of drugs I would suggest that mercury as a potent germicide probably acts by depressing the vitality of the microbes, so reducing their toxine-forming powers and allowing the phagocytes more easily to encapsule and destroy them. Even in so virulent an infection as anthrax mercurialised animals resist an otherwise fatal dose. Over-mercurialisation, however, favours the extension of lesions and microbic growth by depressing the vitality of the tissues. Consequently mercury should never be pushed beyond the slightest touching of the gums. The iodides seem to have little effect on the microbes which determine lesions when the treatment is left off. It must act, I suggest, by breaking up or eliminating the toxine, and so removing the chemotaxic irritant which causes the presence of the microbes to be revealed. The infiltrating cells no longer attracted will wander away, the lesions disappear, and the toxine tide fall, while the microbes will remain apparently latent, as they do for nine months in the fœtus under Colles's law, when the toxine escapes into the mother's circulation. The method of treatment by mercury alone in the early stages is therefore reasonable, the more that can be given short of depressing the patient's vitality, the greater the probable effect on the microbes. With the combined treatment the lesions will disappear more rapidly, but the mercury will also be eliminated more or less, consequently there seems to be a risk of lessening its control over the microbes and so running the risk of spore-formation instead of total destruction of the microbes. I think, therefore, that the combined treatment is indicated only when inconvenient lesions have to be got rid of, and that otherwise mercury alone holds out the best chance of cure. That iodide would have any effect on resting spores does not seem likely, and this accounts for the fact that courses of this drug do not remove the tendency to the future formation of gummata. Mercury, however, by permeating the system and creating an unfavourable environment might possibly do so for a time at any rate, but I doubt if it could enable the cells to destroy the spores. A patient the subject of spores thus is an example of the "Once syphilis, always syphilis" dictum. On the other hand I do not see why in the early stages of the infection mercury should not enable the tolerant cells to destroy the depressed microbes totally and so eliminate the disease.

I have already dealt with the question of congenital disease, but I may be allowed to give a short *résumé* to round off this matter. It is admitted that a child may inherit from either or both parents. When the father is the infector microbes or spores must be conveyed with the semen into the cavity of the uterus; as this is protected by epithelium there is no reason why the mother need be infected, nor is she as a rule. The ovum, however, is in a different case, and the microbes

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growing on the mucosa will invade it and grow with its growth. In such a case the child is born healthy and well developed because the toxine can diffuse into the mother's circulation, where it will cause a degree of toleration sufficient to prevent the child after birth infecting the mother (Colles' law). If the mother is the subject of active syphilis the germ-cell will either convey the microbes and produce an infected ovum, or the toxine in the mother's circulation will diffuse into that of the child. In the first instance the ovum will not be able to get rid of its toxine by diffusion and so be destroyed; in the second, the toxine diffusing from the mother may well be enough to poison the ovum. In either case recently infected mothers rarely give birth to a viable fœtus (Zeissel). If the father is infected also, the chances of the infection and death of the child are increased. If the infection of the mother is not recent, the toxine-tide in her circulation will be lower and the child may eliminate enough toxine to survive. It is then born puny and miserable, with signs of disease, and is an early prey to marked lesions followed by death. In a child infected by the father alone, the mother not being infected, the child is born healthy-looking, but the safety-valve of diffusion is closed, the toxine will accumulate, and in two or three weeks the foci, corresponding to secondaries in the adult, are declared. The after-course of the infection resembles that in the adult, and must depend upon the resisting power of the individual. It may run a malignant course or gradually resolve. Sporing may occur and gummata follow in after years. It seems possible that intra-uterine sporing might occur in a resistant case, and this may account for those exceptional cases in which no symptoms occur in infancy or even up to forty years (Diday). The special affections of interstitial keratitis and internal ear disease may perhaps be accounted for by saying that since the microbes grow in the ovum from the earliest stage they may reach tissues which ultimately will become non-vascular, and here remain as spores when the early outbreaks have been overcome, the microbes elsewhere being destroyed or their spores eliminated during the changes of growth and development. Then when the forces of the organism are exhausted by the evolution of puberty or other causes, the spores resting in the cornea or labyrinth will develop into foci and cause the infiltrations which determine the characteristic lesions. The retention, too, of spores in the testicles or ovaries seems to render transmission to the third generation at any rate credible.

This toxine theory of syphilis has been in my mind ever since I first formulated it in THE LANCET of Sept. 10th, 1892, and with increased experience I am the more impressed with its efficiency in explaining the phenomena of the disease.

Hertford-street, W.

A NEW INSTRUMENT FOR TREATING DEFORMITIES OF THE HUMAN FOOT.

By R. MARTIN GIL, M.D.,

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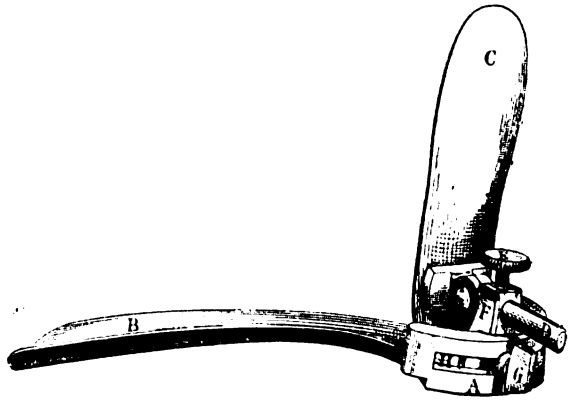
IF deformities of the foot were as common as they are generally strange and abnormal they would most assuredly for a very long time past have constituted a specialty by themselves, to the study of which many eminent men of science would have devoted their time and talent for the benefit of fellow-beings so frequently helpless and worthy of the deepest commiseration. In the course of the last few years a number of orthopædic societies have been founded in Europe and America. In England there are in certain hospitals departments for the treatment of this specialty; in France and Germany many distinguished medical men give their attention to cases of deformity of the foot and leg; the modern publications on operative surgery now treat of these affections at greater length, and of late years special treatises have been issued on the subject, among others the recent ones of Mr. Walsham and Mr. Kent Hughes. Both in these works and in some other pamphlets are to be found descriptions of a great number of instruments for keeping the foot straight and in a proper position, but in my opinion the majority leave something to be desired, for although many of them are excellent in their way they are still more or less defective. When the surgeon does not consider that the case calls for an operation and decides instead on employing one of these instruments, it at once becomes apparent that his skill and solicitude, owing to the imperfections of the invention, fall far short of coping with the difficulties of the case. The manufacturer of orthopædic instruments is then given an order for one, and when finished the inconvenience resulting from the complicated and bewildering combination of springs, screws, joints, hinges, and above all the straps and buckles, becomes painfully evident even if we omit to take into account the certainty of atrophy of the muscles supervening from its prolonged use. To avoid these drawbacks the surgeon employs massage, bandages, plaster-of-Paris, silicate of potash, gum, &c., which, even if they do not meet all the wants of the case, are at least not open to the reproach of being dangerous as are the majority of mechanical contrivances.

The number of cases of deformed feet which I have met with in my professional career are numerous. In those not operated upon by me—which has generally happened through opposition on the part of the family of the patient—the results have been far from encouraging. In many of them the evil continued as before, while aggravated by the check to the development of the limbs caused by the pressure of the apparatus. Quite recently, on the occasion of an operation on a little girl suffering from equino varus in both feet, I felt the want of an apparatus to keep the foot steady and straight after performing tenotomy. The deformity of the bones of the ankle-joint and the slackness of the sinews and ligaments of the outside of the foot rendered it difficult to retain this latter straight and in a proper position and to keep the bandages from moving. Failing to find among the contrivances known to me any to suit my purpose, I was obliged to invent that represented below. This apparatus consists of a circular plate of strong steel, A, with a radius of seven centimetres. A splint, B, is joined to the centre by



two screws, and is applied to the leg with a bandage. When the foot is placed upon the brass plate, C, it is kept steady with another bandage, and by means of the stem, D, which is joined to the plate, the toe being moved to the right or left as desired, leaving the foot in a fixed position by means of the screw, E. The piece, F, is then directed as required, the foot being placed in a normal position and kept in place by the use of the screw, G, which passes through the opening, H, and may be placed wherever its presence becomes necessary. The ring-catch, I, serves to keep the foot in a more or less vertical position as required. These positions are soon changed when, after the wounds inflicted in the operation are healed, massage of the joint has to be employed; it will then be sufficient to slacken the screws, E, G, and that of the ring-catch, I, so that both hands of the operator may be able to move the foot freely without removing the bandages. After the massage any person, however ignorant of mechanical contrivances, can easily place the foot in its former position by means of the screws already mentioned. This apparatus serves for all classes of patients, from children to adults. It is only necessary to exchange the splint, B, and the plate, C, which are held in place by two screws, for others of the measures needed. With children who have already been operated upon after walking and who are permitted to walk with, for example, the boots of Stillman on, these latter will

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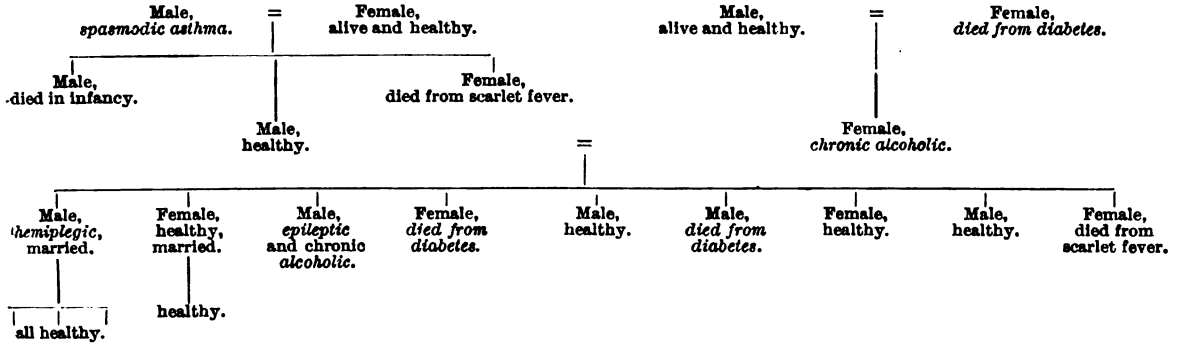
be replaced when they retire to rest by this apparatus, so that the foot may be constantly kept in the position desired without moving during sleep. It is likewise very applicable in other deformities, such as talipes varus, equinus, valgus, and calcaneus, flat-foot, &c., whether dating from birth or acquired after birth, when in connexion with it a plate of the form needed by each individual case is used. When it is a question of children who have not yet walked my apparatus is also useful, but I have kept more in mind those who have already walked for the reason that they are the most difficult to cure, and this is because with my contrivance they cannot place the foot on the ground, while with others known to me when patients are allowed to walk if they let the weight of the body fall on the point operated upon they may possibly do so in a manner liable to cause them injury. When my apparatus is employed the foot of the patient will be always held in a desirable position, and if the operation be not crowned with complete success the blame cannot be attributed to any defect in the position of the deformed member.

DIABETES AND NEUROTIC INHERITANCE.

By J. C. M. GIVEN, M.D. Lond.,
ASSISTANT PHYSICIAN TO THE LIVERPOOL SKIN AND CANCER HOSPITAL.

THE following pedigree, which I obtained when attending one of the cases of diabetes set out, is interesting as an example of how diabetes mellitus may be inherited and also of the fact now generally acknowledged that it may alternate with various neuroses. In this family of four generations (the fourth generation being only infants) there are three cases of diabetes mellitus, one of spasmodic asthma, two of chronic alcoholism, one of epilepsy, and one of hemiplegia the exact nature of which I could not ascertain.



Mossley Hill, Liverpool.

SOME EXCEPTIONAL CASES OF MALIGNANT DISEASE.

By HERBERT SNOW, M.D. Lond.,
SURGEON TO THE CANCER HOSPITAL, BROMPTON.

CASE 1. *Simultaneous development of carcinoma in both parotid glands; excision; subsequent ovariotomy for cyst with twisted pedicle; recovery.*—On Aug. 9th, 1895, a swarthy young woman aged thirty-four years, married, with a child aged sixteen months, was admitted to hospital with symmetrical tumours below each ear. That on the left was as large as a hen's, and that on the right as a pigeon's, egg, and not dissimilar in shape. They were of eighteen months' duration, had commenced therefore during pregnancy, and nearly at the same time, without any other obvious cause. There was no family history of cancer and no symptom in the least indicative thereof. The only complaint was earache. The general health was fairly good and there was a total absence of emaciation or of pain about the new growths, which felt smooth and exactly like an ordinary lymphoma, though slightly more elastic. At the lower extremity of the left was a round lump thought to be a distinct gland, but which subsequently proved to be a lobular projection from the primary tumour. Both were increasing quickly in bulk and caused considerable disfigurement. Upon incision they showed to the naked eye the greyish granular base commonly indicative of malignancy; they were firmly embedded in the parotid tissue and were dissected out with difficulty. The facial nerve passed directly through the left, and its division could not be avoided. Under the microscope the appearances were pronounced by Mr. Plimmer, pathologist to the hospital, to be typical of malignant lymph-gland disease (lympho-carcinoma)—a view in which I concurred. With a few minute cysts containing a milky fluid were large masses of small lymphoid cells, proliferating exuberantly and eroding the surrounding tissues. Presumably, therefore, the disease originated in one of the parotid lymph-glands. While in bed it was discovered almost accidentally that there was also an abdominal tumour which had so far given rise to no symptoms. It was as large as a child's head and was extremely mobile, feeling like a tense cyst. It had been noticed for six or seven months. The patient was discharged for domestic reasons on Nov. 7 at her own request. She sought readmission, however, on Nov. 21st, with severe abdominal pain and tenderness, the temperature rising to 103·6° F. Two days subsequently laparotomy was performed and a cyst of the left ovary with a long twisted pedicle was removed. Apparently the torsion was of some weeks' duration, though no symptoms had arisen previously to the first discharge from hospital. The cyst-wall was anteriorly adherent to the parietes and was there gangrenous, with blackish contents; the parietes were infiltrated and almost gristly. A favourable recovery ensued. The patient was seen well on Feb. 4th, 1896, with no indication of recurrence in the parotids or elsewhere.

CASE 2. *Simultaneous development of carcinoma in the uterus and mamma.*—A woman aged sixty-two years, a widow, was admitted to hospital on Jan. 8th, 1896. A prominent livid boss of encephaloid carcinoma, soft and freely movable, was visible at the upper and outer part of the left breast. Its duration was three months, it was of rapid growth and subsequent to a blow. The axillary glands were slightly enlarged. There was no family history of cancer. The patient was worn and emaciated. She was admitted for operation. A complaint of vaginal discharge led to digital examination, and it was then found that there was also malignant disease of the uterine cervix, that organ being firmly fixed in the pelvis; there was a deeply excavated ulcer, with fetid discharge, and infiltration of the surrounding tissues. So far as could be ascertained it had commenced simultaneously with the breast-lesion. The woman remains (Feb. 6th) an in-patient in an incurable ward, the idea of operative interference having been abandoned.

CASE 3. *Malignant disease of both ovaries; excision; recovery.*—A woman aged thirty-two years, single, was admitted to hospital on Aug. 13th, 1895. A large fluctuating tumour, noticed for two months, distended the abdomen. The menses were regular. There were emaciation and shooting pain on the left side. The mother had her breast excised two years previously for cancer; the mother's mother had "cancerated" (*sic*) tumour of the small bowel. Until a month previously the patient had been a laundress, a calling

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which furnishes a specially large number of malignant cases. Laparotomy revealed a large, irregularly bossy tumour of each ovary, that on the right being the larger. Both were mainly cystic, but had a considerable solid basis, which under the microscope proved to consist of spindle-celled tissue, with abundant roundish cells containing large multiple nuclei. They were therefore sarcomata of very virulent type. The patient was discharged well on Sept. 18th. She was subsequently seen as an out-patient in good health on Feb. 3rd, 1896.

Remarks.—The two cases first reported are in my experience unique. I had never previously met with what appears to have been an independent and nearly simultaneous development of malignant disease in distinct and more or less distant organs; though I am aware that rapid diffusion *per* the bone marrow has caused some cases of acute periosteal sarcoma to be thus described in Germany. In order to establish the possibility of so rare an event one must first negative all possibility of metastatic transmission, such as can nearly always be traced when the opposite mamma becomes carcinomatous. The clinical history of the preceding seems to me quite incompatible with the idea of secondary infection. The first case, moreover, presents additional interest in view of the pathological correlation, occasionally noticed, between the parotid gland and the sexual organs.

Gloucester-place, W.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

NORTH-WEST LONDON HOSPITAL.

A CASE OF ADDISON'S DISEASE; NECROPSY.

(Under the care of Dr. KNOWSLEY SIBLEY.)

IN almost every detail this case is a typical one of Addison's disease, and the condition was fully recognised long before the vomiting and rapidly increasing asthenia made it evident that a fatal termination would soon ensue. The duration of life in these cases is very uncertain; we have published in these columns the accounts of cases in which the first symptoms were those of sudden and occasionally fatal syncope, where pigmentation of the surface of the body had not been previously observed, and it was not known that the patient was affected with this, as yet, incurable disease. It is hardly possible in any case to ascertain the exact date of the commencement of the disease, and it is probable that the process of degeneration of the suprarenal bodies is always far advanced before the clinical signs of the affection reveal themselves. The examination of the suprarenals after death in Dr. Sibley's patient shows how complete the destruction of those bodies may be, so extensive that no suprarenal tissue can be found. It is, however, not possible to say how long a patient can live after complete destruction of these glands. For the notes of the case we are indebted to Dr. Robert R. Leatham, resident medical officer.

The patient, a well-developed but nearly mulatto-coloured girl twenty years of age, was admitted to the hospital on Jan. 28th, 1894. In her family history there was nothing of importance. Both parents were alive and well, the father being of Scotch and the mother of English descent. Tubercle and syphilis were absent, nor had any relative had an unusually dark skin. All her life the patient had enjoyed excellent health with the exception of some hip-joint trouble when three years of age, the result of a fall, and of recurring attacks of dyspepsia during the last two or three years. Four months previously to admission the present illness began. She observed, as did her friends, an alteration in the colour of the skin of the face and neck, the skin becoming gradually darker. The hands, arms, and nails soon became affected in the same way, and finally the skin of the entire body was pigmented. About a month afterwards, in the beginning of November, she began to suffer from palpitation, and in a few weeks sickness and vomiting with occasional attacks of faintness and cardiac pain commenced. These symptoms had continued ever since. Amenorrhœa had existed since September, the hair had been falling out, and there had been a steady loss of strength. She had not, however, been losing flesh. On her admission to the hospital she was found to be a well-nourished girl, with a skin uniformly darker in colour than normal and in tint closely resembling that of a mulatto. The deepest staining existed in the axilla, neck, and buttocks, the parts being of a rich deep brown, the face, thorax and abdomen being of a lighter colour. The areolæ were extremely dark, resembling those of pregnancy; and down the back, over the spinous processes, stretched a band of deep staining. Round the body in a line corresponding to the pressure of the waist-band and above the knees in the position pressed on by the garters passed bands of deeper tint, whilst the flexures of the knees and elbows also showed more intense pigmentation. The scalp was of a yellowish-brown colour, and a scar in the neck, the result of an old suppurating gland, was deeply stained. The skin was soft and moist. The mucous membrane of the mouth was decidedly darker than usual, and on the sides of the tongue were several small patches of deep brown pigmentation. The conjunctivæ were white and clear. On examining the various organs no sign of disease could be detected. The lungs were resonant everywhere, with normal vesicular breathing; and the heart, liver, and spleen were apparently perfectly healthy. The pulse was regular, of low tension, 90 beats to the minute, and with soft arterial walls. The urine was acid, of specific gravity 1020, and contained no albumin, sugar, or indican. There was no œdema of the legs, the knee-jerks were normal, and the hip-joints freely movable; there were no scars. The retinæ and discs were healthy, and round each disc was a well-marked choroidal ring. The uterus and ovaries were healthy, and the pelvis presented nothing abnormal. On Feb. 1st the patient commenced to vomit, and for the next three days was sick every morning. Her pulse varied from 75 to 95 per minute and was of low tension, but otherwise she kept pretty well. Her bowels were inclined to be constipated. On the 5th she was very sick and vomited frequently all day. Her pulse was decidedly weaker, being only 77 beats to the minute. The bowels were open three times, this being due to a dose of cascara sagrada given the night before. She complained of no pain or uneasiness, only of the constant annoyance from the sickness. On the 6th she was no better and the vomiting was nearly incessant, even a sip of water exciting it. Her pulse was very weak and her condition grave in the extreme, the patient being greatly exhausted. On the 9th there was no change, the sickness being most distressing and the pulse nearly imperceptible. With difficulty it was made out to be beating about 130 to the minute. She lay in a state of exhaustion all day, vomiting being excited by the faintest movement, and during the night she died very suddenly. Her temperature was subnormal in hospital from the time of admission.

The *necropsy* showed a well-nourished girl so stiff from the severe cold that rigor mortis could not be distinguished. The skin was deeply pigmented, especially in the parts previously indicated. The lungs were healthy and the mediastinal glands were not enlarged. The heart was of small size and thin-walled, the valves were normal, and the liver and spleen healthy. The left kidney was misshapen, the hilum being puckered, otherwise it was healthy. The suprarenal capsules were very hard, cutting like scirrhus, but retained their shape. The distinction between cortex and medulla was not apparent. On section they appeared to be bluish-white with yellow patches. There was no trace of breaking down. The left was slightly adherent to the surrounding tissues. The solar plexus and semilunar ganglion were removed. To the naked eye they exhibited no sign of disease. The uterus and appendages were normal. A small gland removed from beneath the scar in the neck appeared to be healthy. There was no sign of tubercle anywhere.

Remarks by Dr. SIBLEY.—The suprarenals were chemically examined by Professor Schäfer and Dr. George Oliver, who found a complete absence of any suprarenal tissue, and no suprarenal extract could be obtained from the glands—that is, no physiological action could be produced from the extract obtained. Examination of sections under the microscope showed nothing but fibrous and caseous tissue in various stages of degeneration, with considerable small-celled infiltration in places. No tubercle bacilli could be found.

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ROYAL INFIRMARY, NEWCASTLE-ON-TYNE.

A CASE OF PERFORATING ULCER OF THE STOMACH; LAPAROTOMY; RECOVERY.

(Under the care of Mr. F. PAGE.)

WE are pleased to be able to bring forward the account of another successful operation for perforation of a gastric ulcer. In most respects the history was a typical one of gastric ulceration, and the sudden onset of the symptoms which characterise perforation completed the evidence of the disease available without abdominal exploration. As usual, the perforation was found on the anterior wall, and it was reached and suturing performed, apparently without difficulty, through the median incision. Mr. Page lays great stress in his remarks on the importance of early suturing, and we fully agree with the importance of this. It is a point which we have frequently impressed on the readers of THE LANCET and is strongly supported by the eight cases which we published in the "Mirror" last year. Of these patients five recovered and three died. Of the former the ages varied from nineteen years to thirty-one years and the duration of symptoms of perforation before operation from four hours to thirteen and a half hours. In the three fatal cases the ages of the patients were twenty-one, thirty, and thirty-three years, and the symptoms of perforation had existed for nineteen, nineteen and a half, and fourteen hours respectively. In only one of the eight (a successful operation) was the ulcer on the posterior aspect of the stomach. The importance of a careful examination of the abdomen is shown by the accumulation of fluid which was found and required to be removed from Douglas's pouch during the progress of the operation, and for which a second incision was necessary. For the notes of this case we are indebted to Mr. W. H. Vickery, surgical registrar.

A woman aged twenty-eight years was admitted to the infirmary on March 17th, 1896, with the history that for a few years she had suffered from gastric symptoms and on one or two occasions had had hæmatemesis, the vomited material being of the usual "coffee-ground" nature. At 10 A.M. on the morning of admission she was suddenly seized with a sharp abdominal pain, she became rapidly collapsed, and she vomited some brown fluid. On admission she was collapsed and all her symptoms pointed to perforation of a gastric ulcer. She was pale, her extremities were cold, her pulse was rapid and soft, her expression anxious, and her abdomen tender. She was at once anæsthetised (4 P.M.) and the abdomen was opened by a median incision. There was free gas in the peritoneal cavity, as well as fluid contents from the stomach. On further examination a small, circular punched-out looking ulcer was found on the anterior surface of the stomach near the lesser curvature and at the cardiac end of the middle of the organ. It had contracted friable adhesions to the under surface of the liver, which were easily broken down. A row of sutures was passed through all the coats of the stomach uniting the edges of the ulcer. The ulcer was then covered in with surrounding stomach wall, which was sutured with a row of Lembert's sutures, only passing through the peritoneal and muscular coats. A third row was passed outside this for further security. The peritoneal cavity was very carefully and thoroughly washed out and a glass drainage-tube passed into Douglas's pouch. The parietal wound was sutured in the usual way. The patient stood the shock of the operation well, and was taken back to bed at 4.40 P.M. At 5.30 P.M. two ounces of fluid were drawn from the drainage-tube, and the tube was exhausted every hour until 8 A.M. on March 18th. Altogether twenty-eight ounces were removed. At midnight a nutrient enema was given and retained, and this was repeated every four hours. She dozed at intervals during the night, and her general condition was satisfactory. On the 18th—that is, the day following the operation—she was troubled a good deal with hiccough, but she did not vomit. At midday she had a teaspoonful of meat essence, and this was repeated every four hours. She perspired freely and at times was very restless, her temperature ranging between 98·4° and 100·4° F. In addition to the meat essence she took nearly a pint of beef-tea and six ounces of whisky in the twenty-four hours. At 10 A.M. on the 19th a soap-and-water enema was given and the bowels opened, after which she slept comfortably. The bowels were again moved during the day. She took a large quantity of nourishment. She continued to make satisfactory progress, and on the eighth day after the operation she was allowed an oyster every four hours; on the next day she was given milk puddings. On the 28th the dressings were removed, when the wound was found to be healed and the stitches were removed. On the following day she was put on the ordinary fish diet, and on April 19th she left the infirmary quite well.

Remarks by Mr. PAGE.—There is one point of considerable practical import in this case which I should like to mention. After the sutured stomach was returned the abdomen was very thoroughly washed out with hot sterilised water till the fluid returned quite unstained. A sponge on a handle was then passed into Douglas's space, when the pelvis was found to contain a quantity of fluid stained by contents of the stomach. To remove this a second incision was made into the abdomen and a glass tube introduced into Douglas's pouch. Through this the pelvis was thoroughly cleansed by irrigation. I consider the success of this case is due to the circumstance that the abdomen was opened so soon—namely, six hours—after perforation occurred. The patient owes her recovery mainly to Mr. Ouston—the surgeon who saw her very soon after perforation—who at once placed her in a position to have an operation brought to a successful termination. I have seen the patient to-day (May 12th); she has gained weight and is bright and cheerful, looking, as she says she is, quite well.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Hypertrophic Pulmonary Osteo-arthropathy.—Thyroid Body in Graves's Disease.—Osteitis Deformans.—Carcinoma of the Transverse Colon.—Annual Meeting.—Debate on Proposed Admission of Women as Members.

THE annual general meeting of this society was held on May 19th, the President, Mr. BUTLIN, being in the chair. The business of the ordinary meeting was first proceeded with.

Dr. THORBURN and Mr. WESTMACOTT demonstrated the post-mortem appearances of a case of Hypertrophic Pulmonary Osteo-arthropathy. This rare disease was described by Marie in 1890, and in the *British Medical Journal* of June 3rd, 1893, Dr. Thorburn recorded three examples. Of these cases one, a lad, remained under observation until his death, his clinical symptoms undergoing no material alteration. The post-mortem examination was very complete and showed almost universal erosions and articular changes. The lungs, spine, right suprarenal capsule, and right tibia presented tuberculous lesions and there was extensive amyloid disease. The skull was much thickened, roughened internally, sclerosed, and devoid of diploe; in his facial bones, ribs, sternum, vertebræ (except in the carious region), and clavicles no changes were observed. The limb bones were covered with a rough, porous layer of sub-periosteal bone. Their compact tissue was sclerosed and their medullary cavities encroached upon by new bone. These osseous deposits were especially marked in the shafts of the bones and in the attachments of muscles and fasciæ. The shoulder-joints contained an excess of clear fluid, and the cartilages of the heads of the humeri were eroded, especially at their margins; the synovial membranes were normal. In the hip-joints closely analogous appearances were observed, and the hips and shoulders were all remarkably symmetrical in the extent and distribution of the cartilaginous erosions. The elbow and knee-joints also formed a symmetrical group containing less fluid than the hip and shoulders, but with similar cartilaginous erosions, and with thickening of the synovial membranes. In the wrists, ankles, radio-ulnar, carpal, tarsal, and other small joints erosions of cartilage, principally marginal, were also found. The general condition was thus a highly symmetrical and almost universal osteo-periostitis of the limb bones, with atrophic erosion of the cartilages of their joints; the viscera indicated a somewhat extensive but much subdued tuberculosis. Mr. Thorburn regarded as unsatisfactory the theory of Marie, which attributed the disease to the absorption of ptomaines from suppurating foci, and found no evidence in favour of Bamberger's view that it was due to venous congestion. While reserving any strong expression of opinion he was inclined to

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endorse his own suggestion based on the clinical appearances, that "hypertrophic pulmonary osteo-arthropathy" was the result of a diffused but very mild tuberculosis of bone.—Mr. GODLEE said that the confusion in the literature of this subject was in part due to the way in which it had been introduced to the profession by Marie, who dwelt chiefly on the difference between this osteo-arthropathy and acromegaly. The specimens shown were of great rarity, and they appeared to correspond very closely with the description of Bamberger. Mr. Godlee referred to two cases which had been under his care. The first was that of a man who suffered for the whole of his life from cough. His fingers had been clubbed as long as he could remember and his expectoration had been offensive for three years. He had developed lately an appearance of the wrists and ankles like that of the photographs which had been shown. There was no very distinct enlargement of the shafts of the bones, but there was effusion into the joints, with pain, limitation of movement, and some fever. There was no reason to believe that the patient was tuberculous. The second case was that of a man who had suffered from pleurisy and bronchiectasis since 1891; there was clubbing of the fingers, with swelling of the wrists and ankles and effusion into the knee-joints. He had described a case in 1885 as one of "clubbing of the ankles and wrists" which occurred in a case of old empyema. If a reclassification of these cases were carried out a considerable number of them would fall into the group of septic osteo-arthritis, a group quite distinct from rheumatism. In the first of the cases he had referred to he had obtained skiagraphs of the limbs, and the pictures did not demonstrate enlargement of the bones.—Mr. THORBURN, in reply, held that the cases Mr. Godlee had related belonged to an entirely different group. The enlargements which occurred in congestive diseases were likewise quite distinct from those he described and exhibited.

Mr. EDMUNDS placed on record some further observations and experiments on the Pathology of Graves's Disease. The removal of the whole of the thyroid gland proper and also of one parathyroid gland was not a fatal operation in dogs, a single parathyroid gland being sufficient to prevent death or any symptom of athyroidea. If, however, both parathyroid glands were removed it was necessary to leave a considerable portion of the thyroid gland proper, in order that the dog might live; if even as much as 40 per cent. of the thyroid gland were left chronic tremors and inability to stand might result. The changes in the parathyroid gland thus left were to the naked eye a certain amount of hypertrophy; under the microscope this appeared generally to be due to a simple increase in the number of secreting cells, together with some thickening of the connective tissue. Occasionally an area of very large cells might be found and sometimes columnar cells almost or quite constituting a tubule or small vesicle; occasionally a few minute collections of colloid secretion were seen, but the parathyroid did not develop into thyroid tissue proper even in six months. The same negative result occurred in rabbits. The portion of thyroid tissue proper left also hypertrophied, the vesicles enlarged and became oblong and branched, the lining membrane projected in ridges into the cavity of the vesicles, the secreting cells became columnar, and the colloid secretion became less, being in many vesicles replaced by a fluid which stained much less deeply. All these changes which occurred in a remnant of thyroid tissue proper were also to be found in the enlarged thyroid gland of Graves's disease; indeed, the resemblance was so close as to lead to the inference that the two conditions were of the same nature. With respect to exophthalmos the excision of the parathyroid glands in rabbits seemed to cause the opposite condition of enophthalmos. In dogs a pathological widening of the palpebral opening was occasionally observed after partial excisions of the thyroid gland. The experiments had been made at the Brown Institution.

Dr. FIELDER exhibited the skeleton of a well-marked case of Osteitis Deformans. The patient was a female aged forty-five who had been suffering from the disease since the year 1891. She had had twelve confinements and six of her children were dead, including two who died from tuberculosis. The husband showed old choroiditis due to syphilis. There had been great pain in the limbs, which was always present and was worse at night. The bowing of the legs progressed rapidly and the patient estimated that she had lost four inches in height. The breathing was diaphragmatic owing to the falling together of the ribs, and most of the bones were affected, except those of the feet and the radius and ulna. The osseous changes were chiefly marked about the shoulders and knees, and were more advanced on the right side. Before death a tumour was discovered in the neighbourhood of the sacro-iliac joint, and this was afterwards found to be a mixed spindle and round-celled sarcoma. The greatest girth of the skull was twenty-four inches and at one place it was an inch and a quarter in thickness. The basal skull bones were unaffected and the vertebræ were extensively ankylosed together. No medicinal treatment succeeded in relieving the pain, but the patient seemed to do best on a mixture of iodide of iron and liquor sodii arseniatis.

Dr. NORMAN MOORE exhibited a specimen of Carcinoma of the Transverse Colon. The growth, which showed much thickening with ulceration of the mucous surface of the transverse colon, occupied its middle part. It was a spheroidal-celled carcinoma. The growth was adherent to the stomach, but had only penetrated to the sub-mucous coat of that organ. There was a large secondary growth somewhat higher up in the colon, but no other secondary growths. The patient was a man aged forty-five and his illness lasted seven months. The case was remarkable in the situation of the secondary growth and in the fact that, with the exception of slight diarrhœa without blood in the stools for four days, the symptoms were altogether gastric.

The following card specimens were shown:—

Dr. TYSON (Folkestone): Elongated Appendix with Calculus.

Dr. SELIGMANN: Streptothrix Maduræ.

Mr. JOHNSON SMITH: Filariæ from Lymph Scrotum.

Dr. ROLLESTON: (1) Mediastinal Growth from the Thymus; and (2) Large Cyst in Carcinoma Mammæ.

Dr. HAWKINS; (1) Perforation of Gall-bladder in Febris Enterica; and (2) Horseshoe Kidney.

Mr. S. G. SHATTOCK: Cultural Variation in Streptococcus Pyogenes Bovis consisting of Mossy Outgrowths from the Colonies in Stab Gelatin Cultures.

Dr. OGLE: (1) Congenital Atresia of Pulmonary Artery; and (2) Gumma or Aneurysm of the Heart.

Mr. MALCOLM: Sarcoma of the Kidney.

Mr. TARGETT: Adrenal Tumour of the Kidney.

The business of the annual general meeting was then proceeded with, and it attracted a very large muster of members in view of the fact that the question of the admission of lady members was to be discussed. The report of the council was read by the senior secretary. There were 708 ordinary members of the society. Death had carried off amongst others M. Louis Pasteur, Dr. J. S. Bristowe, and Sir J. Tomes. The fiftieth anniversary of the society would fall during the coming session, and the council proposed to celebrate this by a presidential review of the history of the society combined with a conversazione. The financial statement showed a small deficit, but it was explained that this was due to the fact that a large number of subscriptions still remained unpaid, and the belated members of the society are hereby invited to note this fact. The following were elected as honorary members of the society:—Professor Bouchard (Paris), Professor Koch (Berlin), Professor Welch (Baltimore), and Professor Ziegler (Tübingen).

Votes of thanks having been accorded to the retiring officers and members of council the PRESIDENT, in a few introductory remarks, explained that in February last a lady had applied for membership of the society. The application came before the council in March and was deferred to the April meeting, there being a difficulty in arriving at a conclusion as to a right interpretation of the by-laws, at the time of the making of which there was no probability of women applying to be admitted. The council thought it desirable that the matter should be threshed out at the annual meeting, and asked Mr. Stanley Boyd to move a resolution standing in his name to the following effect: "That, in the opinion of this meeting, it is expedient that ladies, who are duly qualified medical practitioners, should be eligible for the membership of this society."

Of the lively debate which followed we are only able to give the briefest outline.

Mr. BOYD said that he considered it would do good to the medical women, while it would do no harm to the society. He said that the difficulty found in alluding to certain subjects before women, though it hampered ordinary conversation and required a distinct effort in scientific conversation, was yet less difficult before a society of mixed sexes than in the case of a man lecturing to a class composed solely of women. The admission of women would not only be extending a friendly feeling towards them, but would stimulate

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them to work. Their opportunities of obtaining material were too few and their numbers too small to justify them in forming a society of their own.

Mr. BERRY, in seconding the motion, appealed to the generosity of the members and asked them, by admitting lady members, to follow the example of the Anatomical Society and the Society of Anæsthetists.

Dr. HERRINGHAM considered the question to turn on the point whether it would inconvenience the majority of the members or not.

Dr. FLETCHER LITTLE besought the members to consider what the outside public would say to an adverse vote on this matter.

Mr. WALLIS and Dr. KANTHACK both confessed to a feeling of great diffidence when addressing mixed classes, and the former said that the British Nurses' Association could not be pointed to as an example of a happy family of mixed sexes.

Dr. HORROCKS felt that the admission of women would not hinder the attainment of truth.

Dr. NORMAN MOORE found himself forced to the conclusion that this was only another instance of the desire of ladies to push themselves forward into places where a large majority of medical men did not wish to have them.

Dr. HARE was impelled by his declared objection to the admission of women into the medical profession to *a fortiori* exclude them from the Pathological Society.

Dr. DICKINSON, recalling that the society had grown up into a flourishing manhood under certain rules, deprecated strongly a change which would entirely alter the tone of the meetings.

A vote being taken by show of hands, it was found that 23 members were in favour of the motion and 43 against it. The motion was accordingly declared to be lost.

The result of the ballot for the election of officers and council for the ensuing year was declared as follows:—President: Henry Trentham Butlin, D.C.L., F.R.C.S. Vice-Presidents: William Richard Gowers, M.D., Samuel West, M.D., Norman Moore, M.D., Seymour Sharkey, M.D., Arthur E. J. Barker, F.R.C.S., Frederic S. Eve, F.R.C.S., Samuel G. Shattock, F.R.C.S., and Frederick Treves, F.R.C.S. Treasurer: Sidney Coupland, M.D. Honorary Secretaries: J. H. Targett, M.S., and Richard G. Hebb, M.D. Council: Wilmot Parker Herringham, M.B., A. A. Kanthack, M.B., Hector Mackenzie, M.D., Julius Dreschfeld, M.D., G. Newton Pitt, M.D., H. D. Rolleston, M.D., Charles Scott Sherrington, M.B., F. Charlewood Turner, M.D., A. F. Voelcker, M.D., Hubert Montague Murray, M.D., Gilbert Barling, M.B., James Berry, M.B., W. G. Spencer, F.R.C.S., Anthony Bowlby, F.R.C.S., E. Hurry Fenwick, F.R.C.S., H. Betham Robinson, F.R.C.S., Stephen Paget, F.R.C.S., Bilton Pollard, M.B., Raymond Johnson, F.R.C.S., and C. E. Leopold B. Hudson, F.R.C.S.

OPHTHALMOLOGICAL SOCIETY.

Restoration to Normal Vision after Sympathetic Ophthalmitis.—Extraction of a Dislocated Lens with good Result.—Hereditary Optic Nerve Disease in a Mother and Three Children.—Spurious Optic Neuritis.—Lymphangiectasis of the Eyelids.—One-sided Paralysis of the Sixth Nerve associated with Contraction of the Orbicularis and Retraction of the Globe on Inward Rotation.—Transplantation of Skin to the Surface of the Eyeball for the Cure of Symblepharon.—Posterior Lental Opacity, with remains of Hyaloid Artery and Coloboma Lentis.—Detachment of the Retina treated by Drainage.—Case of Proptosis, Optic Atrophy, and Ophthalmoplegia.

A CLINICAL meeting of this society was held on May 7th, Mr. E. NETTLESHIP, F.R.C.S., being in the chair.

Mr. ANDERSON CRITCHETT exhibited a case illustrating Restoration to Normal Vision after Sympathetic Ophthalmitis. An attempt was made to save an eye which had been injured by a nail; the cornea and lens had been wounded. The attempt failed, and the eye was excised thirty-five days after the accident. Twelve days after the excision of the injured eye the other eye became inflamed and vision was reduced to < fingers. Under the use of atropine and mercurial inunction the inflammation subsided gradually and the vision was eventually restored to normal.—Mr. CRITCHETT also exhibited a case of Extraction of a Dislocated Lens with a good result. The patient was a middle-aged woman. Two months before her visit to the hospital she received a blow on the right eye by which the lens was displaced downwards. The left eye had been injured twenty-three years before; at that time there had been also an attack of inflammation in the right eye. The dislocated lens was removed with a vectis; there was no loss of vitreous and vision was eventually $\frac{6}{60}$. The section was within the cornea. The vectis was preferable to the spoon in some cases, as it sank into the lens and held it more securely.—The PRESIDENT expressed the opinion that the second case was another instance of recovery from sympathetic ophthalmia, which added to the interest of the operation that had been performed. The case also raised the question as to whether the removal of the injured eye affected the condition of the other.

Dr. R. D. BATTEN showed instances of Hereditary Optic Nerve Disease in a mother and three children. The mother's sight had failed when she was twelve years old; one of her sisters, aged thirty-three, had the same affection, also one brother. In the mother's case the vision was reduced to $\frac{1}{60}$; the optic discs were atrophic, and there was slight contraction of the visual field. In the younger generation one boy and two girls were affected; their sight had failed at about twelve years, the same age as the failure in the mother's case. In the boy vision was $\frac{6}{18}$ and there was a central scotoma. In the eldest girl there were pallor of the discs, several scotomata, and colour-blindness. In the other girl the signs were less marked. There was no other disease in the family.—Dr. HABERSHON said there was no doubt that this was the same disease as Leber described. The sight usually failed at puberty or the menopause, rarely as young as five or eight years.

Mr. HOLMES SPICER showed a case of Spurious Optic Neuritis. The patient was a boy aged eleven and a half years, whose refraction in each eye was emmetropic and whose vision was $\frac{6}{9}$. His visual fields were normal; his light and colour sense were normal. Both optic discs presented the appearance of the early subsidence stage of severe optic neuritis; their edges were quite indistinct; they were very pale; the vessels were covered in places with a light veil of haze; and there was swelling amounting to about 3 D. The patient had been under continuous observation for three years, and there had not been the slightest change in the appearance of the optic discs.—Mr. HARTRIDGE disapproved of the term "spurious"; he should regard the case as one of persistent optic neuritis in which the macular fibres had escaped.—Dr. R. D. BATTEN was reminded of those cases in which an appearance of neuritis confined to one side was caused by tilting of the optic disc.—Mr. MARCUS GUNN inquired if any case had been recorded in which recovery had taken place after optic neuritis; he had once observed this in an adult.—Mr. SILCOCK mentioned a case exhibiting similar appearances in the fundi; the patient was thought to have cerebral tumour; the appearances were unchanged though they had been closely observed for a long time.—Mr. ADAMS FROST did not consider the long persistence of this condition without change necessarily excluded the presence of optic neuritis.—Mr. HOLMES SPICER, in reply, said he regarded the condition in this case as a physiological one simulating optic neuritis; if it were inflammatory it would be necessary to assume that serious inflammation could last for years without producing any impairment of function in such a delicate structure as the optic nerve.

Dr. D. MOWAT showed a case of Lymphangiectasis of the Eyelids. A small, soft, ill-defined swelling had first appeared in the lower lid; it increased slowly for some months, then spread to the upper lid. The swelling could be displaced from one lid to the other by pressure; if pressure was made on both lids the swelling appeared behind the ear of the same side; there were communicating channels over the zygoma. The swelling had steadily increased so that it was no longer possible to transfer the fluid from one part to another.

Dr. MACLEHOSE exhibited a case of One-sided Paralysis of the Sixth Nerve associated with Contraction of the Orbicularis and Retraction of the Globe on Inward Rotation. It belonged to a definite group of cases, of which he had seen several which all presented the above signs with some variations. Although he called it paralysis of the sixth nerve, he thought the condition was congenital and depended on variations in nerve-supply or muscular development.

Dr. BELL TAYLOR showed a case in which Transplantation of Skin to the Surface of the Eyeball had been effected for the Cure of Symblepharon. The patient, a male aged forty, had symblepharon following a burn by hot slag. The lower lid was firmly adherent to the globe, covering the lower third of the cornea. Repeated attempts to secure separation of

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the adherent tissues by the usual methods failed. Eventually the lid was dissected off the eyeball, and a piece of skin from the upper eyelid of the uninjured eye was transplanted on the surface of the globe, to which it readily became united.

Mr. CARTWRIGHT exhibited a case of Posterior Lental Opacity, with the remains of the Hyaloid Artery and Coloboma Lentis. There existed a double notch in the lens, directed upwards and outwards, through which the suspensory ligament could be seen attached to the remains of the fibro-vascular sheath. The remains of the hyaloid artery appeared to be floating free in the vitreous.

Mr. F. S. EVE showed a case of Detachment of the Retina successfully treated by drainage. The patient, a young man, showed evidence of choroiditis and vitreous opacities before Christmas, 1895; in February the retina became suddenly detached. Treatment by iodide of potassium, pilocarpin, and the recumbent position had no effect. An incision into the sclera was made, a trocar and cannula were inserted, the fluid withdrawn, and a horsehair drain placed in the eye. Seven weeks after no detachment could be made out and the visual field was normal.

Mr. MARCUS GUNN exhibited a case of Proptosis, Optic Atrophy, and Ophthalmoplegia. A female aged sixty-seven suddenly had proptosis of the right eye. The third, fourth, and sixth nerves were paralysed, the optic nerve was atrophied, the pupil was dilated and inactive, and the conjunctiva œdematous. He thought the case was probably one of hæmorrhage from an aneurysm of the ophthalmic artery.—Mr. EVE had had a case with a similar history, which proved to be a pulsating sarcoma of the back of the orbit.

EPIDEMIOLOGICAL SOCIETY.

Infectious Sore-throats and Diphtheria.

A MEETING of this society was held on May 15th, Mr. SHIRLEY F. MURPHY, President, being in the chair.

Dr. GEORGE REID read a paper on Infectious Sore-throats and Diphtheria, in which he quoted Dr. Thorne Thorne's theory, propounded in the Milroy Lectures, that "attacks of so-called sore-throat exhibited under favouring conditions a progressive development of the property of infectiveness, culminating in a definite specific type indistinguishable from diphtheria." He then referred to the so-called pseudo-diphtheria, bacteriologically different from, though clinically identical with, diphtheria proper, and observed that there were probably several distinct diseases comprehended under the designation of follicular tonsillitis, also of a microbic nature, common quinsy being a simple catarrhal affection and scarlet fever and mumps not being properly included among throat diseases. He next described an outbreak originating in an infants' school, where an obstructed drain had been opened, and extending later to the other departments until fully a third of the 300 children had been attacked as well as the whole of the teaching staff and the master's family. Many were seriously ill and in all the swelling of the glands was very conspicuous, but in none was there any membrane or rash. The acute symptoms usually subsided after the fourth day, though the swelling persisted longer, but no case ended fatally. There could be little doubt as to the outbreak having been originally caused by the foul effluvia from the drain; but though the water-closets, urinals, and sink-wastes of the schools and house were all in direct connexion with the drain the extension of the disease beyond the infants' department occurring a week or ten days later was probably due to personal intercourse, yet there were but few cases in the village among children not actually attending school. He next referred to the account given by Dr. Wheaton in a paper read before the society two years ago of an outbreak in South London in 1890, when 150 or more children were attacked with similar symptoms and equally non-fatal results ensued, though these cases presented a transient filmy exudation, but without any paralytic sequelæ; and to a like epidemic in 1893 in a town with 10,000 inhabitants, in which also no diphtheritic bacilli were detected, as well as to other outbreaks described by Dr. Thresh and one observed by Dr. Kenwood at Finchley last year which was unmistakably connected with the supply of milk from a dairy where some of the cows were suffering from a febrile affection and had eruptions on the udders.

Dr. WILLOUGHBY said that the membrane is not an essential phenomenon of diphtheria, and they ought rather to speak of Löffler's, streptococcal, and staphylococcal diphtheria. The three microbes might be present singly or variously associated, Löffler's being the cause of the albuminuria and paralytic phenomena, the streptococci of the purulent, and the staphylococci of the fibrinous, exudations. All three bacteria, including Löffler's, have an extra-corporeal existence which explains the *de novo* origin of both true and false diphtherias.

The PRESIDENT remarked that progressive development was seen in cholera, persons arriving from an infected locality having the Koch's bacillus in their intestines though perhaps showing no signs of the disease.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Cancer of the Rectum.—Tubal Pregnancy.—Hæmatemesis and Melæna.—Exhibition of Cases.

A MEETING of this society was held on April 17th, the President, Mr. MAYO ROBSON, being in the chair.

Mr. LITTLEWOOD read the notes of eight cases of Cancer of the Rectum on which he had successfully operated during the past eighteen months. In all the cases he avoided making a preliminary colotomy, and he advocated this plan whenever the intestinal tract about the disease could be thoroughly emptied. The operations were all performed in the prone position, as recommended by Mr. Godlee, and the great advantages of this position were discussed. In three of the cases the growth was near the anus, and after removal the divided portion of the bowel was attached to the surface by deep sutures and drained posteriorly. In five cases the disease was high up, so that part of the sacrum was divided to facilitate removal. In four of these the divided ends of the bowel were united, a Murphy's button being used for this purpose in one case, but without a good result, and a Robson's bobbin for the other three; in one of these latter there was good union, all the motions passing the natural way, but in the other two a fistulous opening in the posterior part of the bowel was formed. These last-mentioned operations have, however, only been done six and four weeks ago respectively and there is every reason to think that the fistulous openings will become closed. Some of the patients suffered from temporary mania after the operation.—The PRESIDENT considered that the chief points in favour of this operation were the great facility in exposing the rectum, the use of the bougie in showing the limits of the bowel, and the stitching together of the ends of the intestine. He thought very highly of this method of operating.—Mr. W. H. BROWN preferred to have colotomy performed a few weeks beforehand.—Mr. WARD agreed with Mr. Brown, particularly in those cases where the growth affected the rectum and anus.—Mr. WOODCOCK spoke of the dementia following severe operations and mentioned four cases which had occurred in his experience.—Mr. LATOUCHE mentioned that one of Mr. Littlewood's patients whom he was attending already suffered from secondary deposits in the liver.—Dr. SOLLY thought that the dementia might be produced by fæcal poisoning.

Mr. E. O. CROFT read a paper giving the clinical history of three cases of Tubal Pregnancy. Case 1.—This patient was a multipara, thirty-seven years of age, who had for six weeks suffered from amenorrhœa and shown symptoms of pregnancy, followed by irregular hæmorrhage and pain for nine weeks. The decidua came away shortly after the bleeding commenced. The uterus was enlarged and displaced forwards by effusion behind the cervix. Abdominal section was advised, but operation was refused. The swelling subsequently increased, after which there was escape of tarry blood from the rectum, followed by septicæmia, acute peritonitis, and death. The necropsy showed an extra-peritoneal hæmatoma, a rupture of the tube downwards into the broad ligament, an opening into the rectum, and a small recent opening above into the peritoneum. Case 2.—This patient was twenty-seven years of age and had one child who was two years old. There was no history of pregnancy, neither were there any symptoms of it, but there had been irregular bleeding and spasmodic pains for twelve months. A tumour could be felt above the pubes, and there was also a soft swelling behind the cervix. On abdominal section tarry blood was found in the peritoneum, partially limited by false membrane above. The left Fallopian tube was enlarged, measuring three and a

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half inches by one inch, and it was removed together with the ovary. It contained a tubal mole with the remains of the amniotic cavity and chorionic villi; the ostium was closed. The right tube and ovary were congested, but not distended; the ostium was patent. The patient recovered. Case 3.—This patient was a multipara and thirty-three years of age. Eight weeks after pregnancy was suspected there were irregular hæmorrhage and labour-like pains, continuing for three months. An oval tumour could be felt above the pubes on the right side. On abdominal section the tumour was found to be about the size of a lemon and consisted of the right Fallopian tube enlarged and embedded in dense adhesions. It was removed together with the adherent ovary, and was then seen to be unruptured and to be filled with a mole showing chorionic villi and an amniotic cavity; the ostium was closed.

Mr. SALISBURY read a paper on a case of Severe Hæmatemesis and Melæna. The patient was a sallow-complexioned woman forty-five years of age much addicted to tea-drinking and a sufferer from "chronic indigestion" unattended by gastrodynia. She ceased menstruating two years ago. On Feb. 28th she complained of a "sinking feeling" in the abdomen, and in the evening she became extremely collapsed, vomited two or three pints of venous-looking blood and passed two or three pints of very offensive tar-like motions. Ergotine was given subcutaneously and ice to suck; nutrient suppositories and enemata were also used. On March 2nd while straining at defecation she again vomited blood and on March 6th she became delirious. On March 7th she again passed copious tar-like and very offensive motions. She was now delirious and completely blanched; the pulse was not perceptible at the wrist and the heart sounds were scarcely audible. Injections of ergotine were given repeatedly and a pint of normal saline solution (one drachm to one pint) was injected into the vein at the bend of the elbow, after which there was a slight improvement. For the next few days the patient hovered between life and death, but by March 10th she was improving slowly; on March 30th she was able to get up, and a fortnight later she came downstairs daily.

Mr. H. SECKER WALKER showed two cases of Suppurative Disease of the Middle Ear and Mastoid Cells in which Stacke's operation had been performed. In one case the mastoid cells were so much diseased that a large cavity had been left in the bone and this had since been "papered" with epithelium, giving a good result with improved hearing and cessation of discharge. In the other case facial paralysis had occurred a week before operation and this had since quite passed off.—Mr. SECKER WALKER also showed a Suction Curette for soft cataract; it was made of glass so that it could be sterilised by boiling.

Dr. CHURTON showed a male patient aged eighteen years who was admitted into the Leeds Infirmary on Feb. 22nd with General Chorea. In 1894 he had rheumatic joints and for four days was unable to work. Slight chorea followed, but he continued to work and after some weeks recovered. In October, 1895, after kneeling in wet sand he had pain in both knees; his hands afterwards became painful and swollen, but he kept at work, and towards the end of January, 1896, he had apparently almost recovered. On Feb. 5th he had a violent quarrel with a relative, on Feb. 6th there were choreic movements in the right side of his face, his right arm and leg, and on Feb. 8th his right hand was swollen and painful. On Feb. 13th he was nearly well, but on this day a serious quarrel occurred with the foreman of his department, and on Feb. 14th the chorea returned in his right hand, quickly spreading to all his limbs. The case illustrated the general principle enunciated by Dr. Churton at a recent meeting of the society[1] and founded upon observations in thirty-three cases, that in a person about to be rheumatic the first point of attack is determined by local chill, injury, or shock. If in a young person the organ thus damaged be the brain chorea or some other cerebral disorder will be the first and sometimes the only result.

Mr. WEST (Morley) and Mr. LITTLEWOOD showed a boy aged fifteen years who had been operated on for Acute Intestinal Obstruction on March 9th, 1896. The obstruction was in the small intestine and was caused by a coil which had become adherent in the pelvis to the side of the rectum and had invaginated a portion of the rectal wall; this could be felt before the operation. The adhesion was about the size of a half-crown and was separated; it bled freely, and at the edges there was some purulent lymph with a distinctly fæcal odour. The parts were carefully sponged and the abdomen was closed without drainage.

Mr. LITTLEWOOD showed a man aged thirty-seven years on whom he had operated for Diffuse Popliteal Aneurysm, removing about twelve ounces of blood-clot together with the aneurysmal portion of the artery. The patient made an uninterrupted recovery and now walks about without any difficulty.

[1] THE LANCET, Feb. 22nd, 1896, p. 487.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

Recent Results of the Treatment of Diphtheria by Antitoxin.—Hemianæsthesia.

A MEETING of this society was held on May 5th, Dr. ADOLPH BRONNER, President, being in the chair.

Dr. H. J. CAMPBELL read a paper upon Recent Results of the Treatment of Diphtheria by Antitoxin. After giving a summary of the statistics of the treatment both at home and abroad Dr. Campbell discussed in some detail the recent report of the medical officers of the Metropolitan Asylums Board hospitals, and pointed out that these statistics were not open to the same objections as some of the foreign records, in that the cases were all subjected to the examination of the medical man sending the cases up and to the expert opinion of the medical officer, in addition to the bacteriological examination of the throat, so that the patients were all suffering from clinical and not from what might be described as bacteriological diphtheria. The question of dosage was then referred to, and on the authority of Dr. Goodall it was stated that in the Eastern Hospital larger doses of antitoxin had been used recently with better results than they had before obtained. The mode of action of the remedy was then considered and the experiments of Fischel and Wunschheim were quoted in support of the view that the antitoxin does not function as a bactericide, nor does it simply neutralise the toxine, but apparently acts upon the tissue cells in such a way as to enable them to destroy, or at least to render inert, the injurious action of the toxine. It was pointed out that in all diseases associated with the presence of toxines it was of the utmost importance to keep the kidneys well flushed, as the toxic bodies were eliminated by these organs. The results obtained in the prevention of diphtheria by using the antitoxin as an immunising agent were next described, and Ohlmacher's and Biggs' observations upon the length of time that the immunity persists were referred to. In conclusion, an account was given of the pathological effects produced by the remedy itself.—Dr. S. JOHNSTON, Dr. GOYDER, and Mr. MERCER made remarks.—The PRESIDENT discussed the complications met with in diphtheria, and pointed out that since the introduction of the serum treatment the onset of paralysis was not prevented and there were more cases of nephritis. The question of the possible advantages to be obtained from the local use of antitoxin was raised, and Dr. CAMPBELL replied.

Dr. MAJOR read notes of a case illustrating the clinical significance of Hemianæsthesia. A man aged fifty years had been ailing for three months. There had been headache, deafness on the right side, failure of sight, slight failure of power of the right arm and leg, some numbness in the legs, and loss of taste and smell. There was no history of "stroke." When the patient first came under observation there was very slight motor failure on the right side, but there was complete right hemianæsthesia of the skin and of the mucous membranes and also of the special senses. The optic discs were clear; the field of vision was markedly contracted, especially on the right side. Perimetric tracings were exhibited. The patient looked well; there was no obvious paralysis, and no mental defect. The right plantar reflex was reduced. The question of diagnosis, the exact seat of the lesion, and its probable nature were discussed. It was pointed out that in cases of hemiplegia from hæmorrhage or thrombosis motion is often alone affected, because the posterior part of the internal capsule had escaped injury, the lenticulo-striate artery being situated in the anterior part. If in these cases sensation be more or less affected it is reasoned that the lesion has to some extent involved the posterior extremity of the internal capsule. In the case under consideration there was little motor paralysis but complete anæsthesia of one side involving touch, pain,

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and temperature—the skin, mucous membranes, and special senses being all implicated. The differential diagnosis was discussed and the views of Ferrier quoted as to the results of section of the posterior division of the internal capsule. With regard to the eye troubles in lesions of the internal capsule the views of Gowers, Ross, and Ferrier were mentioned, the latter being of opinion that besides hemianopsia cases were occasionally found of crossed amblyopia, as in the one under consideration.—The case was discussed by Mr. FARROW, Dr. H. BRONNER, and the PRESIDENT, and Dr. MAJOR replied.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

The Liver.

A MEETING of this society was held on May 6th, Dr. MUTCH, President, being in the chair.

Dr. W. B. RANSOM read a paper on the Liver. Attention was drawn to the remarkable power of regeneration of this organ. The functions of the liver in regard to fat, glycogen, and sugar were discussed and the conclusion drawn that the greater part of the liver glycogen is normally converted into sugar, not by a ferment, but by the hepatic cells. In regard to bile formation, the seat of blood destruction was considered and the view expressed that it normally commences all over the body and not exclusively in the spleen. Microphotographs were shown of the deposit of iron in the liver in pernicious anæmia. In the case of a man with biliary fistula the daily quantity of bile passed was found to average thirty ounces, the colour being always yellow. The stools remained inoffensive and the patient had a good appetite and digested all kinds of food. The reduction products of bilirubin were discussed and spectroscopically illustrated. Evidence was given of the identity of normal and pathological urobilin. The pigment of the fæces, stercobilin, was usually found to be largely urobilin, but in one case appeared to be mainly hydrobilirubin. Intermediate reduction products are also probably present in fæces. The relation of the liver to urea was also considered and the results obtained by Neucki, Pawlow, &c., with an Eck's fistula detailed. The power of the liver to detain and destroy poisons introduced into or manufactured in the alimentary canal was also pointed out.

Remarks were made by the PRESIDENT, Dr. HUNTER, and Dr. WATSON, and Dr. W. B. RANSOM replied.

CARDIFF MEDICAL SOCIETY.

Exhibition of Cases and Specimens.—Surgical Measures in the Aged.

THE usual monthly meeting of this society was held on May 8th, Dr. EDGAR JONES, President, being in the chair.

Mr. HIER EVANS showed a Case of Diffuse Scleroderma in a boy aged nine years. No other members of the family suffered from a skin disease.

Dr. RHYS GRIFFITHS showed for Dr. HARDYMAN: (*a*) A very severe case of Pott's Fracture saved by conservative treatment, a large wound having been subjected to oxygen treatment; and (*b*) a Roentgen photograph taken by Mr. Allen showing Injury to the Internal Condyle of the Humerus.

Mr. J. LYNN THOMAS showed: (*a*) A Case of Bazin's Malady in a girl aged nineteen years. The symptoms coincided with Mr. Hutchinson's description of the disease. It was confined to the region between the knees and ankles, symmetrical, and had been treated for some months as a case of syphilis. The patient gave a perfect counterfeit synopsis of the manifestations of secondary syphilis. On Boxing Day, 1894, she was ravished (*sic*) in the train by an unknown man. She subsequently—about two months later—had "sores on the genitals," "skin eruption," "loss of voice," and "this disease on my legs." On close examination she turned out to be a *virgo intacta;* the "sores" were retention cysts on the labia minora, the "sore-throat" depended upon simple laryngitis to which she was liable, the "skin disease" was acne, and the "disease on her legs" was what Mr. Hutchinson has designated "Bazin's malady." (*b*) A series of Roentgen Photographs illustrating Foreign Bodies in the Hands, Fracture of the Forearm, Disease of the Elbow, and a Fœtus five months old, showing three rows of Ossific Centres in the Vertebral Column.

Dr. PATERSON showed: (*a*) A case of Unusual Hemispasm following Hemiplegia in a Child aged two years; and (*b*) the Bulbous Extremity of a Divided Spinal Accessory Nerve.

Dr. ALFRED SHEEN showed a man with a very Extensive Keloid on the Back following a Burn.

Dr. A. W. SHEEN read a paper on Surgical Measures in the Aged. The paper emphasised the importance of antiseptic surgery in operations and the urgency of allowing aged patients to get up soon after any injury or operation. Confinement in the recumbent position and carelessness in asepsis or antisepsis are frequent avoidable causes of death in the aged.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

A Few More Words on Strophanthus.—Exhibition of Cases and Specimens.—Lantern Demonstration.

THE eighth meeting of this society was held on May 6th, Dr. ARGYLL ROBERTSON, President, being in the chair.

Dr. G. W. BALFOUR read a paper entitled "A Few More Words on Strophanthus." He remarked on the importance of the subject and stated that they had been asked to put faith in strophanthus on the strength of a series of cases in which the employment of the drug was followed by the disappearance of dropsy, and in which the pulse tracings showed an apparent improvement in the pulse-rate and blood pressure. But the like, he said, happened before without either strophanthus or digitalis and happened daily even now. History, he thought, showed that many, if not most, cardiac cases in hospital required no treatment but rest. Drugs only were of permanent value which increased the elasticity of the myocardium, and this action could only be permanent when accompanied by a corresponding improvement in the general metabolism. This action was typically preserved by digitalis, the elasticity in the myocardium was increased, and this was accompanied by a rise in the general blood pressure. The only other member of the digitalis group which had succeeded in obtaining general recognition was strophanthus, but its action was essentially different from digitalis. Therapeutically it was used to prolong the cardiac diastole and to increase the contractile energy of the myocardium. Its disadvantages were its twofold action on the heart (small doses prolonging the diastole and large doses arresting the heart in systole) and its excessive energy as a poison. Again, strophanthus acted 3000 times more powerfully on the heart than digitalis and 100 times less powerfully than digitalis on the muscles of the arterioles. Thus any rise in the blood pressure produced by strophanthus was due to the systole of the heart and no action was produced similar to that seen in a case of bradycardia, and the rise of blood pressure was thus evanescent, and from the absence of any improvement in the metabolism of the myocardium the stimulating action of strophanthus must tend to exhaust instead of strengthening. Dr. Balfour next glanced at the action of strophanthus on the nervous mechanism of the heart, and maintained that it produced an effect typically that of a heart dying from exhaustion. Finally, he maintained that the action of strophanthus, like all its congeners of the Apocynaceæ, was that of a cardiac poison and not a cardiac tonic; in therapeutic doses it stimulated the heart to increased action, and by calling upon its reserve of energy, without improving its metabolism, it caused death in diastole from exhaustion. The more feeble the heart the greater the risk attending its action. Strophanthus he considered at all times an uncertain and dangerous drug to employ and one entirely unworthy to be called a remedy.—Dr. GRAHAM BROWN, Dr. JAMES RITCHIE, and others took part in the discussion.

Dr. ALEXIS THOMSON showed for Mr. ANNANDALE:—1. A patient after Plastic Operation of the Face for Deformity caused by Rodent Cancer. When he first came under notice he had been repeatedly operated on for the cancer, a gap being present in the position of the nose. The gap was filled up with tissues from the upper lip. The present drawback was that there was a strong growth of hair from the nose. 2. Two cases of Perforating Ulcer of the Foot. In the first case the posterior tibial nerve had been stretched and the ulcer had completely healed. The patient suffered from early tabes dorsalis. The second case was in an early stage. The ulcer was on the plantar surface of the great toe. The ulcer was anæsthetic and analgesic. Symptoms of peripheral neuritis were present. 3. A patient after operation

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for Perforated Gastric Ulcer. The patient while walking was suddenly seized with pain in the abdomen about the region of the umbilicus. The pain was very severe and when first seen by his medical attendant he was manifestly very ill. During the evening he vomited and was sent to the hospital as suffering from intestinal obstruction. There was, however, no obstruction, and the diagnosis seemed to lie between perforated gastric ulcer and appendicitis. No evidence of appendicitis could be made out. There was a history of slight dyspepsia before the attack of severe pain. The abdomen was opened and the peritoneum was found to contain gas and turbid fluid, milk. egg, &c. Yellow lymph was present on the peritoneal surface of the stomach and intestine. An ulcer was found in the anterior wall of the stomach with a circular perforation. The ulcer was invaginated and a drainage-tube was left in the abdomen and the abdominal wound stitched up. The bowels moved next morning after a saline purge. There was some delirium, as was frequently seen in such cases, but the patient made an excellent recovery, and was now in good health. Mr. Thomson remarked that six days ago he had operated on a similar case in Mr. Annandale's wards; the patient was going on well.

Dr. JAMES CARMICHAEL showed a child seven years old. She had been admitted to the Sick Children's Hospital on account of inability to walk. Three months previously she had had an attack of bronchitis. On recovery from this she was found to be unable to walk. She now walked with a "waggling" gait and the attitude of a case of pseudo-hypertrophic paralysis. The whole muscular system was in a feeble state. The feet were markedly flat. No evidence could be found of disease of the nervous system. The electrical reactions of the muscles were normal.

Mr. DAVID WALLACE showed two cases with unusual features. The first was a man twenty-three years of age who was admitted to the Royal Infirmary suffering from tuberculous bone disease for which one foot was amputated. On returning to report himself a swelling was found on the right side of the head. Fluid was diagnosed. Under chloroform an abscess was opened. A sequestrum was found which, when touched by the examining finger, disappeared into a cavity between the skull and the dura mater. It was a case of tuberculosis perforans of the skull, a somewhat rare condition, and had given rise to no symptoms. The patient made an excellent recovery. The second case was that of a man aged thirty-six years who was trephined. While carrying wood he fell and was found unconscious. He was removed to the infirmary, where he was found to be in a very drowsy state with a wound over the left parietal region. The pulse was 42. The pupils were equal. He vomited, and the pulse rose gradually to 62. He was in a drowsy condition, breathing heavily, but not stertorously. The following day the pulse was quicker and the temperature rose to 102° F. He seemed more drowsy, and there was some paresis of the right arm. He had the appearance of cerebral irritation. Next day as he seemed to be getting worse Mr. Wallace operated. A portion of the left parietal bone was found and a circle of bone removed, but no hæmorrhage was discovered. The coronal suture was, however, noticed to be separated. Mr. Wallace then trephined on the right side, but found no gross hæmorrhage, merely small extra-dural hæmorrhage. The patient gradually became conscious and made a good recovery. In this case there seemed to have been first concussion followed by reaction, with the production of small hæmorrhages.

Dr. NORMAN WALKER showed a patient to whom Warts had been communicated by shaving.

Mr. CAIRD gave a Lantern Demonstration illustrating the Pathology of the Appendix Vermiformis.

Dr. NORMAN WALKER showed microscopic specimens—(1) from a case of Ringworm of the Scalp in an Adult—a very uncommon condition; and (2) the Germs said to be responsible for Eczema. They were found in mulberry-shaped collections.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases, Specimens, and Photographs.

THE concluding meeting of the session was held on May 8th, Dr. W. G. DUN being in the chair.

Dr. WALKER DOWNIE showed an infant the subject of Membranous Occlusion of the Left Nostril. The child was brought to hospital on account of noisy respiration and of inability to retain the nipple in the mouth when taking the breast, a condition which had been present since birth. Examination discovered a membranous diaphragm closing the left nostril less than a quarter of an inch within the orifice. There were evidences of syphilis in the child and Dr. Downie was disposed to regard the occlusion of the nostril as the result of an ulcerative process which had existed in intra-uterine life.

Dr. LINDSAY STEVEN showed a man twenty-two years of age who after a severe attack of enteric fever in May, 1895, developed three weeks after convalescence an extreme Spastic Condition of the Left Upper Limb especially marked in the flexors of the digits and elbow; a similar but less extreme condition appeared in the left foot. Sensation was undisturbed; the tendon jerks were exaggerated; there was no reaction of degeneration, and no history or evidence of syphilis. Dr. Steven had no doubt that the lesion was situated in the upper segment of the left motor tract, but its nature he regarded as very uncertain. He leaned rather to the view that it was thrombotic, leading to a gradual sclerosis in the motor cortical area.—Dr. STEVEN also demonstrated four cases of Enlargement of various Groups of Lymphatic Glands for the purpose of illustrating his opinion that in many such cases the distinction that ought to be made between true Hodgkin's disease and other lymphatic enlargements was not made. The most interesting member of the group was a lad aged nineteen who, after suffering from enlargement of the cervical and axillary glands for some months, began to develop evidence of paralysis of the third cranial nerve on the right side with, afterwards, great difficulty in walking and a tendency to fall backwards when not supported although the lower limbs were not paralysed. The case was described as a genuine case of Hodgkin's disease, with formation of a nodule or nodules exercising pressure on the central nervous system; there was no splenic enlargement. Dr. Steven concluded this part of his demonstration by showing a lympho-sarcomatous growth from the mediastinum. The malignant process had extended to the pleura, and large numbers of nodules had developed along the surfaces of the ribs and also in the subcutaneous tissue.—Dr. STEVEN also showed the Liver from a case of Congenital Absence of the Common Bile Duct removed from the body of a child who had died aged five months. The child had been jaundiced from birth, but had appeared in all other respects to be a perfectly normal child. On the morning of death the child had seemed to be dull and listless and cried when moved. Death occurred suddenly from a large hæmorrhage into the intestine. Post-mortem examination showed the absence of the common bile duct, the cystic duct terminating in a filamentous cord. The normal hepatic ducts were present, the capillary ducts in the liver being distended with bile. The liver itself was the seat of a fine cirrhosis. Dr. Steven drew attention to the rarity of the case as a complete record and to the comparatively long time which the child lived in apparently complete health and happiness.—Dr. R. M. BUCHANAN discussed the case and briefly described two similar cases which he had seen at the Royal Hospital for Sick Children.

Dr. C. O. HAWTHORNE showed the Suprarenal Capsules from the body of a woman aged fifty, the capsules being enlarged and almost completely caseous. The patient had been the subject of phthisis pulmonalis and there had been marked pigmentation of the skin of the trunk. The face was quite free from undue pigmentation, and there was no noteworthy darkening of the skin of the axillæ or of the genitals. There were no patches on the buccal mucous membrane. A contrast, however, was appreciable between the skin of the palms of the hand and that of the dorsum of the hand and the front of the forearm, there being in the last-mentioned situations a faint but distinct walnut-tinged colour which terminated abruptly at the base of the palm. This, together with the pigmentation of the trunk and some few but not severe attacks of vomiting, had been regarded as rendering a diagnosis of Addison's disease probable, and the patient's sudden death and the post-mortem examination confirmed this view.—Dr. HAWTHORNE also showed photographs and drawings of a case of Leucoderma. The patient was a woman aged forty-three years and the subject of symptoms pointing to chronic pathological changes in the lumbar enlargement of the spinal cord. There was also extensive brown pigmentation of portions of the trunk and limbs with intervening areas of skin almost entirely free from pigment. It was specially noteworthy that the distribution of this condition was almost exactly symmetrical, there being, for example, a white patch

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over each elbow, each hip, and in the lower half of each forearm. Dr. Hawthorne suggested that this distribution must be taken as supporting the view that leucodermic patches are essentially dependent upon changes in the nervous system.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

Suppurative Pericarditis treated by Drainage.—Leucocythæmia.—Empyema.—Exhibition of Cases.

A MEETING of this section was held on May 8th, Dr. WALTER G. SMITH being in the chair.

Dr. O'CARROLL read an account of a case of Suppurative Pericarditis secondary to Pneumonia which had been treated by free and constant drainage. The pericardial cavity gradually contained less and less pus, but the patient died from asthenia two months afterwards, and the walls of the pericardial cavity were then found to be adherent everywhere except in front, where there was about a drachm of pus.—Dr. M. A. BOYD related the particulars of a case in which he drew off four ounces of serous fluid and the patient recovered. The temperature might be normal though there was pus in the pericardium. In children broncho-pneumonia often preceded the collection of fluid in the pericardium; he thought that paracentesis should be resorted to more frequently than at present in cases of pericarditis in children.—Dr. HEARD drew attention to the observation of Dr. Ewart that a patch of dulness might be detected at the inner side of the angle of the left scapula at the base of the left pleura as an early symptom in these cases.—Dr. DRURY asked what was the exact site selected for the operation. It had been recommended some time ago to tap the pericardium as close as possible to the left margin of the sternum in the fourth interspace, but he had examined a large number of subjects in the dissecting-room and had found that in a considerable proportion of cases either the internal mammary artery or vein would be wounded by such a proceeding.—Dr. FINNY said that he had only met with one case of suppurative pericarditis requiring operation. He tapped the pericardium one inch outside the sternum, between the fourth and fifth ribs, and drew off eight ounces of purulent fluid, giving immediate relief, but a second attempt to perform the same operation with a larger needle did not succeed, as for some unaccountable reason he failed to reach the pericardium. The post-mortem examination revealed a large collection of pus in the pericardium. He thought that pericarditis was comparatively a rare disease, and that extensive pericardial effusion was very rare, the consequence being that very few cases required to be tapped, but tapping should be resorted to when the symptoms did not yield to other forms of treatment, especially when the effusion was believed to be purulent.—Dr. O'CARROLL, in reply, said that there was no infection of the left pleura, as the fluid which it contained was a clear serous fluid due to the cardiac failure which occurred at the end of the patient's life. Though he had carefully examined the patient's chest he had not remarked the symptom referred to by Dr. Heard. In making the puncture he had selected a point in the fourth space a thumb's breadth internal to the nipple line.

Dr. CRAIG read a short paper on Leucocythæmia and exhibited stained blood films and photographs of a case of the lymphatic type of this disease. The patient had died in hospital after an acute illness of two months' duration, his symptoms being general enlargement of all the lymphatic glands, pallor, severe epistaxis, diarrhœa, temperature varying from 99° to 103°F., dyspnœa, slight increase in size of spleen and liver, but no tenderness over the bones. In the blood there was a diminution in red cells to at least one-third of the normal number and an absolute and relative increase of the leucocytes, so that the proportion of white to red averaged about one to twenty. Dr. Craig drew attention to the recent description by Kanthack and Hardy of the leucocytes found in normal blood, and said that in his case all the forms of white cells could be seen, although the increase was entirely due to the presence of lymphocytes. He pointed out that a purely lymphatic form of leukæmia was rare, that its victims were among the young, and that the disease generally ran an acute and rapidly fatal course. In the present instance the patient was an Italian nineteen years of age, and the illness terminated fatally within two months from its onset. The severe epistaxis and persistent diarrhœa required symptomatic treatment so that arsenic was not given a fair chance and bone-marrow was not tried.—The CHAIRMAN thought that the clinical significance of the various leucocytes was still very doubtful. He stated that the continuous use of arsenic in chronic cases was not devoid of danger, as peripheral neuritis might ensue; he also mentioned the great chemical changes that occurred in the urine in this disease, the uric acid and the xanthine bodies being increased.—Dr. BOYD mentioned that he had treated a case of the lymphatic form in which there was marked tenderness of the tibiæ, sternum, and ribs. Under arsenic there was distinct improvement (proportion of leucocytes 1—300). The patient was then put on bone-marrow, but a relapse occurred (leucocytes 1—20). On resuming the arsenic treatment improvement again took place and the patient returned to the country, where, however, he relapsed again and died in three or four months.

Dr. A. R. PARSONS read notes of a case of Extensive Empyema.—The CHAIRMAN said that in such cases the heart was generally the first organ to return to its normal position. After aspiration the effects of the diplococcus of pneumonia seemed more amenable to treatment than those of the streptococcus, so that the examination of the pus was of the greatest consequence. He agreed with Dr. Parsons that a peculiar tympanitic note on percussion and roughness on breathing were often the first symptoms in such cases.

Dr. A. R. PARSONS also exhibited a case of Atresia Auris and Unilateral Facial Paralysis occurring in a female patient and a case of Hemichorea.

Reviews and Notices of Books.

Abdominal Tumours and Abdominal Dropsy in Women. By JAMES OLIVER, M.D., F.R.S. Edin., Physician to the Hospital for Women, Soho-square, &c. London: J. and A. Churchill. 1895.

THIS little book consists of 281 pages of large print, divided into twenty-six chapters, in which various swellings met with in the abdomen, ranging from pregnancy to cancer of the liver, are more or less fully considered. It will be seen that while several of the tumours described are those more particularly belonging to the department of gynæcology, a large number, such as tumours produced by enlargement of the liver, enlargement of the gall-bladder, tumours of the pancreas, and tumours connected with the spleen and kidney, belong to general medicine. We think, however, that the author has done right to include them, as the diagnosis of any particular abdominal tumour involves to some extent a knowledge and exclusion of all the rest.

Contrary to the usual practice, the author does not give us any information as to the intention or aim of the work, for he does not supply a preface. The book very properly begins with the diagnosis of pregnancy in its various phases. It is hardly possible to lay too much stress on the need for acquiring a practical familiarity with all the physical signs of pregnancy, for there is no subject in which mistakes are more frequently made—mistakes which necessarily tell to the disadvantage of those making them, as well as of their patients.

In what appears to be intended to be a monograph it might perhaps be said that some of the cases given under the heading Utero-gestation are a little trite and elementary—e.g., Case 4, on page 10, entitled Conception occurring while Menstruation was held in Abeyance by Lactation. This is a matter of frequent occurrence; no doubt a case of this kind is instructive to a student beginning to work at the subject, but in writing for those who may be presumed to have had a certain amount of general experience so elementary a piece of information would seem a little superfluous. The same may be said of Case 5, entitled Pregnancy in a Woman

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who ever since the Establishment of Menstruation had Menstruated with great Irregularity.

We observe in the section devoted to Hydatid Mole that the author says that "on vaginal examination portions of the mole may be found hanging through the cervix." This is certainly contrary to the general experience except in cases where the mole is actually in process of being spontaneously expelled. In the chapter on Fibroid Tumours of the Uterus, Case 7, Uterine Fibroid producing Retention of Urine after the Menopause, illustrates what has become more generally recognised of late—viz., that it is by no means rare for these tumours to give trouble even after the change of life.

In Chapter VII., on Hæmatometra and Hydrometra, which, by the way, is a very short one, only consisting of two and a half pages, the author recommends for the treatment of imperforate hymen that a small opening should be made and after the bulk of the fluid has escaped that the opening should be enlarged, but does not say in what way the opening is to be made, whether by the knife or scissors or aspirating needle, or by the method which is generally considered best nowadays—viz., with Paquelin's cautery. In speaking of Ventral Hernia he says in mild cases much good may accrue from galvanism and the administration of tonics, but in others a properly adjusted abdominal belt is imperative. He omits any mention of the operative treatment of this condition.

The American Year-Book of Medicine and Surgery; being a Yearly Digest of Scientific Progress and Authoritative Opinion in all Branches of Medicine and Surgery, drawn from Journals, Monographs, and Text-books of the leading American and Foreign Authors and Investigators. Under the general editorial charge of GEORGE M. GOULD, M.D. London: The Rebman Publishing Co., Limited. Philadelphia: W. B. Saunders. 1896. Price 38*s*.

THIS handsome and bulky volume forms a welcome addition to the somewhat extensive series of year-books which aim at presenting a critical digest of contributions to every branch of medical and surgical literature that have appeared within the preceding twelve months. The work before us deals with the period from July, 1894, to June, 1895, and it is difficult to know which to admire most—the research and industry of the distinguished band of experts whom Dr. Gould has enlisted in the service of the year-book or the wealth and abundance of the contributions to every department of science that have been deemed worthy of analysis. Publications such as this serve to bring home to us the fact that in all parts of the world there is constantly increasing activity in ever-widening circles for the advancement of scientific knowledge and the promotion of sound medical and surgical practice. As regards the work itself it is much more than a mere compilation of abstracts, for as each section is entrusted to experienced and able contributors the reader has the advantage of certain critical commentaries and expositions, where such seem to be needed, proceeding from writers fully qualified to perform these tasks. It would be impossible to treat such a work as if it were an ordinary manual or text-book; there is no single critic who could presume to offer an opinion as to whether the matters dealt with in each and every section are of adequate importance or whether they have been suitably noticed. It may, however, be taken as certain that as regards method of arrangement of subjects, their proportionate distribution, and the lucidity with which they are treated this year-book is of much excellence. The following is a list of the departments and of the contributors to them. General Medicine: Dr. W. Pepper and Dr. A. Stengel; Surgery, Dr. W. W. Keen and Dr. J. C. Da Costa; Obstetrics, Dr. Barton C. Hirst and Dr. W. A. Newman Dorland; Gynæcology, Dr. J. M. Baldy and Dr. W. A. Newman Dorland; Pediatrics, Dr. L. Starr and Dr. Thompson S. Westcott; Nervous and Mental Diseases, Dr. A. Church and Dr. H. J. Patrick; Dermatology, Dr. W. A. Hardaway and Dr. C. F. Hersman; Orthopædic Surgery, Dr. Virgil P. Gibney and Dr. Homer A. Gibney; Ophthalmology, Dr. H. F. Hansell and Dr. C. F. Clark; Otology, Dr C. H. Burnett; Diseases of the Nose and Larynx, Dr. E. Fletcher Ingalls and Dr. T. Melville Hardie; Pathology and Bacteriology, Dr. J. Guiteras and Dr. D. Riesman; Materia Medica. Experimental Therapeutics, and Pharmacology, Dr. H. A. Griffin and Dr. Van Horne Norrie; Anatomy, Dr. C A Hermann; Physiology, Dr. G. N. Stewart; Hygiene, Medical Jurisprudence, and Chemistry, Dr. H. Leffmann. The book is furnished with an admirable index—a *sine qud non* in a work of reference—and is also illustrated by engravings and coloured plates reproduced from articles quoted. It is emphatically a book which should find a place in every medical library and is in several respects more useful than the famous "Jahrbücher" of Germany. It has, however, one blemish which to many may perhaps seem but venial. Much as we admire this very excellent review of medical and surgical progress we cannot refrain from regretting that the learned editor—himself a lexicographer—should have adopted some of the "new spelling," which, although advocated by some very eminent men, seems to us to be a retrograde step and one destructive of etymology. Dr. Gould has done this, he says, in his preface, "in the interest of much-needed brevity and simplicity"; but although he may succeed in familiarising us with such elisions as occur in the words "chlorid," "chlorin," "iodid," "iodin," "quinin," "aceton," just as we have long been used to "labor," "color," and "hemorrhage," it will take longer for even the mildest purist to be reconciled to "anemia," "hemoglobin," "uremia," "hemoptysis," "pyemia," and the even more startling "edema," and "esophagus," which are but samples of the manner in which the diphthong is here ignored. Nor can we pretend to prefer "goiter," "center," "pathologic," "histologic," or "physiologic" to the recognised spelling of the words these terms represent. Has Dr. Gould in view the further extension of this system in successive year-books, and having accustomed us to these samples is he meditating a further driving in of the wedge and the elision of all mute consonants also? If so, we fear that what may be a gain to the cause of phonetic spelling will be a loss to literary style and accuracy, and Dr. Gould himself may have to remodel his famous dictionary.

Surgical Pathology and Morbid Anatomy. By ANTHONY A. BOWLBY, F.R.C.S. Eng., Assistant Surgeon to St. Bartholomew's Hospital. Third edition. London: J. & A. Churchill. 1895. Pp. xxiii. and 640. Price 9*s*.

PATHOLOGY holds at the present time a place very different in importance from that which it occupied twenty years ago. The constant progress that has been made in all its departments of late years has converted it from one of the minor branches into the chief branch of medical science, for it is only by a correct pathology that we can prevent disease; and on a true knowledge of pathology therapeutics, to be successful, must be based. The volume before us is one of the most satisfactory of the smaller text-books on a subject often too scantily treated in the ordinary manuals of surgery. In noticing the first edition of this work in 1888 we spoke with approval of the care which had evidently been bestowed upon it, and we are glad to see that this the third edition is an improvement even on the two preceding issues. The descriptions of pathological conditions are accurate and concise, yet conciseness has not been gained at the expense of accuracy and the descriptions are sufficiently full for any student's requirements. All parts of the work have been brought

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up to date, but the present edition differs from its predecessors chiefly in the fuller account which has been given of bacteriology, and this is due to Dr. Kanthack, Lecturer on Pathology at St. Bartholomew's Hospital, who has rewritten the chapter on Micro-organisms in their relation to Pathological Processes, and has also added to the information regarding pathogenic bacteria in various parts of the book. Twenty new illustrations have been added to the 185 present in the second edition. The book may be safely recommended as a trustworthy handbook to the science of surgical pathology.

Pediatrics: the Hygienic and Medical Treatment of Children By THOMAS M. ROTCH, M.D., Professor of the Diseases of Children at Harvard University. Two Vols. Edinburgh and London: Young J. Pentland. 1896.

FROM several points of view this is one of the most important works on the diseases of children which has appeared for many years. It differs from previous text-books in the large amount of space devoted to the natural development of children from birth to puberty and to the question of natural and artificial feeding, and also in the remarkable wealth and excellence of its illustrations. These latter are for the most part good mechanical reproductions of photographs, but there are also a number of accurately coloured plates. The book is almost over-illustrated, but this, after all, is a fault in the right direction, and it would be hard to find a work of the kind in which photography has been more successfully employed.

The text takes the form of lectures, apparently as delivered at Harvard University, and they are fifty-three in number. The first four are devoted to an account of the fœtus at term and the normal development of the infant, nor can even this large amount of space be considered too much when it is reflected how widely the anatomy and physiology of the infant differ from those of the adult. The subject is one which is usually passed over in a short introductory chapter, but Professor Rotch has here collected facts and statistics from the literature of all countries so as to furnish a valuable work of reference. And in this he has done good service, since knowledge of this kind must lie at the root of the successful recognition and treatment of children's diseases. After a good practical lecture on nursery hygiene he passes to the subject of infant feeding, to which no less than six lectures are devoted. This is a question of which Professor Rotch has made a very special study, and there is no man more qualified than he to write on it. To him is due the establishment of milk laboratories in America, the first having been opened in Boston in 1891. The amount of detailed care which has been spent on the matter is marvellous, and a perusal of the account here given may well make Englishmen blush that we are so far behind America in our artificial feeding. The most rigid care is taken in assuring purity of source of the milk and in preventing its subsequent contamination; at the laboratory it is separated by a centrifugal apparatus, sterilised, and re-combined in accordance with the physician's prescription. The physician can order any percentage of fat, sugar, and proteid within reasonable limit which he may choose just as he would order a prescription at a druggist's. So novel and excellent a departure is well worthy of imitation in this country, and, indeed, there are already signs of its being taken up. But for the benefit of that majority of mankind which has no milk laboratory within reach Professor Rotch gives complete directions for the home modification and sterilising of milk by means of simple and inexpensive apparatus which should prove of great practical utility. A special chapter on premature infants and their treatment completes this part of the book.

The succeeding part, dealing with the diseases of children, is also of considerable though unequal merit and bears throughout the stamp of originality, based as it is largely on the author's own experience. More than seventy pages are devoted to a study of the blood in childhood, in health and in disease, a point to which Professor Rotch justly attaches great importance. The account is very full and excellent and is followed by a full bibliography of the subject, which will make it a valuable work of reference for some time to come. The diseases and malformations of the newborn are treated in a separate section of three chapters. The order in which the systematic diseases of children are discussed is occasionally erratic. It is difficult to perceive the advantage of separating diphtheria and epidemic influenza from the specific fevers and treating the first-named under the heading of diseases of the mouth, nose, and pharynx, while influenza figures amongst the "unclassified diseases." This, however, matters little so long as the accounts given are good, which, indeed, they mostly are, though the different sections are, as we have said, not all of equal merit. The chapter on rickets may be instanced as inadequate to the importance of the disease—at least to the mind of an English physician. A valuable feature of the book lies in the frequent introduction of short accounts of illustrative cases. Temperature charts are also largely reproduced, but in a form which renders them strange and unpleasing to the eye, for the morning temperature is inserted vertically under that of the preceding evening, an arrangement which is at variance with fact and has nothing to recommend it. The worst which can be said of the book is that it is not all of the same great excellence as the introductory part. But Professor Rotch has produced a work which must have a standard place in the literature of children's diseases, and which no one studying the subject can afford to neglect.

Klinische Vorlesungen über Syphilis. Von Dr. E. VON DÜRING, Professor für Dermatologie und Syphilis an der Kaiserlichen Medizinschule in Konstantinopel. (*Clinical Lectures on Syphilis.* By Dr. E. VON DÜRING, Professor of Dermatology and Syphilis at the Imperial School of Medicine, Constantinople.) Hamburg und Leipzig: L. Voss. 1895. Pp. xvi. and 320.

THESE twenty-two lectures were delivered in French at the Imperial School of Medicine at Constantinople and have been translated into German for the use of the medical men attending the Haïdar-Pascha Hospital. Though the author expressly disclaims in his preface that these lectures form a complete text-book, we cannot but think that the work contains a very full and able exposition of the present knowledge of syphilis. As might be expected from Dr. Düring's position the skin affections caused by syphilis receive a greater share of attention than is usually accorded to them in most treatises on the subject; the author points out that so far as the skin at least is concerned no sharp line can be drawn between secondary and tertiary affections, that the manifestations attributed to these stages are often so mingled that they cannot be satisfactorily separated. Dr. Düring looks upon the papule as the fundamental lesion in all syphilides, and considers that all the other forms, such as the squamous, the vesicular, and the ulcerating, have developed from the papule. The author recognises a syphilitic neuritis and thinks that this condition accounts for many of the chronic pains which so often occur among the sequelæ of syphilis. The absence of any illustrations is accounted for by the work being merely a reprint of lectures, and we can understand that they were not essential for those for whom the book was intended—namely, the students attending the author's clinic; but it detracts somewhat from the value of the work for the ordinary reader.

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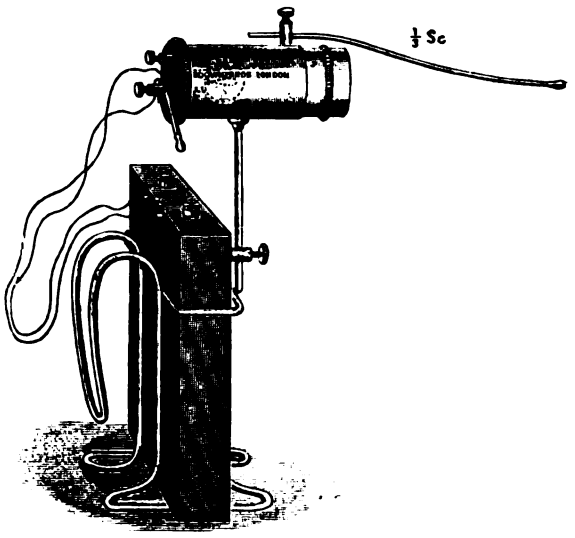
New Inventions.

ELECTRIC HAND LAMP.

A FOUR-VOLT accumulator, carried in a light wire stand, is the source of electric power. The lamp, a small 3½-volt incandescent one, is brilliantly lighted by a current of rather more than half an ampère. The beam of light, rendered parallel, convergent, or divergent by a three-quarter inch focal length bi-convex lens in a sliding mount, can be so directed

FIG. 1.



Stand, Accumulator, and Lamp, with Wire for Swab attached.

as to brightly illuminate the fauces without falling also upon the lips or teeth. A binding-screw on the top of the lamp case forms an attachment for the end of a wire swab (as shown in Fig. 1) for bacterioscopic examination, thus leaving the other hand available for the tongue depressor. The incandescent lamp is, of course, somewhat overworked, but it is inexpensive and is so mounted as to be easily renewable.

FIG. 2.

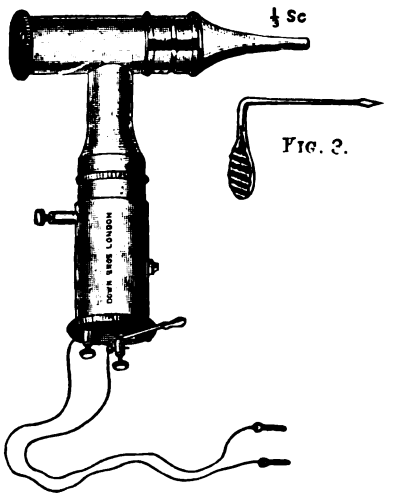


FIG. 2.

Lamp, with the Otoscope attached, and the Myringotome.

The lamp is detachable from the pin which fixes it to the front of the stand. After two years' use the accumulators are still in excellent working order.

The lamp is furnished with a flange for the attachment of a 'Brunton's" otoscope (Fig. 2) modified by having a slot cut in it so as to permit of the use of a specially shaped myringotome (Fig. 3) through it. The membrana tympani is very well illuminated by the electric lamp, and operation upon it is rendered easy. The lamp has been made for me by Messrs. Down Brothers, 5 and 7, St. Thomas's-street, Borough, S.E.

E. O. HOPWOOD,
Resident Medical Officer, London Fever Hospital, Islington.

RED CROSS PERFUME GERMICIDE.

WE have received from the Red Cross Germicide Company, Gresham-street, E.C. a sample of their "perfume germicide" and a convenient form of inhaler. The germicide consists of an alcoholic solution of a fragrant essential oil. The essential oil separates on addition of water, which develops its agreeable smell considerably. The inhaler in fashioned on the principle of an ordinary wash-bottle—i.e., it consists of a container with two tubes passing through the cork. One tube dips below the surface of the fluid in the container and the other ends at a point above the level of the fluid. By inhaling through tube No. 2 air is drawn through tube No. 1, and the fluid reaches the lungs charged with the volatile constituents of this fluid. In tube No. 1 is a small ball valve to prevent regurgitation in cases of coughing. The apparatus affords a handy and inexpensive method of inhaling medicated vapours, although there is nothing very new about it. It was suggested by Dr. O. Siemon of Cottbus, Germany.

A NEW MILK STERILISER.

WE have received from Mr. J. L. Aymard of Ipswich a new and simple apparatus for the sterilisation of milk by heating it rapidly and effectually in such a manner that it is not altered by evaporation. It consists of two parts—an ordinary saucepan to hold boiling water for the supply of steam and the milk container, which is surrounded by a tin plate cylinder or jacket, the intervening space of about half an inch in width being filled with steam when in use. This cylinder is open at the bottom, fits closely into the top of the

saucepan, and has a lid, so that the milk container is everywhere surrounded by steam except where its spout projects externally. The manner of using it is very simple. Some water having been made to boil in the saucepan the jacketed milk container is placed in position, and the whole is set over a good spirit-lamp or fire for about five minutes, which is sufficient to bring the milk to a temperature exceeding 200° F. without giving it the disagreeable flavour due to over-heating or "burning" which is so common with ordinary boiled milk. This apparatus enables milk to be very quickly sterilised for the use of an infant in small quantities as required, and there is of course no separation of the cream, so that the result is better than when a number of small bottles of milk are treated at one time, according to the usual practice, for when these bottles become cold the cream rises and sticks around the narrow necks. An important advantage of sterilisation is that it prevents any risk from the pathogenic organisms so frequently conveyed by milk, such as those of tubercle, scarlet fever and enteric fever. A thermometer is not essential, but it can be supplied if required. The sterilisers are made in sizes capable of treating amounts of milk varying from three-quarters of a pint to six gallons; the prices range from 3s. 6d. to £5 5s., the latter including a portable furnace and copper. The makers are Aymard's Patent Steriliser Company, 19A, Coleman-street, E.C.

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THE LANCET.

LONDON: SATURDAY, MAY 23, 1896.

THE wheels of progress at the Royal College of Surgeons of England, which had been clogged and seemed likely to remain at a standstill for an indefinite period, have been freed from some of the impediments which had caused the deadlock and are once more steadily though deliberately revolving. The overwhelming vote of the Fellows of the College in favour of the principle of representation of Members of the College on the Council recorded at the half-yearly meeting of the Fellows in January last ensured the defeat of the report of the Deputation Committee, which virtually recommended the Council not to make any concession either to the Fellows or to the Members and the acceptance for the moment of an amendment moved by Mr. TWEEDY and seconded by Mr. RIVINGTON to this effect: "That the recommendations of the Deputation Committee be not adopted, but that a poll of the Fellows be taken respecting the motion passed at the general meeting of Fellows on Jan. 2nd in favour of giving to the Members of the College direct representation upon the Council, and that a committee be appointed to prepare for the approval of the Council an elucidatory statement of the subject in question, together with the interrogatories which shall be submitted to the Fellows." This amendment was carried by 12 votes to 11, but when put as a substantive motion it was moved by Sir WILLIAM MACCORMAC and seconded by Mr. BRYANT: "That before the Fellows are addressed upon the subject the Council do take into consideration at an early date the question whether Members should or should not be directly represented on the Council." It will be observed that the terms of this resolution were in themselves ambiguous, and, naturally interpreted, imply that the Fellows were to be addressed as soon as the Council had taken the subject of the representation of Members on the Council into consideration, and, therefore, that the resolution was not antagonistic to the poll of the Fellows proposed in the resolution of Mr. TWEEDY. When put to the vote twelve members of the Council voted for the resolution and eleven against, one vote having been transferred from one side to the other. The resolution, being then put as a substantive resolution, was carried, and set aside Mr. TWEEDY'S motion. At the March meeting the Council took the subject of the representation of Members of the College on the Council into consideration, with the result that the following resolution, moved by Sir WILLIAM MACCORMAC and seconded by Mr. BRYANT, "That, as the members of this Council represent the body corporate of this Royal College and consequently its Members as well as its Fellows, it is the opinion of this Council that no further representation of the Members is desirable," was carried by eleven votes to eight, two members of the Council abstaining from voting and three of reforming tendencies being absent. Thus, by a fortuitous concurrence of adverse circumstances the motion for a poll of the Fellows was lost and a feeble resolution opposed to the representation of Members of the College on the Council was carried by less than half the Council.

It was not to be expected that the reforming members of the Council would acquiesce in a fiasco which placed the question in a false position and entirely obscured the real state of opinion on the Council. Hence it was that notice was given for the re-discussion of Mr. TWEEDY'S motion and of the adverse resolution passed at the March Council meeting, and both subjects were re-opened at the meeting of the Council held on the 14th inst. Mr. TWEEDY moved, and Mr. RIVINGTON seconded, the resolution: "That a poll of the Fellows be taken respecting the motion passed at the general meeting of Fellows on Jan. 2nd in favour of giving to the Members of the College direct representation upon the Council, and that a committee be appointed to prepare for the approval of the Council an elucidatory statement of the subject in question, together with the interrogatories which shall be submitted to the Fellows." This resolution was carried by a considerable majority, thus proving that it had only been lost on a previous occasion through misapprehension on the part of some of the members of the Council. After the adoption of this resolution Mr. RIVINGTON moved, and Mr. WILLETT seconded, the motion, "That the following resolution, proposed by Sir WILLIAM MACCORMAC, seconded by Mr. BRYANT, and carried by 11 votes to 8, be rescinded—viz.: 'As the members of this Council represent the body corporate of this Royal College, and consequently its Members as well as its Fellows, it is the opinion of this Council that no further representation of the Members is desirable.'"

It was too much to anticipate that the reforming zeal of the members of the Council would extend so far as to rescind a resolution. That zeal had been exhausted when the resolution for a poll of the Fellows had been passed and could no further go. The motion was lost, not on account of the strength of the opposition, but from lack of support by those who would never have voted in favour of the resolution which it was desired to rescind. It would certainly have been better if the resolution of the Council adverse to the claims of the Members had been expunged, because it tends to complicate the position and may lead, unless adequately explained, to the loss of votes which might otherwise be recorded in favour of the representation of the Members on the Council. A great deal will depend upon the "elucidatory statement" which has to be drawn up by the committee appointed by the Council and upon the questions submitted to the Fellows. It ought to be fairly represented in the "elucidatory statement" that opinion in the Council is very evenly balanced in regard to giving the Members of the College representation on the Council, that there is no clear majority either way, and that there has not been a majority of the Council voting for the adverse resolution.

It is high time in the interests of the College that this question should be settled and settled in favour of the Members of the College. No one can find fault with the tone and temper of the Society of Members on this question. They have been moderate and dignified. It was scarcely to be expected that, desiring as the Members naturally do to

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be represented by Members of the College, they should have taken the initiative and declared their willingness to be contented with representation by Fellows of the College, but, we believe, that should the Fellows of the College declare themselves favourable to the principle of representation of the Members and give a largely preponderating vote for representation by Fellows, the Society of Members would be ready to accept the decision and give to this method of representation a fair trial. It must be recollected that what is wanted is the addition to the Council of representatives of general practitioners, and no doubt these can be found both among the Fellows and he Members of the College, so that from this point of view it appears to be of minor importance whether Fellows or Members become the representatives of the Members of the College. The contentment and the unity of the great constituency which ought to be the pride of the College and its governing Council are the chief objects to be obtained, so that all connected with the institution may feel personally interested in its prosperity and work together for the common good. We firmly believe that the Fellows of the College generally will rise to this great opportunity and that they will show unmistakably that the resolution passed by the Council in a purely accidental manner does not reflect the matured opinion of the Fellows at large. We shall recur to this subject as soon as the committee has drawn up the elucidatory statement and the questions it has been appointed to prepare.

BENEDICT the Fourteenth, or MACAULAY'S "favourite Pope" according to TREVELYAN, was once asked by a nephew who wanted to follow in his uncle's footsteps what books he would recommend as best adapted to fit him for such a career. "You could not have consulted a better authority," was the Holy Father's reply. "Every year I make a list of the publications which are in all respects most worthy of perusal, particularly by aspirants such as you," and therewith handed him the last "Index Expurgatorius." The saying was even more wise than it was witty. None knew better than the able and learned Pontiff that "the most opposite opinions can make a plausible show of evidence when each has the statement of its own case, and it is only possible to ascertain which of them is in the right after hearing and comparing what each can say against the other and what the other can urge in its defence." He would even have concurred with another great thinker of our century, that, so far as the plastic and energising intellect is concerned, "a waking error is—aloof from practice—better than a sleeping truth," and that "there is no proportion between the possession of facts and the development of the mind in which they are deposited." Every schoolboy in science "is now familiar with more truths than PLATO or ARISTOTLE ever dreamed of knowing, yet" (continues the same authority), "compared with the Athenian or the Stagyrite, how few even of our masters of modern science rank higher than intellectual barbarians." Living in the middle of last century, BENEDICT the Fourteenth was in this respect at one with the most authoritative thinkers of the nineteenth century, and if on the part of the Curia he sanctioned the periodical issue of the "Index Expurgatorius" it was on grounds of which his successors in office seem not yet to have appreciated the wisdom or the wit.

On April 20th last there was affixed to the gate of St. Peter's in Rome the "Index Expurgatorius" for the year, and in it are mentioned by name at least five treatises on the subject of criminal anthropology. The medical schools, particularly at Turin and Naples, which seek to find the nexus between organisation and development, between physically conditioned propensity and moral responsibility, are directly struck at and their authors put in the pillory of the Roman Catholic Church for attempting to bring the two factors of social life into the area of inductive research. The world is assured on Vatican authority that the old explanation of intellectual and moral neuroses is the right one; that "demoniacal possession" is quite sufficient to account for the phenomena of epilepsy and epileptoid explosion; and that all attempts to investigate them on the "natural history method," as propounded and practised by HIPPOCRATES, are as useless as they are impious.

Professor LOMBROSO and his colleagues will hold themselves excused, we imagine, from regarding this denunciation of their work as amounting to more than a useful advertisement, and will be much less solicitous to notice it than to reply to such critics as Dr. MAUDSLEY and others at the last Medico-Psychological Congress. If for a moment they could be brought to consider this "decretum" of the Roman Church against them, it would be only to remind the world of the fact that similar denunciations of the modern spirit and its works have proceeded from the same quarter and been either abandoned or tacitly revoked. Between sixty and seventy years ago, for example, Pope GREGORY XVI. denounced railways as inventions of the evil one, and yet before the death of his Holiness he had to connive at their introduction into the most Catholic kingdom of the Two Sicilies, while in the next Pontificate the Eternal City saw itself connected with the seaboard and the rest of Italy by the same anathematised medium. It was Pope GREGORY, too, that fulminated against the newspaper press as another invention of the Prince of Darkness, and yet under his successor, PIO NONO, the daily and weekly journals were adopted and subsidised by the Vatican itself as the most powerful means of vindicating the apostolic cause. These are facts—facts, moreover, which justify the observation that the Roman Catholic Church in its attitude towards science seems departing from that principal which MACAULAY makes the determining cause of its vitality and its diffusion—to wit, the recognition and absorption, not the ignoring, still less the rejection, of all the forces that make for popular control. Since the revival of letters, and still more since the Reformation, the Vatican has been represented in nearly every walk of science, and from Father BOSCOVICH down to Father SECCHI and Father DENZA, whose deaths are comparatively recent, it has helped to widen and deepen the main stream of the world's knowledge by brilliant achievements in inductive research. Why should it make physiology or anthropology an exception to other sciences? Why denounce the application of these to the investigation of social phenomena before their votaries have properly argued out their cases or even made themselves adequately heard? Is it not "on the cards" that, just as the railway and the newspaper have not only lived down

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Vatican censure but have been pressed into Vatican service, the same reversal of attitude may be witnessed towards medical investigation and even criminal anthropology? The Roman Church contains men of science able to sympathise with every honest attempt to solve nature's problems and to view the "Index Expurgatorius" rather with the eyes of BENEDICT the Fourteenth than with those of some of his less enlightened successors.

IT is now universally recognised that—to use the language of the Lancashire and Cheshire Branch of the British Medical Association—"it is expedient that lying-in women and newly-born infants be protected from the practice of midwifery-nursing by ignorant and untrained persons," and as we have already pointed out there is an almost equally general agreement as to the necessity for bringing all practice by women—not being qualified medical practitioners—among lying-in women, whether as midwives or midwifery-nurses, under some regulation to be prescribed by law. Even Dr. RENTOUL and his followers, as representing the extreme opponents of registration, "are anxious to improve the education of midwifery-nurses and, if need be, to support a practical scheme for their local registration; they do not object to the registration of midwives provided these act as midwifery-nurses *only* under the *immediate* supervision of medical practitioners and are registered as midwifery-nurses only; nor do they object to such proposed legislation as would protect any of the present privileges of *existing* midwives." We may, we hope, consider that the basis of a practical measure has been laid in the agreement expressed by all parties to this discussion. All would seem to be agreed on the following points—that lying-in women and children must be "protected," that the persons whose practice is to be brought under regulation shall be restricted to natural labour, and that any recognition of them shall be such as to make clear that they are in no sense medical practitioners and must assume no medical title. The Midwives Bill, which is practically disposed of for this session, in Clause 12, sub-clause 5, dealing with removal from the Register, enacts that "for the purposes of this section professional misconduct shall, in addition to any other form of misconduct, include any omission to send for a medical practitioner where the case is not one of natural labour." When there is so much agreement all round the natural course seems to be for the different parties to the discussion to come together so as to put down in practical terms what all agree to. To facilitate this, it is well to be explicit as to points which are still the subject of difference. Our object to-day is to note two or three of these. Let us note one between Dr. RENTOUL and the members of the Lancashire and Cheshire Branch. Dr. RENTOUL in his manifesto requires that the midwifery nurses shall act only under the immediate supervision of medical practitioners. The Lancashire and Cheshire Branch of the British Medical Association, however, "are unanimously of opinion that the proposition that it be made compulsory for every woman to have a registered medical practitioner in attendance at confinement, or that no person other than a registered medical practitioner, or a person acting under the direct or personal supervision of such be allowed to attend any case of midwifery, is, however desirable, impracticable." There is, probably, less difference between these views than appears. At any rate, it is obvious that the personal presence of a medical man—overlooking a midwife—at every case is impracticable. If a lying-in woman could afford a double service the need for this legislation would cease. We must be content with a medical practitioner *in reserve*, acting under the proposed Midwives Board, and, perhaps, all things considered, the district medical officer would be the best referee. This is a detail on which there should be no difficulty in coming to an agreement.

There remain two or three other points of prime importance on which there is more difference of opinion. They should be adjusted with a little discussion, but they need more consideration than—even after twenty years—they seem to have received. They have reference to the authorities by which the contemplated Act is to be administered. All are agreed that the chief work to be done shall be done by a board created for the purpose—the Midwives Board. But with regard to the composition of the board there are wide diversities of opinion. The Midwives Bill of the present year gives a board of eighteen—three representatives of the College of Physicians, three of the College of Surgeons, three of the Apothecaries' Society, three of the Incorporated Midwives' Institute, and three appointed by the Lord President of the Council, of whom one at least shall be a woman. The Bill of the Parliamentary Bills Committee of the British Medical Association provides a board consisting of Registered Medical Practitioners to be appointed by the General Medical Council. The Bill of the Lancashire and Cheshire Branch has a Midwives Board of twenty-seven selected from registered medical practitioners to do duty in the following districts:—London and Southern Counties, seven representatives; Birmingham and Midland and Eastern Counties, five representatives; Lancashire, Cheshire, Westmoreland, and Cumberland six representatives; Northumberland, Durham, and Yorkshire, six representatives; and Wales and Counties of West of England, six representatives. Other questions of great importance are—who is to keep the Register? and shall it be national or local? The Midwives Bill assigns the duty to the Midwives Board. But both the Parliamentary Bills Committee and the Lancashire and Cheshire Branch of the British Medical Association require the General Medical Council to keep and publish the Register. According to the former no midwifery nurse is to commence practice in a district without first reporting herself to the medical officer of health. Dr. W. FRASER in his valuable contributions to the settlement of this question in our columns advises local registration, as distinguished from national, on the score of being more proportionate to the humble expenses of training and more effective. There is an equal diversity of views as to the power of removing from the Register for disciplinary purposes. The Midwives Bill assigns this duty to the Midwives Board, but assigns the power of restoration to the Board or to the Privy Council. The Parliamentary Bills Committee gives the power of removing from, and restoring to, the Register to the General Medical Council. The Lancashire and Cheshire Branch proposes that a committee of the Midwives Board shall investigate charges of

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misconduct and may remove from the Register. Dr. FRASER leaves questions of discipline to the medical officer of health for the town or district, with appeal to the medical officer of health for the county.

A curious difference in the Bills is in the way in which the action of the Privy Council is imported into the administration of the proposed Act. There is an unwise obtrusion of this august body into the Midwives Bill. It has three nominations to the Midwives Board; together with the General Medical Council it has to take steps to secure the first Midwives Board; it fixes a date for the establishment of the Midwives Register with a notice in the *London Gazette;* it must confirm all rules framed by the Midwives Board and approved by the General Medical Council; if the General Medical Council fails it must invite some other suitable body to act or proceed to act itself; and it may direct the restoration of a name to the Midwives Register. In the respective Bills of the Parliamentary Bills Committee and the Lancashire and Cheshire Branch the Privy Council is required to confirm the rules approved by the Board and approved by the General Medical Council. Dr. FRASER proposes that the Local Government Board shall issue directions annually to be observed by midwives as to sanitary conditions in nursing a patient. We have no space left to discuss these various points. But we suggest to all who are in earnest in seeking to protect lying-in women and who do not wish for another twenty years' delay to simplify their suggestions as much as possible. The machinery of any practical measure should be local, inexpensive, and simple. To import the Privy Council into the administration seems to us quite superfluous and hindering Even the General Medical Council is not needed, save in the initiation of the administration to sanction rules. It has repeatedly expressed its willingness to assist so far but no further and has indicated its belief in a local rather than a national administration. The examinations should as far as possible be local and the registers should be local. The realisation of this legislation will be brought about soon or late, according to whether it is kept proportionate to the limited function of the parties to be trained and the limited means of those whose lives are to be saved. Looked at from this side of the question the proposals of Dr. FRASER seem very valuable, and Dr. LOVELL DRAGE, who is opposed to most Midwives Bills, sees in them a solution of the difficulties. Dr. FRASER will do service by still further developing his views as to the machinery for localising examinations and registration. The General Medical Council may be a fit body to govern the medical profession, and yet be unfit for such duties as are involved in the administration of a Midwives Act.

THE DUKE AND DUCHESS OF FIFE AT BRIGHTON.—Their Royal Highnesses the Duke and Duchess of Fife last week visited Brighton, where the Duchess laid the foundation stone of a new wing for the accommodation of the nursing staff of the Brighton Children's Hospital. Twelve bedrooms, with bathrooms, &c., will be provided, and the cost, including furnishing, is put at £1500, of which from £1100 to £1200 is already collected, besides purses to the amount of £179 received by Her Royal Highness.

Annotations.

"Ne quid nimis."

THE LIVERPOOL LADIES' CHARITY AND LYING-IN HOSPITAL.

THE dispute between the board of management and the late medical staff of the Liverpool Ladies' Charity and Lying-in Hospital has been alluded to in several letters by our Liverpool correspondent; but, as the subject is one of importance to the profession in general, we have no hesitation in further referring to it. The charity consists of a hospital containing fifteen beds, attached to which is a staff of three honorary medical officers, a matron-midwife residing in the building, and a staff of nurses. There is also an out-door department for women who wish to be confined in their own homes, much on the same principle as the Royal Maternity Charity of London. The city is mapped out into districts, each with its honorary medical officer and midwives; the former is sent for in cases involving difficulty. At the hospital the board of management objected to the normal cases coming under the supervision of the medical officer on duty, and insisted on the matron-midwife admitting all patients and having charge of them during their confinements unless she detected anything abnormal, in which case she had orders to summon the medical officer on duty. The late staff objected to this practice, and demanded that all patients in the hospital should come under their supervision; and further that the matron-midwife should act under their direction, similarly to a house surgeon obeying the orders of his chief. A meeting of the subscribers was summoned to place before them the matter in dispute, with the result that a resolution was carried apparently giving charge of all patients to the medical staff, but in reality confirming the attitude of the board of management towards the medical staff. The staff then came to the conclusion that, as their proper position in the hospital was denied to them, they could not retain office any longer and forthwith resigned in a body. Consequently on their resignation the board of management advertised for two honorary hospital medical officers and for several district medical officers to fill the vacant posts; the 18th inst. was fixed as the latest date for receiving applications from intending candidates. The result must have been as humiliating to the board of management as it is satisfactory and creditable to the local members of the profession. No application was forthcoming. Not one member of the profession was found to be desirous of being connected with an institution which showed so little regard for the feelings of its medical staff. Our correspondent alluded to a meeting of the local members of the profession which took place on the 11th inst., to protest against and to denounce the unreasonable conduct of the managers of this charity towards its medical staff. The meeting, at which 215 gentlemen and two ladies were present, was unanimous, and carried two resolutions, the latter of which advised the local members of the profession to have nothing to do with a charity which was capable of acting thus to its medical staff. Mr. Mitchell Banks in an able speech said that he trusted that no medical man would demean himself by applying for a post of such questionable dignity. The result of this meeting has been all that was to be desired, and an object-lesson has certainly been given to the board. We will not dwell on the abuse which has been poured on the heads of the staff of the hospital and on the profession in general in letters addressed to the local papers; this is a subject beneath notice. It is amusing, however, to find the ignorance displayed by some of the

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writers in their charges of inhumanity against the "doctors." One gentleman in alluding to the use of the pelvimeter by a member of the staff declared that it was a barbarous practice. We wonder if he is under the impression that it is used for vivisecting purposes. All the troubles at this charity might have been averted if the medical staff had been represented on the board of management. We trust that in future the members of this board will confine themselves to the ordinary duties of hospital management, and cease to encroach on matters which they do not understand.

THE BIRTHDAY HONOURS

WHILE sincerely congratulating the members of the medical services—for the name of no civilian member of the medical profession occurs in the list—who are recipients of any honours and distinctions, we can only express our regretful surprise at the extremely limited number of the members of our profession who have been deemed worthy of being included in the brithday list. Brigade-Surgeon-Lieutenant-Colonel Alfred Swaine Lethbridge is promoted to be a Knight Commander of the Order of the Star of India, Brigade-Surgeon-Lieutenant-Colonel Benjamin Franklin to be a Companion of the Order of the Indian Empire, Dr. J. Rogers Pasha to be a Companion of the Order of St. Michael and St. George, and Surgeon-Major-General Charles Dodgson Madden to be a Companion of the Order of the Bath.

MEDICAL CERTIFICATES AND BOARD SCHOOLS.

WE have frequently discussed the conduct of the London School Board with regard to medical certificates, and we have now to comment upon the same subject as it appears at Macclesfield. At the recent monthly meeting of the Macclesfield School Board the Rev. Father Robinson, who was in the chair, proposed the following resolution :—

"That, with a view to secure the more regular attendance of children at school on the one hand, and to avoid unnecessary prosecution of parents on the other, a medical officer be appointed, whose duty it shall be to examine all children sent to him by the clerk and to report as to their fitness or otherwise to attend school; and that the clerk keep a counterfoil record of children so sent; and that the medical officer be paid half-yearly at the rate of 1*s.* for each child so sent."

In the course of his remarks he is reported by the *Macclesfield Courier* as saying "that by appointing a medical officer they would be taking upon themselves the onus of paying for what they had a right to do by law." We must inform Father Robinson that, if he is rightly reported, and if he means that a School Board has a right to demand a medical certificate, he is wrong. A School Board has no more right to demand a medical certificate than it has to demand a certificate of baptism. Father Robinson's resolution is an attempt to grapple with a difficult question, but we do not quite see how it is going to work, and it is open to the same objection as the resolution of the London School Board. If the Board gets answers to its advertisement we suppose it will appoint a medical man, but we doubt if any will apply with the prospect of having to run all over Macclesfield and examine cases at 1*s.* a head. No parent would bring his child to the medical officer, for he would naturally think, "If he is too ill to go to school he is too ill to go to the medical man." Of course in many cases this reasoning would be wrong, but still it would certainly be used. All the old stories about incorrect certificates were brought up by Mr. Brown and Mr. Hammond. That certificates are often given by those who have no right to give them—e.g., herbalists, &c.—we can well believe, but that incorrect certificates are granted by qualified men we do not believe, except in a very few cases. We cannot see why the Board should not be satisfied that any medical man should sign certificates. In case of any doubt arising the School Board medical officer might be at liberty to examine into the case *in consultation* with the original giver of the certificate. We think that no general practitioner would object to this, for something analogous is constantly being done by insurance offices, &c. But the procedure of the London School Board, as it stands in the resolution of May 30th, 1895, is intolerable, and the Macclesfield board, by proposing to make the clerk the judge, is scarcely acting more wisely. The fee of 1*s.*, too, is absurd. However, we await the development of the scheme with interest and shall have more to say upon the matter.

THE "NEW STREET DANGER" AGAIN.

A SOMEWHAT alarming phenomenon manifested itself in Northumberland-avenue on Monday morning last. About ten o'clock dense volumes of black smoke were observed to be issuing from several culverts in the road extending for a considerable distance immediately in front of the Victoria and Métropole Hotels. The character of the smoke and its smell could leave little doubt as to what the origin of the subterranean fire could be. It was just that which might be expected on the burning in a confined space of the bituminous cement or gutta-percha used for electric lighting cables. For some cause or other the mains had become over-heated. Shortly after the occurrence the electric light at THE LANCET offices was found to be turned off—a fact which confirmed the view of electric mains being the source of the mischief. Luckily in this instance there did not appear to be any leakage of coal gas, otherwise the result might have been very serious. The fire, however, was soon subdued by the fire brigade pouring water down the culverts. The incident will of course be inquired into, and the proceedings should possess some interest in throwing, perhaps, some light on the question as to whether the electric mains *per se* could cause an explosion.

SHORTHAND FOR MEDICAL STUDENTS: PETITION TO THE GENERAL MEDICAL COUNCIL.

A PETITION signed by nearly two hundred members of the Society of Medical Phonographers, to which is appended the names of many prominent members of the medical profession, including Sir Joseph Lister, President of the Royal Society, Dr. Wilks President of the Royal College of Physicians of London, and Mr. Christopher Heath, President of the Royal College of Surgeons of England, has been presented to the General Medical Council and will, we presume, be considered at the approaching meeting of that body. The prayer of the petitioners is that shorthand should be an extra optional subject for the Preliminary Examination required by the General Medical Council, and in view of the great saving of time and labour and the facilities which a knowledge of shorthand gives to its possessor in recording clinical and scientific observations we have no doubt that the Council will carefully consider the prayer of the petitioners. The use of shorthand in education is becoming daily more and more recognised and especially so in the case of the learned professions. Its advantage to the legal profession is obvious and the clerical profession has been greatly indebted to it. As the petitioners state, the value of shorthand to staff officers of the army has lately been recognised in the Queen's regulations and has been made compulsory for Foreign Office *attachés*. In the medical profession its increasing use is reflected in the growth of the Society of Medical Phonographers, inaugurated a little more than a year ago, which has increased from sixty to two hundred and forty members, some of them with an experience of from thirty to forty years, and representing every branch of the profession. Provided a

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knowledge of shorthand is acquired before the student commences his medical studies and also that he has learned the proper method of using it which he may do by the perusal of an excellent little book [1] written by Dr. Gowers and published by the Society of Medical Phonographers the embryo practitioner is armed with an instrument which should greatly assist him in his studies. Should, however, the General Medical Council recognise shorthand as an optional subject at the preliminary examination it would be wiser not to limit the system to Phonography, excellent though that system may be; indeed, arguments might be advanced against the official recognition of any one particular system. Phonography is perhaps one of the best for scientific work, but it is certainly not perfect from a practical point of view. To officially recognise one system would not be fair to the others.

COPPERED PEAS.

AN important decision was given last week on the greening and preserving of peas with copper. It appears that a conviction was obtained against a wholesale provision dealer in the Borough for selling preserved peas containing 3·16 grains of sulphate of copper, which the magistrate held to be an ingredient in sufficient quantity to be dangerous to health. There was some difficulty in giving judgment in the appeal as the opinions of authorities were greatly at variance on the question of the quantity that should be permitted. In the present case, however, it was considerably in excess of the limits which most authorities had laid down. We should like to see the use of copper salt for this purpose interdicted altogether or else only allowed when the vendor agrees to label in distinct and moderately large characters the tin or packet containing them to the following effect: "These peas are coppered." That some distinct legislation is wanted on this subject is evident from the statement that the annual consumption of these peas in England is estimated at 20,000,000 tins. Assuming, therefore, that each tin contained the quantity of sulphate of copper stated to be present in the sample in the present case this would amount to 9000 lb., or over 4 tons, of sulphate of copper taken with this form of food annually into the human system; and who shall say that this quantity of copper is so uniformly distributed that one consumer does not get more than a three-grain dose from time to time?

THE CRIMINALITY OF THE FRENCHWOMAN.

THE statistics of crime are in France, as in other countries, several years in arrears. It is not surprising, therefore, that those relating to the year 1893 should have been published only last week. Criminologists may be interested to know what part the Frenchwoman takes in offences against the established rules of civilised society. Of 4269 accused persons in 1893 3673 were males and 596 females—a proportion of 6 to 1. In other words, woman was responsible for 14 per cent. of the crimes committed, a diminution since the period comprised between the years 1871–76, when the percentage was 17. As might be expected, offences against persons predominate over those against property, being 19 per cent. in 1876–80, 18 per cent. in 1881–85, 21 per cent. in 1886–90, 20 per cent. in 1892, and 17 per cent. in 1893. Offences against property rights have progressively descended from 13 per cent. in 1876–80 and 12 per cent. in 1892 to 11 per cent. in 1893. Prosecutions for infanticide have likewise decreased in the following proportions: 1889, 210; 1890, 174; 1891, 148; 1892, 154; 1893, 132; the annual average for 1876–80 having been 207. We may conclude that the criminal instincts of our Gallic sisters are comparatively feeble, and that what appears to the justice-loving Briton as culpable indulgence on the part of French juries *vis-à-vis* of the erring woman, more especially in what our sentimental neighbours denominate *drames passionnels*, has not had the effect of encouraging the weaker sex in wrong-doing. Alphonse Karr has, in one of his books, cynically defined woman as *un être qui s'habille, babille, et se déshabille* (a being who dresses, chatters, and undresses). A short sojourn in this giddy city of pleasure will lead to a like conclusion in so far as a large proportion of Parisiennes is concerned. The absorption of their time in the above-named important occupations may, perhaps, account for the rarity of their appearance in criminal records and also for the predominance of male crime.

[1] The Use of Shorthand by the Student.

QUESTIONABLE TASTE.

THE Metropolitan Hospital Sunday Fund has issued a notice (which we publish elsewhere) expressing disapproval of street collections on Hospital Sunday, and we almost wish it were possible to withhold the benefits of the Fund from those hospitals who make Sunday hideous by organising street processions in aid of their respective charities. On Sunday last in a certain part of London there was a street procession organised in aid of a hospital which for the present shall be nameless, as we do not know whether the hospital authorities were responsible for it or whether the tradesmen who took part in it and thus secured a big advertisement for themselves were responsible. In addition to the usual bands and banners of friendly societies which accompany these processions there were tradesmen's carts, decorated with flowers and vegetables, the name of the owner of the vehicle being, of course, conspicuously visible. To this there can, perhaps, be no serious objection, though we question the taste of the proceeding; but the principal "attraction" was a man on what was supposed to be a sick bed, and attended by two nurses, one of whom, we understand, was a qualified nurse attached to a local mission and the other a person masquerading in a nurse's costume. Comment is needless.

THE POOR-LAW SCHOOLS COMMITTEE: SEVERE CRITICISM.

THE Poor-law Schools Committee and its report have not been permitted to go free in the matter of criticism—and criticism, moreover, of a severe character. The London and District Poor-law Officers' Association have recently held a meeting in London at which the report in question was handled by several of the members in no friendly manner. The principal speaker was Mr. H. D. Aslett, superintendent of the branch schools of the Kensington and Chelsea school district, and in a lengthy paper he traversed the assertions made in the report in many directions. Not alone with the substance of the document was he at variance, but he criticised the constitution of the Committee and the selection of witnesses as well as many of the statements of particular witnesses. The general tenor of his paper may be gathered from the terms of the resolution which he submitted to the meeting, and which ran:—

"That in the opinion of this association the report of the Committee on Poor-law Schools gives evidence of bias; too much has been made of individual cases of admitted failure, to the exclusion of thousands and thousands of satisfactory ones; the weakest condition of the weakest school is the measure with which all are meted; the description of the schools much more appertains to what they possibly were twenty or thirty years ago; and the report does not recognise the forward strides made in all the schools during the past ten years."

He felt that too much had been made of the alleged evils of aggregating children in schools, and pointed out that, whilst many schools were for comparatively small numbers of inmates, even the large schools were divisible into

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three sections—boys, girls, and infants—having little in common. He regarded ophthalmia as potent for mischief in other places equally with Poor-law schools, and did not regard the disease as by any means a necessary corollary to the school system. With reference to the physical condition of the inmates of the schools, he looked upon the bad record as arising from a natural selection of the unfittest for these institutions. The degree of faith to be placed in the much-lauded boarding-out system seemed to him to be smaller than is generally felt to be the case, having in view the statistics placed before the Committee by those most favourable to it; and, in his opinion, the standard of excellence in matters educational is quite as high in Poor-law schools as in most of the elementary schools in the country. Others who spoke felt it to be hard that no more praise had been accorded to the painstaking work of the Poor-law guardians and officials to better the system as at present existing. The meeting at the end of this discussion unanimously passed the following resolution:—

"That in the opinion of this meeting of this association the report of the Poor-law schools is unsatisfactory, unjust, and unfair to metropolitan schools generally, which can show very satisfactory results, as an impartial inquiry must prove; and this meeting suggests to the National Council that some action shall be taken in the matter."

THE SURGICAL TREATMENT OF INTRACRANIAL TUMOURS.

IN a paper in the last number of the *American Journal of the Medical Sciences* Dr. Stieglitz, Dr. Gerster, and Dr. Lilienthal describe three cases in which operation was performed for intracranial tumour. In one case the patient recovered and did well for at least a year after operation; in the other two cases death followed operation. The first patient was a woman aged twenty-five, who, in October, 1891, while talking to her husband, suddenly felt the thumb and forefinger of her right hand twitch. The spasm gradually spread up the arm to the shoulder and face, leading to a general convulsion, with loss of consciousness. Several attacks similar in character followed, and in February, 1892, there was definite paresis of the right hand, which gradually became more marked in the course of the next few weeks. There was no headache, sickness, or optic neuritis, and anti-syphilitic treatment failed to influence the symptoms. It was concluded that a tumour was probably present in the left anterior central convolution near the junction of the middle and lower thirds. Operation was performed on June 25th, 1892, and a sub-cortical cystic tumour was found in the position indicated above and an ounce of straw-coloured fluid escaped. The cyst-wall was perfectly smooth, but it was considered inadvisable to attempt the removal of this. The patient made a good recovery and by the end of the following October she was able to write and sew, a marked difference from her condition before operation, when she had been unable to use the hand at all. In December, however—that is, six months after operation—she had a general epileptic seizure which began in the right arm, and she continued to have twitchings on the right side with subsequent weakness of the limbs on the affected side. No other symptoms were superadded until March, 1895, when she began to suffer from severe headache, and at this date, for the first time, the optic discs were found to be cloudy and slightly swollen. It was thought that there had been a recurrence, or rather an extension, of the growth in the cyst wall, and at the operation a small maroon-coloured mass was found towards the upper margin of the opening in the skull. This was found to be conical in shape, with the base at the surface and the apex deep in the brain substance. It was sarcomatous, and islets of growth were found in the surrounding brain substance. There was temporary interference with speech after the operation, but this soon passed off and power began to return in the paralysed limbs. A year after this second operation the condition of the patient was very satisfactory. There had been no recurrence of the severe seizures or even of the slight twitchings, and there had been considerable return of power in the paralysed arm, the thumb and index finger alone remaining powerless. Cutaneous sensibility is said to have been perfect, but there was considerable interference with the muscular sense in the hand. The second case was that of a Russian aged thirty-three, who came on account of loss of vision, and was found to have intense optic neuritis. There were also severe headache, staggering gait with tendency to fall to the right, slight weakness of the right side of the face, and some indefinite limitation of the movements of the right eye. Total deafness on the right side and partial reaction of degeneration in the facial muscles of the right side were moreover present. Trephining was done in the right occipital region as it was supposed the tumour was situated in the ventro-cephalic part of the right cerebellar lobe close to the internal auditory meatus. The intracranial pressure was found to be enormously increased and the tentorium was pressed up from below. The tumour could not be reached, and so enormous was the intracranial pressure that there was a large hernia cerebri which had to be removed. The wound subsequently became septic and the patient died a fortnight after the operation. At the necropsy a glio-sarcoma the size of a small apricot was found, involving the anterior half of the right cerebellar hemisphere and indenting the same side of the pons. The third case was that of another Russian fifty years of age who suffered from right-sided fits and subsequently from headache and disturbance of speech. There was also weakness of the right arm and right side of the face, but no optic neuritis until more than eight months after the first fit. Operation was carried out, but the patient succumbed to the shock and loss of blood. A large tumour was found in the left Rolandic area. These three cases furnish examples of the difficulties to be met with in dealing surgically with intracranial tumours. The last two show that trephining alone, even when the tumour is not removed, has certain dangers. Those arising from the enormously increased intracranial pressure and consequent protrusion of the cranial contents after trephining in the case of sub-tentorial tumours are strikingly illustrated in the second case.

LONDON DUST.

ONE of the unpleasant effects of the recent spell of dry weather in London has been the unusually large amount of dust that has been flying about. The irritation of the mucous membranes of the respiratory tract and conjunctivæ which it produces is no doubt responsible for many of the nasal and bronchial catarrhs which are apt to occur at this period of the year, especially in those who are predisposed to them, and, besides this simple irritative effect, a large amount of organic matter is naturally inhaled. Dust is chiefly made up of mineral particles to which is added a variable amount of organic matter arising from the decomposition of animal and vegetable refuse, and we may feel quite sure that the dust of overcrowded London contains a large share of the latter. It is impossible to estimate with any degree of exactitude what detrimental effect on the general health a period of dusty weather may have, but we are forced to think it must have some when we look at the disastrous results to health which continuous inhalation of particles causes. So in a minor degree is the dust of the streets injurious, not perhaps to any practical amount to those who are healthy, but to those already suffering from pulmonary complaints it must necessarily be

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harmful from the irritation and coughing which its inhalation causes. It is possible that a time will come when most of the traffic of the streets will be carried on by means of autocars and bicycles, in which case the decrease in the number of horses would be accompanied by a decrease in the amount of dust and especially of the organic matter which now so freely enters into its composition.

THE ILLNESS OF SIR J. RUSSELL REYNOLDS.

WE deeply regret to be unable to speak hopefully of Sir J. Russell Reynolds's condition. The complete prostration still remains, and although no new symptoms have appeared his state is one that still gives rise to the deepest anxiety. The breathing has been easier since the appearance of our last report, but the fact that during the week that has elapsed no improvement of the terrible weakness has taken place prevents us from speaking to our readers in any optimistic manner. We may hope for the best, but it would be wrong not to be prepared for the worst. By the command of the Queen Sir James Reid has visited Grosvenor-street several times, and the condition of the patient is daily reported to Her Majesty. The numerous personal inquiries and messages of deep sympathy that have been received by his family from sources far and wide bear touching testimony to the affection and esteem in which Sir John Russell Reynolds is held by all who know him.

RECURRENT PARALYSIS OF THE THIRD NERVE.

IN a recent number of the *Wiener Klinische Wochenschrift* Dr. Karplus has a paper on this subject, in which he relates two interesting examples of it, in one of which examination post mortem was possible. An abstract of this paper appears in the last number of the *Neurologisches Centralblatt*. The first case was that of a woman, thirty-seven years of age, without any history of nervous disease in her family. She had suffered from her eighth year from attacks which she herself associated with a severe injury. The attacks consisted in sudden and severe right-sided headaches which came on without warning. A few years after their commencement ptosis appeared and the duration of the whole attack extended over five or six days. The attacks became more and more frequent, and at the time at which she was seen they came on every three months. For the previous six months also recovery from the paralysis of the third nerve had not been complete. During three pregnancies the patient had never had an attack. Examination during an attack showed complete paralysis of all branches of the third nerve. On the temporal bone just under the zygoma on the right side there was a point tender to pressure. Sensibility in the region of the second and third branches of the trigeminal nerve was otherwise normal, while during the attack hypo-æsthesia and hypo-algesia were present in the region of distribution of the frontal branch of the fifth nerve. The second patient was a man aged forty-three, who was admitted to the hospital on account of progressive paralysis. The history was that at the age of six months he had had an attack of sickness, with subsequent ptosis, which passed off in a few days. After that until he was twenty he had similar attacks every two or three weeks, accompanied with severe right-sided headache. After his twentieth year recovery from the ptosis had been incomplete and he had begun to squint. On admission he had a dilated, inactive pupil on the right side, divergent strabismus of this eye, and ptosis. He had, under observation, every three or four weeks attacks of complete paralysis of the third nerve with severe headache and sickness. The fundi were normal. The patient died after a succession of epileptiform attacks. At the necropsy a tumour the size of half a pea was found in the third nerve and connected with the dura mater. This was found to be a neuro-fibroma which involved the third nerve on all sides. The fibres of the nerve were degenerated, but the cells of the nucleus were unaltered, although the supporting tissue was less abundant on the right side than the left. Dr. Karplus regards the tumour as having been probably congenital, and by reason of its presence and pressure to have led to degeneration of the nerve fibres. From his observations he is inclined to regard these cases of recurrent palsy of the third nerve as the result of changes at the base of the brain. The affection of the branches of the trigeminus on such a hypothesis is intelligible, and he does not accept the view that circulatory disturbance is an efficient cause of the conditions.

THE FOUNDATION OF A JENNER MEMORIAL MEDAL.

IN another column will be found a letter signed by the officers of the Epidemiological Society in which it is stated that the Society proposes to found a medal in honour of Jenner, to be awarded to persons who shall have added to the knowledge of epidemiology and preventive medicine. We note this intention with much pleasure—in the first place because we are satisfied that the profession will be glad of this opportunity of founding a memorial to Jenner on the centenary of his great discovery, and, secondly, because the Epidemiological Society is peculiarly fitted on account of its association with the subject of vaccination to undertake the task.

ANALYSES OF DIPHTHERIA ANTITOXIN.

THE weekly bulletin of the State Board of Health of Massachusetts for the week ended April 4th contains some valuable results as to the quantitative analysis of the diphtheria antitoxins offered for sale in that State. In the case of the serum of Behring (No. 2), of that of Parke, Davis, and Co., and of Mulford and Co. the antitoxin was up to the advertised strength. In the case, however, of the serum of the Pasteur Institute of Paris (Roux) it was found that the ten cubic centimetres of serum which were tested contained a total of 500 antitoxic units instead of 600 units; while in the case of Gibier's diphtheria antitoxin, New York, it was discovered that a bottle professing to contain 2500 units contained from 625 to 750 units only. Results such as these are obviously of considerable importance and are calculated to very materially vitiate statistics relative to dosage.

AN UNQUALIFIED DRUGGIST.

SOME remarkable disclosures with reference to a druggist's business were made in recent legal proceedings. The defendant—a druggist—was sued for £25, which was the balance of a sum for which he had bought the business. The defendant did not deny that the sum was owing, but he pleaded that in selling the business the plaintiff had misrepresented things to him, and on that score he put in a counter claim for £50. The evidence went to show that the plaintiff was an unqualified druggist, and it was further alleged that the large profits he had made were due to an extensive sale to females of a mixture for illegal purposes and that the defendant, as he did not continue to sell this mixture, found the profits far below what he had been led to expect. In the end, after conflicting evidence, the plaintiff got his £25 and the defendant was awarded the same sum on account of the fraudulent misrepresentation, but without costs to either side. This case is one of those which show that in all probability a large trade is often done in these illegal sales of medicines, and in this case the vendor in some measure guarded himself by not allowing his name to appear on the bottles. The composition of the mixture was not given, but it was said to be a very

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dangerous one and a combination of drugs which no qualified man would use. The greatest vigilance is necessary to control the sale of medicines for illegal purposes, and exemplary punishments should be passed on those who are convicted.

THE GENERAL MEDICAL COUNCIL.

THE Queen has nominated Mr. Thomas Pridgin Teale, M.B. Oxon., F.R.C.S. Eng., to be again, for the term of five years from the 23rd inst., a member of the General Council of Medical Education and Registration of the United Kingdom. This is Mr. Teale's fifth period of service. His interest in education, medical and otherwise, is well known. At the last meeting of the Council he gave notice of a resolution on the subject of excessive examinations which is sure to raise some very important questions.

THE MEDICAL SOCIETY'S CONVERSAZIONE.

THE annual conversazione of the Medical Society of London took place on May 18th, when a large and distinguished gathering of Fellows and visitors assembled to hear the annual oration, which was delivered by Dr. W. H. Allchin. The subject chosen was "The Breaking Strain," and the address will be found in full in another part of our present issue. The attention with which its delivery was received and the enthusiasm with which the after-vote of thanks was accorded to the orator could not fail to demonstrate to Dr. Allchin how much his venture into the fields of the transcendental had been appreciated. The presidential reception which was held afterwards was largely attended and the newly decorated and attractive rooms of the society were crowded until a late hour.

RECENT PAUPER STATISTICS.

THE monthly comparative statements of pauperism issued by the Local Government Board have now for some time been so unsatisfactory that it is pleasing to have to record of the latest—in respect of February last—that some material improvement is manifest. Having regard to the whole of England and Wales, as divided by the Registrar-General into eleven divisions, it is satisfactory to note that with a single exception (the north midland group of counties, and that only in respect of one week) there was in February last, as compared with 1895, a decrease in pauperism in every division. Not alone so, but in London the improvement ranged from 18·9 to 28·2 per cent. in the several weeks of the month. In the country as a whole the decreases were 7·1 per cent. in the first week, and in the remaining weeks 10·8, 12·5, and 10·7 respectively. It may be that these data are more satisfactory on paper than in actual fact, inasmuch as February of the present year was free from the heavy frost which prevailed in that month in 1895. But none the less the returns are far from displeasing in the face of previous statements.

THE THYROID TREATMENT OF MYXŒDEMA AND CRETINISM.

THE efficacy of this mode of treatment now stands in need of no proof. So many illustrations have been published showing at a glance the condition of the same patient before and after administration of thyroid extract that the subject is in some danger of becoming stale and tiresome. But there are many clinical observations which can be made on patients during the early period of treatment which are of interest and importance. In the last volume of the Edinburgh Hospital Reports there is a very interesting paper by Dr. Byrom Bramwell which contains his observations on twenty-three cases. Dr. Bramwell has had experience of all the forms of administration, subcutaneous injection, the raw gland itself, the fluid extract, and the dried extract. He prefers the latter and confirms the statement of others that its activity does not appear to be impaired by keeping. An interesting clinical observation is that patients suffering from myxœdema and sporadic cretinism seem to be much more susceptible to the action of thyroid extract than those suffering from some skin diseases. "In most cases of myxœdema unpleasant symptoms and acute thyroidism are apt to be produced if the dose exceeds four tabloids daily (quarter of sheep's thyroid gland), but in several cases of psoriasis and ichthyosis I have given twenty, thirty, forty, and in one case even seventy-four tabloids (equal to one, two or even five average sheep's thyroids) per diem." In several cases there was an increase of mucus and uric acid in the urine when treatment was commenced. In one case this was extremely marked, the deposit of mucus in the specimen-glass looking like a large coagulum. Dr. Bramwell calls attention to the great differences in susceptibility met with in different people, and urges the necessity of caution and of giving small doses at the commencement of treatment. The danger of syncope is referred to. Death has occurred from this cause in a case in which the myxœdema was rapidly subsiding, and it is recommended that when the thyroid extract is very rapid in its effects cardiac tonics and stimulants should be given at the same time. The paper is written in Dr. Byrom Bramwell's usual clear style, and, as in all his papers, the illustrations are both useful and truthful.

THE LANCET AND THE HYDERABAD COMMISSIONS ON CHLOROFORM.

WE are pleased to be able to announce that we have reprinted in book form the Report of THE LANCET Commission appointed to investigate the subject of the Administration of Chloroform and other Anæsthetics from a Clinical Standpoint, together with the Reports of the First and Second Hyderabad Chloroform Commissions. The volume consists of nearly two hundred pages. In reproducing the Reports some slight changes have been made in the text of the introduction and elsewhere, these having been necessitated by the character of the original Report, which, as it appeared serially in our columns, needed textual reconstruction to render it consecutive; and a full description of the Manometer Experiments has (by the kind permission of the Nizam and the Government of Hyderabad) been added. We venture to hope that the work will prove useful to the profession as a record both of experimental investigations and of clinical research with regard to a subject of the highest importance to mankind. Further particulars concerning the publication will be found in our advertisement columns.

THE MEDICAL OFFICER OF HEALTH OF THE WEST RIDING OF YORKSHIRE.

THE West Riding County Council last week appointed as their medical officer of health Dr. James Robert Kaye, a gentleman of large experience in sanitary administration who has for upwards of six years been medical officer of health of Huddersfield and medical superintendent of the infectious hospitals of that populous borough. He has for some years displayed both zeal and ability in directing public attention in his district to the necessity of sanitary improvements and in demonstrating the advantages—moral, physical, and material—which result from an intelligent and consistent observance of the laws of hygiene. Such persistent but judicious advocacy of a high standard of sanitary efficiency is a praiseworthy characteristic of a public official and does much to counteract the prevalent apathy of local authorities. Dr. Kaye is a native of Perthshire and studied medicine in St. Andrews and Glasgow. In addition to his medical degrees obtained at Glasgow University in

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1880 he holds the Diploma of Public Health of Cambridge University and is a Fellow of the Chemical Society of London.

ONE OF THE LAST OF THE CHARTIST PRISONERS.

THE Rev. Arthur O'Neill, who died at Birmingham on May 14th, was born at Chelmsford in 1819, and in 1835 commenced the study of medicine in Glasgow University, but soon abandoned medicine for divinity. He also joined the Chartist movement, and in 1842 was charged with sedition and imprisoned in Stafford Gaol for nearly twelve months. He was for more than forty years pastor of a Baptist chapel in Birmingham. There is probably now only one survivor of the Chartist prisoners.

THE Council of the Hospital Sunday Fund ask us to state that they do not give their sanction to, or approve of, boxes being carried about the streets soliciting donations in aid of this Fund. The proper places for making collections are the several places of public worship, to which payments by those unable to attend may be sent. Payments may also be made directly to the Lord Mayor, who is the treasurer of the Fund, at the Mansion House. The collection will take place this year on Sunday, June 14th.

THE committee of the Howard Association have adopted a resolution to the effect that the clauses in the Education Bill concerning pauper children do not contain sufficient safeguards against the abuse of the boarding-out system. We earnestly hope that if the clause in question is as inadequate as the resolution of the Howard Association seems to imply measures will be taken in committee to meet the deficiency.

WE have received a copy of a leaflet issued by a body called the Church Anti-vivisection League. It accuses the Clergy of subsidising vivisection and of alienating the laity. It also begs the clergy not to give any offertory to a hospital that "has a vivisectional laboratory attached." We hope to return to this subject next week.

THE Colonial Office has been informed by telegram from the Governor of Hong-Kong that seventy fresh cases of bubonic plague occurred in the colony in the week ending May 19th, and that the number of deaths from the plague in the same period was ninety-one.

THE QUEEN has been pleased to sanction the following appointments to the Order of the Hospital of St. John of Jerusalem in England. To be Knights of Grace: Sir Wm. MacCormac, F.R.C.S. Eng., and Mr. Samuel Osborn, F.R.C.S. Eng.

THE EMPEROR FRANCIS JOSEPH has conferred the honorary degree of Doctor of Medicine on Sir Joseph Lister, President of the Royal Society, on the occasion of the celebration of the Hungarian Millennium.

MADAME ADELINA PATTI has arranged to give another grand morning concert at Swansea in aid of the Swansea Hospital and the poor of the district round Craig-y-Nos. The date fixed is Aug. 6th.

THE Sanitary Institute have accepted an invitation from the city and county of Newcastle-upon-Tyne to hold a sanitary congress and health exhibition in that city in the autumn of this year.

THE festival dinner at the Imperial Institute on June 10th in aid of the re-endowment of Guy's Hospital, at which the Prince of Wales is to preside, will be followed by a reception.

THOMAS WAKLEY,

THE FOUNDER OF "THE LANCET."

A BIOGRAPHY.[1]

CHAPTER XX.

The First Public Meeting of Members of the Royal College of Surgeons of England.—Mr. Lawrence's Speech from the Chair.—The Condemnatory Resolutions.—Wakley's Amendment.—Successful Oratory.

ON Saturday, Feb. 18th, 1826, the first public meeting of Members of the Royal College of Surgeons of England was held at the Freemasons' Tavern. For the first twenty years following the granting of the Charter there had been open dissatisfaction amongst the Members, who, be it remembered, comprised the flower of the general practitioners of England. Until 1815 it was not necessary for a medical man to hold any qualifications whatever. No government licence, no diploma from a state-supported or state-recognised body was necessary, and, *a fortiori*, no university degree. Therefore a large proportion of the medical men in the country were what nowadays would be termed "unqualified." They possessed qualifications to practise, certainly—for example, they had generally served several years of apprenticeship to men grown grey in the pursuit of the healing art, and they were mostly sound obstetricians, expert prescribers, and accurate dispensers; but of all standing derived from the successful endurance of the tests of examination they were guiltless. This was the plight of many of the English practitioners before 1815; and even after that date, inasmuch as the Apothecaries Act was not a retrospective one, there were as many unqualified as qualified practitioners in the country. But those who were qualified had generally received their diploma from the Royal College of Surgeons of England and represented the flower of their order—the men who had gone through a recognised training at a general hospital and had satisfied independent examiners that they had made good use of their time while walking the wards.

It must be remembered that these men were in many cases actually the same individuals who had prevented the old Corporation from obtaining at the hands of Parliament a legalisation of its Acts and a consequent re-establishment by their well-timed request to Lord Thurlow to come to their assistance. It was the outcome of their decided and united action that the House of Lords had been put upon its guard against the schemes of a few interested members of the Court of Assistants and had in 1797 refused to pass a bill sanctioning the re-constitution of the old Barber-Surgeon Company while all the abuses that had crept into it during its centuries of somewhat precarious and ill-established existence made an integral part and an important parcel of its programme for a new life. These rightly recalcitrant Members had observed with pleasure the dissection by the great Lord Thurlow of the plans of their would-be masters and the consequent rejection of the same by the country. When, therefore, the Court of Assistants received three years later from King George III. a royal charter giving them in addition to a dignified position all the unwarrantable rights for themselves that they had previously unsuccessfully demanded from Parliament, the wronged Members knew all the arguments against the granting of the charter by heart. Yet although they were disaffected,

[1] Chapters I., II., III., IV., V., VI., VII., VIII., IX., X., XI., XII., XIII., XIV., XV., XVI., XVII., XVIII., and XIX. were published in THE LANCET, Jan. 4th, 11th, 18th, and 25th, Feb. 1st, 8th, 15th, 22nd, and 29th, March 7th, 14th, 21st, and 28th, April 4th, 11th, 18th, and 25th, May 2nd, and 16th respectively.

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and rightly, they made no common cause. Their leaders, who were their opponents, had received royal recognition and the fight seemed over. If there had been an outspoken and liberal medical paper in 1800 the Council and officers of the new Royal College would not have enjoyed the peaceful time that they did, but the help that could have been lent to the cause of justice by a strong editor was not then forthcoming. The only medical paper existent at the time speaking with any sort of authority was Dr. Roderick Macleod's decent but somewhat inept monthly publication *The Medical and Physical Journal*, and the proclivities of this journal were strongly aristocratic. So that Saturday, Feb. 18th, 1826, was an important day for the reforming spirits of the College, for it was on that day that the first organised step was taken by the Members against their leaders.

Mr. William Lawrence was in the chair on the occasion and was supported by Mr. Tyrrell of St. Thomas's Hospital, whose close relationship with Sir Astley Cooper did not prevent him from realising which side was right. There were 1200 persons present, but a certain proportion, probably a quarter, of these were not Members of the College, but only individuals of the general public interested in one or other side of a quarrel the merits of which had been widely discussed owing to Wakley's direct and uncompromising methods of comment in THE LANCET.

Mr. Lawrence (to whom a more lengthened reference will soon be made) in an eloquent opening speech constituted himself the mouthpiece of the aggrieved Members. All the points that had been insisted upon by Wakley and Mr. James Wardrop—under the pseudonym of "Brutus"—in THE LANCET were introduced into Mr. Lawrence's speech He dwelt upon the cruel and ridiculous disabilities of the Members in almost the words that were used in THE LANCET and picked to pieces in the most laughable manner the by-law precluding all but a few teachers in London, Dublin, and three Scotch towns from giving certificates of attendance upon scientific lectures. Its obvious grammatical frailty came in for notice no less than its cruelty to the students and its evidences of greed. Mr. Lawrence, fastening upon the words "to promote sound chirurgical knowledge,"[2] said it would seem that sound knowledge was the sort acquired in the winter, when the hospital lecturers were delivering their courses, while unsound knowledge was liable to be imparted in the summer, when only the excommunicated schools of the Graingers and Brookes were able to give the student the assistance and facilities for practical work that he required. After a detailed comparison of the merits of the hospital surgeon with those of the men who were now prevented from officially teaching, in the course of which he incidentally mentioned that under the College's present restrictive edict the famous school of William Hunter could not have existed, Mr. Lawrence went on to point out that the privilege of recognition must have been conceded to Scotland in some mockery, for it was well known that the schools of Aberdeen and Glasgow possessed no facilities for obtaining subjects, so that they could not give the instruction that the college had licensed them to impart. Edinburgh was different (gruesome forecast of the Burke and Hare tragedies!), but of Aberdeen and Glasgow, he said:—"We know, gentlemen, that at least anatomy cannot be studied in those places with any hope of success. We are all, I believe, aware, and no one is more ready than myself to acknowledge the great talents and acquirements of the gentlemen at the head of the anatomical schools in those places, but we are also aware that they are destitute of subjects, and without subjects, without the necessary means, no talent in the teacher, no acquisition of which he can boast, no peculiar fitness for the office of instruction in the past will avail the student in his study of anatomy." From this Mr. Lawrence diverged to touch upon a point of which telling use was afterwards made in THE LANCET, that the by-law excluded the great provincial teachers from giving recognised certificates. "Need I mention," said the speaker, "Hey of Leeds, Hodgson of Birmingham, Martineau, Dalrymple, and Cross of Norwich, and Barnes of Exeter, names that will amply warrant me in stating my conviction that the surgeons of provincial hospitals are as fully competent in the instruction of students as the favoured body who are attached to the London hospitals?"

Mr. Tyrrell then rose, and supplemented Mr. Lawrence's remarks by relating the history of the College and so making clear that the ill-treatment of the Members by the Council of the royal chartered organisation was a perpetuation of the abuses enacted under a corrupt Corporation. He then proposed the following resolution:—"That the public and the members of the surgical profession very justly complain that the science of surgery has not been advanced nor its practitioners benefited either by the late Corporation or the present Royal College of Surgeons in London." Mr. Wardrop seconded the resolution, which was carried unanimously.

A second resolution was put to the effect that the new by-laws contained provisions of the most oppressive character, injurious to the rights and property of individuals, and calculated to increase the expense and difficulty of acquiring surgical knowledge and to serve the private interests of the ten examiners by whom these regulations were made. This also was carried unanimously. Next followed two resolutions dealing with the exclusion by one of these by-laws of eminent anatomists, English, foreign, metropolitan, and provincial, from the pecuniary and honorary benefits belonging to the position of a recognised teacher of anatomy or surgery. These were carried unanimously.

A Mr. Lloyd then brought forward a resolution condemnatory of the inaction of the College with regard to the library and the museum. The former he declared to be useless because of its incompleteness and because such valuable books as it did contain were not accessible to the members, who had paid for them with their fees. The latter, he said, was not only closed to the Members at all seasons when it would be of any practical use to them, but Hunter's splendid collection still remained uncatalogued twenty-four years after Government had presented it to the College for the promotion of medical science. Not the least contentious part of Mr. Lloyd's speech was a reference to the fact that the catalogue would now be exceedingly difficult to construct owing to an individual having destroyed John Hunter's inestimable manuscripts. The meeting cried *Hear hear! Name! Shame!* and *Sir Everard Home!*[3] and the resolution was passed unanimously.

The complaint with regard to the compulsory entrance of Members by the back door was also put in the form of a resolution and carried unanimously.

A resolution was then brought forward by a Mr. Wigan that a committee should be appointed to present to the Council of the College a remonstrance grounded on the foregoing resolutions and requesting that the grievances therein complained of should be remedied.

So far, as will be seen, the meeting had been remarkably at one in sentiment and language, but this resolution led to an animated discussion. It brought Wakley to

[2] Chapter XIX. of this Biography, May 16th, 1896, p. 1376.

[3] It may be necessary to remind the reader of the significance of this interruption. Sir Everard Home, the first President of the Royal College of Surgeons who used that title, was John Hunter's pupil, brother-in-law, and literary executor. In discharge of his executorship he destroyed Hunter's manuscripts about three years before the date of this meeting. He was and is generally believed to have made use of the papers in scientific writings to which he appended his own name and to have burnt them for fear of detection.

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the front, who, while owning that he had been the author of the advertisements summoning those interested in the reform of the College to meet at the Freemasons' Tavern, said that he did not find the results as drastic as he had hoped. A lot of condemnatory resolutions forwarded to the College would certainly constitute a serious remonstrance to that body, but he did not believe that any remonstrance would be of avail. He wished to petition Parliament to recommend his Majesty to grant a new Charter, and one which allowed each Member to have a voice in the election of those persons who were to regulate the proceedings of the College in the prosperity of which he must feel a personal as well as a national interest.

His lengthy speech was listened to with mixed feelings by his audience. He was prepared to go much further than most of them, and many of his expressions of contempt for the present rulers of the College did not meet with response. The general feeling was, in fact, favourable to civil remonstrance at the time that Wakley rose to speak on the other side. But, said Wakley, one might as well remonstrate with the Devil as with this constitutionally rotten concern—his own words. Nothing would come of such a measure, and he urged the meeting to petition Parliament at once to abrogate the Charter. He carried the bolder spirits with him, although he frightened many conscientiously anxious in the cause of reform but not believing that such root-and-branch remedy was necessary. His speech was an eloquent effort—outspoken, combative, and closely reasoned. He set the meeting right on the legal procedure necessary to obtain an abrogation of the Charter, and summed up, with striking additions, those grievances endured by the Members, which had already been made the subject of unanimous resolutions. Gradually he carried his hearers with him. Dissentient cries grew less frequent and applause waxed more unrestrained. As he felt that he was winning he in his turn made concessions to the meeting, dropping his more contentious tone and appealing to their practical sense. He concluded by proposing a long amendment to Mr. Wigan's motion to the effect that a petition, founded on the resolutions already adopted should be immediately prepared and presented to the House of Commons praying for the appointment of a committee to inquire into the abuses thus revealed with a view to obtaining from the King a new Charter.

Mr. Lawrence, in putting the amendment to the meeting, said a few words in favour of the original motion, but Wakley had taken the sense of the assembly by storm and his views were endorsed by a large majority.

A committee of twenty persons was then appointed to prepare the petition to the House of Commons and the meeting adjourned.

(To be continued.)

THE PREVALENCE OF DIPHTHERIA IN CONNEXION WITH ELEMENTARY SCHOOLS.

DR. W. R. SMITH has recently presented to the London School Board an elaborate statistical report on the prevalence of diphtheria in London and elsewhere and its alleged connexion with the elementary schools. In the year 1894 the attention of the Board was forcibly drawn to the possible influence of aggregation in school on the spread of infection, by the publication of an important "memorandum" by the medical officer of health of the administrative county of London, which furnished evidence that school attendance since the year 1870 has been answerable for a *portion* of the increased prevalence of diphtheria that has been observed for some years past. Accordingly the School Board, by a resolution dated January, 1895, directed their medical adviser to report to them on the whole subject. Dr. Smith's report is divided into three sections. The first deals with the evidence as to local incidence of diphtheria in the past. The second with the diphtheria statistics available for London, and the third with Dr. Smith's personal investigations respecting 2000 cases of diphtheria occurring in 1895. Although the information contained in the first section is undoubtedly interesting in relation to the geographical distribution of diphtheria, it does not seem relevant to the present question; we shall therefore pass on to the second section, and endeavour to learn from it how far the evidence adduced by Dr. Smith proves his assertion that school influence plays but an unimportant part in the enormous increase of diphtheria during recent years in London. Before examining Dr. Smith's method of reasoning it may be useful to review for the benefit of those readers not conversant with the originals, the position which Mr. Shirley Murphy takes up in his memorandum, as well as in his presidential address to the Epidemiological Society. This position may be shortly summarised thus: The London mortality from diphtheria in 1871–80 was less than in 1861–70, but for some reason or other children from three to ten years of age shared less in the fall than did those under three or over ten years of age. If the London diphtheria mortality during 1891–93 be compared with that of former periods this special incidence is still more plainly marked upon children aged from three to ten years, these years being periods of exceptional diphtheria prevalence. Consequently if the rates prevailing in 1861–70 be compared with those of 1891–93 it appears that whereas in the later period the increase at all ages amounted to 196 per cent. and that among children under three and over ten years amounted to 173 per cent. and 53 per cent. respectively, the increase at ages from three to ten years amounted to as much as 309 per cent. There is therefore at the present time a greater tendency than there formerly was for children of from three to ten years of age to die from diphtheria, and close examination points to the year 1871, when the Education Act first became operative, as the year in which this increased prevalence first became conspicuous.

Dr. Smith in the course of a long argument sets himself to demolish Mr. Shirley Murphy's position. In the first place, he states that while the percentage of children attending elementary schools has increased from 25 per cent. in 1871 to 60 per cent. in 1893, the comparative death-rate at ages from three to ten years has remained throughout these years fairly constant. On examining Dr. Smith's Table 12, however, it is impossible to agree with this latter statement; for if the years be arranged in either decennial or quinquennial groups it will be found that with increase of school attendance there has been a gradual increase of comparative diphtheria mortality at the school ages. Again, Dr. Smith, commenting on the incidence of diphtheria on the several ages, admits that the fact that the decline during 1871 to 1880 was least at "school age" supports Mr. Murphy's contention. "But," he adds, "this cannot be said of the figures relatively to the recrudescence of the disease in 1881–90," inasmuch as "in England and Wales as a whole children aged from two to three years were most affected by this rise, while in London the increased incidence fell yet a year earlier." It is impossible not to recognise from this argument that Dr. Smith fails to grasp the point really at issue here—namely, whether the Education Act has actually contributed in any important degree to the recent prevalence of diphtheria; for he bases his statement on the incidences of mortality in 1871–80 as compared with 1881–90, whereas the Act had been passed in 1870. If Dr. Smith had compared the behaviour of diphtheria in 1861–70 with that in 1881–90, or with that in 1891–94 he would have found that his expectation "that any tendency to school infection would show itself in a marked manner at age four," would have been fully realised. In these comparisons the maximum increase is found, in each case, to be in children at ages from four to five years. Subsequent pages of Dr. Smith's report exhibit a similar fallacy, and suggest the notion that the writer fails to understand that two distinct factors have herein to be considered: the one, the natural behaviour of diphtheria in relation to age incidence, the other, the effect of the Act of 1870 upon this incidence; and that the effect of the Act can be appreciated only by contrasting the incidence of mortality in the several ages in periods respectively preceding and following the year 1870. It is to be hoped that having

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regard to the importance of the subject, Dr. Smith will see fit to reconsider his conclusions in connexion with this part of his report. Dr. Smith next touches on the decrease in the diphtheria attacks notified in London at a time which corresponds with the interruption of school attendance by the summer holidays. He thinks that the decrease in the number of attacks is not due to diminished opportunities of infection, and while apparently admitting that there is a diminution of disease incidence about this time, he is evidently disposed to account for it by the migration of children from London for the summer vacation. But this explanation had already been considered by Mr. Shirley Murphy and held by him to be insufficient. Mr. Murphy has, moreover, shown that both in 1893 and 1894, when children from three to ten years are considered, the August decrease corresponds with the closing and the subsequent increase with the re-opening of the schools of the London School Board, *due allowance being made for the incubation period and for some delay in notification;* and, lastly, he has shown that the decrease in attacks among children aged under three years occurs somewhat later, "in a way to suggest that the attacks of children at the earlier age were due to infection from the older children, whilst the decrease in the attacks among the former was due to diminished opportunities of infection from the latter."

In conclusion, some reference must be made to Dr. Smith's inquiries into the origin of infection among about 2000 persons admitted into the hospitals of the Metropolitan Asylums Board. Using such aids for his inquiry as ambulance nurses and school teachers, Dr. Smith arrives at the conclusion that 7·6 per cent. of the cases at school age were due to school infection. Unfortunately, Dr. Smith's figures do not permit of the formation of a safe judgment as to how nearly this percentage represents the full proportion of attacks attributable to school influence, but if this proportion be assumed to be correct even Mr. Shirley Murphy could scarcely desire a more complete justification of the position which he has assumed. We must, therefore, express the opinion that the arguments in Dr. Smith's elaborate report fail to weaken in the slightest degree the force of the contention advanced in Mr. Shirley Murphy's memorandum and in his presidential address of 1894, and we trust that the educational and sanitary authorities of the metropolis will relax none of their endeavours to minimise the dangers which there still continues to be reason for associating with the aggregation of children in school under existing conditions.

THE POWERS AND DUTIES OF SANITARY AUTHORITIES.

NOTHING is more bewildering to those whose duties are more or less governed by the Factory and Workshops Acts than the cross references which abound in these documents of legislation; in addition to this the meaning of some of the sections are by no means clear and the re-codification of the existing Acts is most desirable. To disentangle as Dr. J. F. Sykes attempted to do in a paper read before the Sanitary Institute on Wednesday, April 15th, from the Factory and Workshops Acts, 1878 to 1895, the powers and duties of sanitary authorities was not an easy task, but Dr. Sykes is to be complimented on the way in which he accomplished it. Prefacing his remarks with some preliminary details and definitions he gave an apt illustration of the involved nature of the factory and workshop legislation.

The Factory and Workshops Act of 1878, Section 3, relating to effluvia, overcrowding, ventilation, &c., and Section 33, relating to lime-washing, washing, &c., applied to all factories and workshops. The same Act, Section 61 (1), exempted domestic workshops from Sections 3 and 33. The same Act, Section 101, exempted from the nuisances, Section (91) of the Public Health Act of 1875, all factories and workshops within the provisions of the Factory and Workshops Act, but relegated to the nuisances section above mentioned every other factory, workshop, or workplace. The Factory and Workshop Act of 1891, by Section 39 and Schedule 2, withdrew workshops within the Factory and Workshops Acts from Section 101 of the Factory and Workshop Act, 1778. The same Act of 1891 by Section 3 (1) withdrew workshops from Sections 3 and 33 of the Factory and Workshop Act, 1878. The net result of these cross references being that all extra-metropolitan workshops and workplaces are relegated by the Factory and Workshops Act, 1891, to Section 91 of the Public Health Act of 1875, and similarly Section 2 of the Public Health London Act, 1891, has now within its pale all metropolitan workshops and workplaces.

Confining his attention to nuisances special to workshops Dr. Sykes said it was the duty of a sanitary authority to see with regard to every workshop within a district:—1. That it is kept in a cleanly state. 2. That it is kept free from effluvia arising from any drain, closet, urinal, &c. 3. That it is ventilated in such a manner as to render harmless any gases, vapours, dust, or other impurities generated in the course of the work carried on therein. 4. That it is free from overcrowding—that is, that at least two hundred and fifty cubic feet of space per head are provided during ordinary working hours and four hundred cubic feet during overtime. 5. That the prescribed notice specifying the number of persons who may be employed in each room is duly affixed at the entrance to the workshop or that the fact is otherwise made known. 6. That a reasonable temperature is maintained in each workroom. 7. That it is lime-washed, cleansed, or purified when necessary for health as certified by an officer of the sanitary authority, bakehouses being excepted and otherwise provided for. 8. That it is provided with sufficient and suitable sanitary conveniences for each sex. 9. That note is made of the employment of protected persons in order that the factory inspector may be informed. 10. That the list of outworkers is inspected.

In addition to the ordinary requirements for a workshop already enumerated it is also the duty of a sanitary authority with regard to every bakehouse within its district to see:—1. That the inside walls, ceilings, &c., are (*a*) either painted or varnished every seven years and washed every six months, or are (*b*) lime-washed every six months. 2. That a sleeping place is effectually separated from any bakehouse in the same building, and is lighted and ventilated by an external window at least nine feet square, one half being made to open. 3. That a bakehouse cistern is separate and distinct from any water-closet cistern. 4. That any water-closet, earth-closet, privy, or ashpit is cut off from direct communication with a bakehouse. 5. That no drain or pipe for carrying off fæcal or sewage matter has an opening in the bakehouse. 6. That no bakehouse is in such a state as to be, on sanitary grounds, unfit for use as a bakehouse. 7. That no underground bakehouse is newly brought into use.

In the Public Health London Act, 1891, Section 141, the expression "bakehouse" means any place in which are baked bread, biscuits, or confectionery from the baking and selling of which a profit is derived. In the Factory and Workshop Act, 1883, Section 17 (1), it is provided that the sanitary authority shall enforce the sanitary provisions with regard to "retail bakehouses," and they are defined as places where the bread, biscuits, or confectionery baked in which are not sold wholesale, but by retail in some shop or place occupied together with such bakehouse. Section 36 of the Act of 1891 merely repeats the exception of bakehouses which are factories, and appears to be a redundant provision. The interesting point is the curious fact that in the metropolis wholesale bakehouses (not factories) are controlled by sanitary authorities, whereas outside the metropolis they are controlled by factory inspectors, another of the strange results of the complicated provisions of legislation by cross references. The sanitary provisions, the affixing of notices and abstracts, notice of occupation, and other provisions of the Acts, now apply to laundries, except to laundries of certain public institutions, domestic laundries, and laundries where not more than two non-residents are employed. By Section 27 of the Factory and Workshop Act of 1891 it was provided that the occupier of every factory and workshop and every contractor employed by such occupier shall, if required by order of the Secretary of State, keep a list of all persons employed, either as workmen or as contractor, outside the factory or workshop, and of the places where they are employed, such list to be open to inspection by any factory inspector or officer of a sanitary authority. In November, 1892, the Secretary of State made such an order with regard to the manufacture of wearing apparel, electro-plate and files, cabinet and furniture making and upholstery work. By Section 42 of the Factory and Workshop Act of 1895 it was further provided that the lists described in Section 27 of the Act of 1891 shall be sent on March 1st and September 1st in each year to the factory inspector of the district, and it was also provided that Section

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27 of the Act of 1891 shall (by statute) apply to any place from which any work of making wearing apparel for sale is given out, as if that place were a workshop.

With reference to the relationship of the sanitary authority to the inspector of factories, by Section 26 of the Factory and Workshop Act of 1891 notices of the opening of new workshops, and by Section 41 of the Factory and Workshop Act of 1895 notices of the occupation of existing workshops, must be sent to the inspector of factories, and by him forwarded forthwith to the sanitary authority of the district. On the other hand, by Section 27 of the Public Health (London) Act, 1891, if the medical officer of health becomes aware of any child, young person, or woman being employed in a workshop, he must forthwith give notice of the fact to the factory inspector of the district. Section 29 of the Act of 1895 provides that any case of lead, phosphorus, or arsenical poisoning, and of anthrax contracted in any factory or workshop shall be notified by the medical attendant to the chief inspector of factories; that written notice of the case shall then be sent to the factory inspector and to the certifying surgeon, and be regarded as an accident, of which the latter is required to investigate the nature and cause. Now that the recently-appointed chief inspector of factories is a thoroughly experienced and well-known medical officer of health the objection raised to this provision ceases to have the weight it originally undoubtedly had; but this entirely new departure in the notification of disease will be watched with interest both by the public and the medical profession. Washing conveniences are also now required to be provided where lead, arsenic, or other poisonous substances are used in any factory or workshop. Further, the occupier of a factory or workshop is not allowed to employ any woman within four weeks after childbirth.

A few words must be devoted to the section of last year's Act, which provides that the occupier of any place where wearing apparel is made, cleaned, or repaired, or where it is given out for these purposes, or any sub-contractor of the occupier, is liable to a maximum penalty of £10 if he allows any wearing apparel to be made, cleaned, or repaired in any dwelling house or building occupied therewith, whilst any inmate is, to his reasonable knowledge, suffering from scarlet fever or small-pox. This will apply to tailoring, dressmaking, millinery, &c., as well as to laundrying, mangling, &c. It is rarely that an employer knows anything of the health of other persons residing in the same houses as his employés. He can only know of small-pox or scarlet fever if he be informed by his employé or by the sanitary authority, whose officer again would in turn have to be informed by the employé of the name and address of the employer, and there is no compulsion to disclose this, so that the working of this section must depend mainly upon the goodwill of the employé, to whom no provision of compensation for loss of employment is made. As medical officers of health are notified of all cases of scarlet fever and small-pox, what is really required is to give specific power to sanitary authorities to enforce removal to hospital of any cases of scarlet fever or small-pox occurring in any house where wearing apparel is made, cleaned, or repaired.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

A MEETING of the Comitia was held on May 14th, Dr. SAMUEL WILKS, President, being in the chair. After the minutes had been read and confirmed, the PRESIDENT announced that Dr. Collingridge, Medical Officer of Health of the Port of London, had been nominated Milroy Lecturer for the ensuing year. It was also announced that the committee appointed to consider the Midwives Bill had not met, the Bill having been abandoned. The following gentlemen were then admitted to the Fellowship: Charles Montague Chadwick, M.D. Oxon., Harry Campbell, M.D. Lond., Arthur Gamgee, M.D. Edin., John Anderson, C.I.E., M.D. St. And., John Michell Clarke, M.D. Camb., Sir Hugh Reeve Beevor, M.D. Lond., Ernest Septimus Reynolds, M.D. Lond., William Hunter, M.D. Edin., William Aldren Turner, M.D. Edin., and Arthur Pearson Luff, M.D. Lond.

Formal communications were received from the headmaster of the school at Bury St. Edmunds, conveying the thanks of the governors, masters, and scholars for the portrait of Sir Thomas Watson; and from the Registrar of the General Medical Council announcing that the term of office of the representative of the College in the General Medical Council had expired. The Comitia proceeded to elect a representative and Sir Dyce Duckworth was re-elected by a large majority. The PRESIDENT bore testimony to the service rendered by Sir Dyce Duckworth to the interests of the College at the meetings of the General Medical Council, and after a few remarks from Sir DYCE DUCKWORTH the meeting adjourned.

THE AMERICAN MEDICAL ASSOCIATION.

THE New York *Medical Record* reports the proceedings of the forty-seventh annual meeting of this association, held at Atlanta, Georgia, on May 5th, 6th, 7th, and 8th. The proceedings comprised many matters of interest, of which we can now only notice the chief. The President (Dr. Beverly Cole), in his opening address, noticed what he called a lowering of the standard of the profession, a falling off from the days "when the medical man was a gentleman as well as a scholar." He found the reason of this, undoubtedly in the multiplicity of schools, with their bidding for patronage. He acknowledged efforts after a better state of things in many places, mentioning New York and Illinois, and "perhaps some other States," but doubted that the "commenced advance was not much more than a species of advertisement." He denounced the tendency of large life insurance companies to cut down examiners' fees, saying surely the fee of five dollars was small enough. He noticed that there was a tendency in foreign physicians to come to practise in the United States. Speaking of the Moscow Congress he regarded the exclusion of the English language as an insult to English-speaking people. He lamented the proneness of the clergy to endorse every quack nostrum, and was still more severe on certain medical men who give testimonials to proprietary remedies. In the conclusion of his address Dr. Cole deprecated the tendency to mutilate the human body by excessive surgery, fully admitting its honorable achievements. The appendix seems the organ most liable to such practices in the States, so that the Hon. John Temple Graves, in welcoming the association, alluded to this portion of the body as liable to special attack in a community so healthy as to leave little else for treatment by a faculty they were nevertheless all glad to welcome. The address in medicine by Dr. William Osler of Baltimore, and that in surgery by Dr. N. Senn of Chicago, were the chief features of the meeting. Dr. Osler, observing that humanity had suffered from three great enemies—fever, famine, and war—mentioned that three of the greatest benefits conferred on mankind had reference to fevers—the introduction of cinchona, the discovery of vaccination (which was duly celebrated at a later stage of the meeting), and the announcement of the principle of asepsis. He discoursed chiefly on typhoid fever, which he said was to-day the fever of their country. The address of Dr. N. Senn on "Some of the Limits of Surgery" was important. While magnifying surgery now founded on modern pathology and the new science of bacteriology, he deprecated the *furor operativus* manifested in special departments of surgery, and said that operative surgery had been carried to extremes. He showed the rapidity with which general infection may take place from the experiments of Schimmelbusch, who found micro-organisms in the spleen five or ten minutes after infection of a wound. We can only indicate a few of the subjects in which he indicated the limits of surgery in plain, not to say strong, language. Early resection or arthrectomy in cases of tuberculous joints he thought had been disappointing. In hundreds of cases he had got most satisfactory results from intra-articular and parenchymatous injections of iodoform and glycerin. Cure was obtained in one-half or two-thirds of uncomplicated joint cases. As regards the surgery of the abdomen, nearly 50 per cent. of cases subjected to radical treatment for malignant disease succumbed to the operation. He himself had opened the abdomen for malignant disease of the stomach in nineteen cases, and in only one was the disease limited to the organ first affected. He was especially plain in his words on the "greatest onslaught of modern surgery on the organs of generation, male

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and female, and did not know where it was to end." "The mutilating work," he said, still continues, and he was especially severe on the recent graduate who, after watching the practice of a much-employed gynæcologist for a month or two, starts as a full-fledged specialist and is ready to extirpate the uterus, remove ovaries and Fallopian tubes, and sew up imaginary lacerations of the cervix and perineum. "The frequency with which women are being castrated is one of the most flagrant transgressions of the limits of the art of surgery," said Dr. Senn, and asked, "Where is this wholesale unsexing of our population to end?" He was scarcely more reserved in his plea in favour of conservatism in the treatment of prostatic hypertrophy. Finally, he declared that he had written without malice in the interest of sufferers and "as a plea for the recognition of good work done by the great mass and back bone of our profession—the modest, toiling, inadequately-remunerated general practitioner."

OYSTERS AND TYPHOID FEVER.

WITH reference to the special article which appeared in THE LANCET of Feb. 2nd, 1895, under the heading of "Oysters and Typhoid Fever" a good deal was said before a committee of the House of Commons recently on the subject of the possible communication of disease as a result of the consumption of oysters in a raw state. The Brighton Corporation are promoting a Bill in Parliament "To confer further powers upon the Mayor, Aldermen, and Burgesses of the Borough of Brighton," known as the Brighton Improvements Bill. Among the clauses is one allowing the Corporation or sanitary committee to make an order forbidding the introduction into Brighton of shell-fish from ponds or rivers contaminated with sewage in case of the medical officer of health attributing infectious disease in the borough to such shell-fish. Cases of typhoid fever have already been ascribed to the eating of sewage-contaminated oysters and other shell-fish from Shoreham Harbour, and it is alleged that in the year 1894 at least 40 per cent. of the cases of enteric fever originating in Brighton were ascribable to such shell-fish. However, this particular clause in the Bill has been struck out. It was strongly opposed by the two oyster merchants who are carrying on an extensive business with the favourite bivalvular mollusc in Shoreham Harbour—the port of Brighton, and a short distance from the borough. Dr. Newsholme in his evidence before the committee went fully into the cases which he ascribed to the eating of oysters and mussels from Shoreham Harbour, and was corroborated by Sir Joseph Ewart, M.D. Dr. Klein, F.R.S., gave the result of a bacteriological examination of water from the harbour and also of oysters submitted to him. There was, he said, sewage matter in both to a considerable extent, but he could find no definite trace of typhoid germs. He considered, however, that there was great risk of disease being caused under such conditions. Dr. Sharkey said that the general evidence of typhoid fever being spread by oysters was very strong. This concluded the evidence on this clause, and Sir William Marriott, Q.C., who, with Mr. Pember, Q.C., and Mr. A. V. Frere, appeared for the promoters, said he had no doubt the clause as it stood was very strong and he could quite understand the objection to placing so much power in the hands of the medical officer of health, who might seriously damage a trade. Any suggestion, he added, by which the action of the authorities might be made subject to an appeal to the Local Government Board or otherwise would be accepted by the Corporation; but after a deliberation of the committee in private the chairman (Mr. Mount) said they were of opinion that the clause should not be granted. During the proceedings the special article in THE LANCET was referred to. The article included a verbatim report of a bacteriological investigation of water from an oyster-bed in Shoreham Harbour and of oysters from the same source made by Professor Crookshank, M.B., Director of the Bacteriological Laboratory, King's College, London. The following extract practically summarises the report: "The question which I have been asked is whether oysters from this particular bed are likely to be injurious to the consumer. From the bacteriological investigation of the samples of water and of oysters submitted for examination I am of opinion that there is no evidence, from the bacteriological examination, which would lead me to condemn the oysters as dangerous or unfit for food. I am led to this conclusion by the absence of typhoid fever bacilli and by the absence of any septic micro-organisms, and by the fact that all the micro-organisms which I succeeded in isolating were perfectly harmless species. I would venture to add, however, that more than a bacteriological investigation is required to relieve public anxiety upon the question of a possible danger arising from the consumption of uncooked oysters."

THE OBLIGATIONS OF THE GENERAL MEDICAL COUNCIL, MEDICAL SCHOOLS, AND CORPORATIONS IN RELATION TO THE RIGHTS OF MEDICAL MEN.

AT a meeting on May 15th of the Select Committee of the Civil Rights Defence Committee on this subject, Mr. Timothy Holmes, F.R.C.S. Eng., in the chair, the resolution appointing this committee having been read, the resolutions of the meeting of the Civil Rights Defence Committee of Jan. 9th, 1896, were read as follows:—

1. That, as many of the great lay and medical public bodies will refrain from coöperating in the defence of the professional and civil rights entrusted to the committee until a strong consensus of opinion is aroused urging them to do so, the constituent bodies of the committee are asked to adopt resolutions in the sense of those adopted by the committee.

2. That the professional bodies represented on the Civil Rights Defence Committee be asked to use their influence with the medical schools which induce young men to enter the medical profession and with the General Medical Council, the universities, and corporations which confer upon them supposed rights, now formally declared to be held entirely at the pleasure of the Crown, acting by the judges, and ask them to unite in making good the rights which they take part in promising and which are now imperilled by the decision of the Court of Appeal.

General Graham's memorandum of Feb. 7th, 1896, to the medical papers requesting an expression of opinion on these resolutions was brought up and also THE LANCET of May 9th with an article on the work of the committee dealing with the obligations of the General Medical Council, medical corporations, and medical schools in relation to the rights of medical men, taking the same view as that adopted by the committee in the memorandum and resolutions, and declaring that these bodies are at present subsisting by holding out to men entering the profession false promises of rights now declared by the decision of the Court of Appeal to have no existence, and that it is incumbent on such bodies to discontinue receiving such moneys until the rights for which they receive them are vindicated.

Correspondence with the General Medical Council, the University of London, the Royal College of Physicians of London, the Society of Apothecaries, London, and St. Mary's Hospital Medical School inviting coöperation was laid on the table.

Lord Stamford's letter inviting the coöperation of the General Medical Council in defence of the rights confirmed by its certificate of registration was read. General Graham explained that the only reply had been from the solicitor of the Council, and not from the President, stating that the case is outside the scope of the Council and ignoring the grounds of the invitation.

Resolved:—

1. That a letter be drafted for the next meeting, to be addressed to the President of the General Medical Council for signature by the medical members of the committee, supporting the invitation conveyed by the President.

2. That letters be similarly prepared to be written to the President and Council of the following bodies: the Royal College of Surgeons of England, the British Medical Association, the Association of Fellows of the College, the Medical Defence Union, and the West London Divisions of the London and Counties Medical Protection Society, requesting each to act independently in support of this committee in earnestly inviting the coöperation of the General Medical Council.

Correspondence with the Society of Apothecaries was next considered, including an invitation to coöperate, to which no answer had yet been received.

Resolved:—

1. That a letter be drawn up for signature by the medical members of the committee supporting the invitation to the society to

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unite in vindicating the rights of the society under its charter infringed in the violation of Mr. Anderson's rights as a Licentiate, and to use its influence with other guilds to unite in this defence of common rights.

2. That a report of the meeting be sent to the medical papers.

The meeting adjourned until to-day (Friday) at 6 P.M.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on the 14th inst., the President, Mr. CHRISTOPHER HEATH, being in the chair.

Mr. Harold J. Stiles was introduced and the President handed him the Walker Prize, and Dr. A. A. Kanthack was presented with the Jacksonian Prize.

A letter was read from Dr. J. S. Edkins, with a memorial signed by various professors and lecturers on physiology in the United Kingdom, requesting that certain alterations be made in the present examination in physiology for the Fellowship. It was resolved that Dr. Edkins should be informed that as the subject of physiology at that examination had been very fully considered so lately as eighteen months ago the Council did not see their way to reopen the question.

It was resolved that the annual meeting of Fellows of the College for the election of members of the Council should be held at the College on Thursday, July 2nd next, at 1 30 o'clock P.M. precisely, and that the meeting of the Fellows should be held on the same day at 5 o'clock P.M.

Mr. TWEEDY moved: "That a poll of the Fellows be taken respecting the motion passed at the general meeting of Fellows on the 2nd of January in favour of giving to the Members of the College direct representation upon the Council, and that a committee be appointed to prepare for the approval of the Council an elucidatory statement of the subject in question, together with the interrogatories which shall be submitted to the Fellows."—The resolution was carried and a committee was appointed.

A letter from Mr. W. G. Dickinson was read communicating a resolution adopted by the committee of the Society of Members respecting the resolution adopted by the Council on the subject of the representation of Members on the Council. A letter was also read from Mr. H. P. Dunn communicating a resolution adopted by the committee of the Association of Fellows, expressing regret that the Council had not adopted the resolution passed at the last meeting of Fellows, and the hope that the whole body of Fellows might be consulted on the subject. The receipt of the letters was acknowledged.

Mr. RIVINGTON moved: "That the following resolution carried at a previous meeting of the Council be rescinded—viz.: 'As the members of this Council represent the body corporate of this Royal College, and consequently its Members as well as its Fellows, it is the opinion of this Council that no further representation of the Members is desirable.'"—The motion was not carried.

THE SOUDAN EXPEDITION.

THERE has been but little to record in connexion with this expedition during the past week, nor does it seem likely that anything of importance will occur until the advance takes place. There appears to be little doubt that this may eventually assume the shape of a combined but double movement from Wady Halfa and from Suakin. The Indian force will reach Suakin in the course of another week, when the Egyptian troops garrisoning that place will be free to join the force operating in the Nile direction. We do not yet know what will be the hospital arrangements for the Indian contingent at Suakin. There will be a hospital—probably a field hospital—on shore, and possibly one of the ships may be utilised as a floating hospital, but we do not apprehend that (unless an outbreak of cholera should unhappily occur among them) there will be any large amount of sickness among the men of the Indian force, as they are acclimatised and accustomed to field service. All the transport arrangements have been completed for the transfer of the Egyptian garrisons on the Red Sea on their evacuating Suakin and Tokar when relieved by the Indian troops. There was a rumour that the North Staffordshire Regiment was about to be recalled from Wady Halfa to Cairo, but this appears to be quite unfounded. The regiment is much more likely to move in a southward than a homeward direction. In spite of the great heat (happily relieved at night by a breeze), the discomfort of sandstorms, and the monotony of the life, the troops are quite as healthy as could be expected. The hospital arrangements at Akasheh and Wady Halfa are described as very satisfactory. At Akasheh there is only accommodation for 150 sick, but the health of the troops—British and Egyptian—is, as we have said, good. An invalided British officer from Akasheh was recently conveyed successfully from that station to the Citadel Hospital at Cairo. The transport arrangements were excellent, and there were ample supplies of ice and necessaries *en route*. There are a great many rumours about the Dervish troops, but very little is really known of their actual or intended movements or as to the strength which can be brought into the field in defence of Dongola. It is said that Ferkeh, an outpost camp beyond Akasheh held by the Dervishes, has been evacuated; if so it will probably be occupied by the Egyptians. There is a good deal of activity still displayed among the military and War Office authorities at Cairo. The occurrence of an outbreak of cholera at Alexandria with some cases at Cairo is, of course, an unfortunate and embarrassing circumstance, which engages, naturally, a good deal of anxious attention on the part of the Egyptian Government and its sanitary department; but there is no reason to suppose that it will spread to posts along the Nile at a great distance from Egypt and affect the expeditionary force there.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6279 births and 3830 deaths were registered during the week ending May 16th. The annual rate of mortality in these towns, which had been 18·4 and 18·5 per 1000 in the two preceding weeks, declined again last week to 18·4. In London the rate was 17·8 per 1000, while it averaged 18·8 in the thirty-two provincial towns. The lowest rates in these towns were 11·7 in Brighton, 13·3 in Derby, 13·4 in West Ham, and 14·4 in Norwich and in Leicester; the highest rates were 21·2 in Liverpool, 22·0 in Salford, 23·0 in Sunderland, 26·0 in Plymouth, and 28·5 in Manchester. The 3830 deaths included 561 which were referred to the principal zymotic diseases, against 641 and 622 in the two preceding weeks; of these, 201 resulted from measles, 183 from whooping-cough, 72 from diphtheria, 40 from scarlet fever, 34 from diarrhœa, 30 from "fever" (principally enteric), and not one from small-pox. No fatal case of any of these diseases occurred either in Brighton or in Preston; in the other towns they caused the lowest death-rates in Leicester, Derby, and Leeds; and the highest rates in Birkenhead, Croydon, Sunderland, and Manchester. The greatest mortality from measles occurred in Bristol, Portsmouth, Manchester, Sunderland, Birkenhead, and Oldham; from whooping-cough in West Ham, Huddersfield, Halifax, Birmingham, and Swansea; and from "fever" in Birkenhead. The mortality from scarlet fever showed no marked excess in any of the large towns. The 72 deaths from diphtheria included 43 in London, 5 in West Ham, 4 in Liverpool, 3 in Cardiff, and 3 in Birmingham. One fatal case of small-pox was registered in Cardiff, but not one in any other of the thirty-three large towns. There were 20 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 16th inst., against 16, 13, and 15 at the end of the three preceding weeks; 6 new cases were admitted during the week, against 8, 3, and 5 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2539, against 2534, 2523, and 2527 on the three preceding Saturdays; 293 new cases were admitted during the week, against 236 and 238 in the two preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 292 and 260 in the two

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preceding weeks, further declined to 249 last week, and were 74 below the corrected average. The causes of 68, or 1·8 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Leicester, Nottingham, Bradford, Newcastle-upon-Tyne, and in ten other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Blackburn, Preston, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·0 and 18·9 per 1000 in the two preceding weeks, rose again to 19·3 during the week ending May 16th, and was 0·9 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 11·8 in Greenock and 15·4 in Perth to 19·9 in Aberdeen and 21·1 in Glasgow. The 563 deaths in these towns included 38 which were referred to whooping-cough, 17 to diarrhœa, 9 to measles, 4 to "fever," 5 to scarlet fever, 1 to diphtheria, and not one to small-pox. In all, 72 deaths resulted from these principal zymotic diseases, against 76 and 69 in the two preceding weeks. These 72 deaths were equal to an annual rate of 2·5 per 1000, which was slightly below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 30 and 25 in the two preceding weeks, rose again to 38 last week, of which 24 occurred in Glasgow, 8 in Aberdeen, and 3 in Dundee. The deaths referred to measles, which had been 11 in each of the two preceding weeks, declined to 9 last week, and included 6 in Glasgow. The deaths referred to different forms of "fever," which had increased from 4 to 14 in the three preceding weeks, declined again to 4 last week, of which 2 occurred in Glasgow and 2 Edinburgh. The 3 fatal cases of scarlet fever corresponded with the number in the preceding week, and included 2 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 88 and 110 in the two preceding weeks, declined to 92 last week, and were 17 below the number in the corresponding week of last year. The causes of 31, or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate n Dublin, which had been 23·7 and 21·9 per 1000 in the two preceding weeks, rose again to 22·8 during the week ending May 16th. During the past seven weeks of the current quarter the death-rate in the city has averaged 23·3 per 1000, the rate during the same period being 18·7 in London and 17·7 in Edinburgh. The 153 deaths registered in Dublin during the week under notice showed an increase of 6 upon the number in the preceding week, and included 5 which were referred to the principal zymotic diseases, against 10 and 13 in the two preceding weeks; of these, 2 resulted from diarrhœa, 1 from scarlet fever, 1 from diphtheria, and 1 from whooping-cough, but not one either from small-pox, measles, or "fever." These 5 deaths were equal to an annual rate of 0·7 per 1000, the zymotic death-rate during the same period being 3·2 in London and 0·9 in Edinburgh. The 2 fatal cases of diarrhœa corresponded with the number recorded in the preceding week, while the mortality from scarlet fever was lower than in any recent week. The 153 deaths registered in Dublin last week included 30 of infants under one year of age, and 44 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons considerably exceeded the numbers in any recent week. Four inquest cases and 8 deaths from violence were registered; and 70, or nearly one-half, of the deaths occurred in public institutions. The causes of 17, or more than 11 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

INDIA AND THE INDIAN MEDICAL SERVICES.

THE Queen has approved of the following promotion in the Indian Medical Service made by the Government of India: — To be Brigade-Surgeon-Lieutenant-Colonel: Surgeon-Lieutenant-Colonel Andrew Deane, Bengal Establishment. Her Majesty has also approved of the retirement from the service of the undermentioned officers:—Brigade-Surgeon-Lieutenant-Colonel William Price, M.D., Madras Establishment; Surgeon-Lieutenant-Colonel Peter Johnston Freyer, M.D., Bengal Establishment. — *London Gazette.*

The services of Surgeon-Colonel T. J. McGann (Madras) are replaced at the disposal of the Military Department. Surgeon-Major R. Shore (Bengal), Medical Officer of the Mewar Bhil Corps, is appointed to officiate as Medical Officer, Kotah and Jhalrapatan. Surgeon-Captain H. R. Woolbert (Bengal), Medical Officer of the Deoli Irregular Force and of the Haraoti and Tonk Political Agency, is appointed to officiate as Residency Surgeon in Mewar, vice Surgeon-Major H. N. V. Harington. Surgeon-Lieutenant-Colonel P. A. Weir (Bengal), Residency Surgeon in Nepal, is appointed to officiate as Medical Officer of the Deoli Irregular Force and of the Haraoti and Tonk Political Agency. Surgeon-Major R. Neill Campbell, Officiating Senior Medical Officer, Port Blair, is appointed to be *ex-officio* Assistant Superintendent in the Settlement. Surgeon-Lieutenant-Colonel J. W. Clarkson is appointed to be Sanitary Commissioner for the Government of Bombay. Surgeon-Captain W. E. Jennings has delivered over the charge of the Shikarpur Prison. Surgeon-Major J. Crimmin, V.C., and Surgeon-Captain W. E. Jennings, M.B., have respectively delivered over and received charge of the office of Health Officer of the Port of Bombay.

NAVAL MEDICAL SERVICE.

The following appointments are announced:—Surgeons: A. E. Merewether, W. R. Center, C. M. Beadnell, W. S. H. Sequeira, J. G. Fowler, J. C. G. Reed, E. G. E. O'Leary, W. M. Keith, E. Sutton, W. E. Matthew, M. L. M. Vaudin, W. H. Thomson, J. W. Craig, W. L. Martin, A. T. Wysard, W. J. Stitt, and S. Croneen to the *Victory* for Haslar Hospital; A. W. B. Livesay to the *Victory*, additional for disposal; A. F. Harper to the *Scylla*; and J. H. Stenhouse to Plymouth Division of Royal Marines.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain Thomas J. Compton to be Surgeon-Major.

VOLUNTEER CORPS.

Artillery: 1st London (City of London): Alfred Allport, gent., to be Surgeon-Lieutenant. The Highland: Surgeon-Lieutenant G. A. Lang, M.B., to be Surgeon-Captain. *Engineer: Fortress and Railway Forces, Royal Engineers:* 1st Middlesex: Surgeon-Lieutenant W. H. Bourke, M.D., to be Surgeon-Captain. *Rifle:* 4th Volunteer Battalion the Norfolk Regiment: George Lowe, M.D., to be Surgeon-Lieutenant. 2nd Volunteer Battalion the Royal Welsh Fusiliers: Evan Thomas Hughes, gent., to be Surgeon-Lieutenant. 1st Volunteer Battalion the Duke of Cornwall's Light Infantry: Charles Cecil Bullmore, gent., to be Surgeon-Lieutenant. 1st (Pembrokeshire) Volunteer Battalion the Welsh Regiment: Surgeon-Lieutenant W. L. Hughes resigns his commission.

THE EXAMINATIONS FOR NAVAL SURGEONS.

The under-mentioned gentlemen who competed on the 4th inst. and following days at Examination Hall, Victoria Embankment, for appointment as Surgeons in the Royal Navy have been granted commissions:—

Name.	Marks.	Name.	Marks.
A. E. Merewether, M.B. ...	2712	W. E. Matthew	2307
W. R. Center, M.B.	2680	M. L. M. Vaudin, M.B. ...	2260
C. M. Beadnell	2631	W. H. Thomson	2181
W. S. H. Sequeira, M.B. ...	2605	J. W. Craig, M.B.	2175
J. G. Fowler	2494	W. L. Martin	2171
J. C. G. Reed	2446	A. T. Wysard	2161
E. G. E. O'Leary	2393	W. J. Stitt	2109
W. M. Keith, M.B.	2365	S. Croneen	2055
E. Sutton	2318		

NAVY ESTIMATES.

In the recent debate on the navy estimates, when the House went into Committee of Supply, there was extremely little of a medical character touched upon beyond some remarks by Admiral Field on the lady nursing system introduced into the naval hospital service, with special reference to Malta, and the old grievance about the toll exacted at the bridge leading to Haslar Hospital. Mr. Macartney concurred in the remarks of the gallant admiral as to the valuable services of the nursing sisters, adding that he understood there was a head nursing sister at Malta. With reference to the

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toll-bridge at Haslar he was prepared to consider any representations that might be made.

THE LEE-METFORD BULLET.

It will be remembered that experience in India during the Chitral expedition was not altogether favourable to this missile in that it was not found to possess sufficient "stopping" power. We noticed, too, that a similar complaint was made of the bullet by the defenders of Bulawayo in their encounters with the Matabeles, and it was alleged that on this account the Martini-Henry had been substituted for the Lee-Metford rifle. As the result of experimental investigations in India it is announced, however, that by a slight modification in the Lee-Metford bullet this defect has been completely overcome.

THE MILITIA AND THE SPREAD OF SMALL-POX.

We recently printed a letter from a correspondent calling attention to the danger of importing small-pox from Gloucester into hitherto healthy districts by assembling men from the affected city and district for their annual militia training. We are glad to see, therefore, that Her Majesty has been advised to dispense with the calling out of the third and fourth battalions of the Gloucestershire Regiment, an order in respect to which appears in the *London Gazette* of May 15th.

Surgeon-Major T. B. Moffitt, A.M.S., will arrive at Netley for duty on the 23rd inst.

Correspondence.

"Audi alteram partem."

"X" RAYS: INSTANTANEOUS PHOTOGRAPHY AND EXPERIMENTS UPON THE HEART AND OTHER SOFT TISSUES.

To the Editors of THE LANCET.

SIRS,—Considerable attention has lately been paid to the use of fluorescent screens and special plates with a view to the reduction of the time of exposures. The object of this communication is not to minimise the importance of any aid which may be placed in the hands of a surgeon, because whatever success should attend the ordinary and simpler methods it is not unlikely that instances may occur for which we should require every facility at our disposal. In my previous communications, however, I have pointed out that just as we desire good sunlight in ordinary photography more than quick plates, so in this work a good Crookes's tube is what we most need. The experiments below have all been done with the ordinary focus tube, Paget XXXXX plates, and hydrokinone developer. With regard to the tubes I have made many modifications by experiment, such as increasing the size of the aluminium concave disc to one and three-quarter inches in diameter. What I find is most important, however, is the proper vacuum. Hence I am more particular than ever, when I wish a tube for special work, to superintend the exhaustion and to test it on the fluorescent screen before taking off the pump. Another improvement is to be got by watching the current passing through the coil. I found that the fluorescence with the mercury interruptor was much greater than that with the ordinary platinum spring, and on testing with Lord Kelvin's cell tester and ampèremeter I found that when the current across the terminals was as high as 17 ampères during the time of exposure and when the spring was vibrating the meter would not register more than 1 ampère. On the other hand, with the mercury interruptor one single flash was enough to send it up to something like 5 or 7 ampères. Instead, therefore, of counting the exposures in minutes and seconds in instantaneous work I use the mercury interruptor and register the number of flashes in the tube due to each vibration of the interruptor. By this means I have photographed the bones of the hand with one flash of the tube and obtained the best negative I have ever taken of the bones of the hand with ten such flashes. The current across the terminals during this experiment registered 10 volts and 10 ampères and the spark was from 10 to 11 inches in length.

This is not, however, the only advantage of the method described, because by making a series of observations on the fluorescent screen I was able to distinguish shadows of many of the soft tissues of the body. As stated in a report of the demonstration given to the British Laryngological Association, I have seen and photographed the deep structures of the neck, including the larynx and tongue. I have now distinctly seen the cardiac area in the living subject, showing its right and left borders, base, and apex. In a photograph of the same the relationship of the ribs, clavicle, &c., are also well defined. The diaphragm covering the liver on the right side is also well seen. I have photographed the normal heart in a number of cases (with its pericardial covering of course), and in some of these experiments with the ordinary tube it did not take more than eight minutes' interrupted exposures. In one, a young subject, hypertrophy of the right ventricle with enlargement of the liver could be distinctly made out. I would add one more note in passing: the vacuum of every tube changes during exposure, but with a little experience and by means of a Bunsen's flame it can be easily brought back to the condition which gives the maximum number of "x" rays. For the above reasons I have not found quick plates or fluorescent screens of very great advantage in photography.

I am, Sirs, yours faithfully,

JOHN MACINTYRE, M.B. Glasg., F.R.S.E.

"A RECORD OF THE INFECTIOUS DISEASES OCCURRING AMONGST 400 ADOLESCENTS DURING A PERIOD OF TWENTY-FIVE YEARS."

To the Editors of THE LANCET.

SIRS,—The profession is indebted to Dr. Clement Dukes for the data he has given as to the incidence of infectious disease among 400 boys, presumably the average population of Rugby School. Although I have no desire to discuss his figures as a whole, yet I should like to offer some general remarks upon those that deal with ophthalmia—a term which as employed by Dr. Dukes is by no means free from obscurity. So accomplished a physician need be scarcely reminded that at least three contagious eye conditions are included under that word—namely, (1) muco-purulent and (2) purulent ophthalmia, and (3) acute trachoma. According to my experience each of these is a specific malady due to a particular micro-organism and having a different meaning. Yet the writer makes no attempt in his communication to distinguish between them. Again, he employs the phrase "granular lids" without any qualification whatever. His readers are thus left in doubt whether by that expression he means mere follicular disease or the far more serious affection, trachoma, both of which in a certain sense may be said to be marked by a granular state of the conjunctiva. These ambiguities make it difficult to estimate the meaning of Dr. Dukes's figures, and appear to me to rob his communication of whatever scientific value it might otherwise possess. Apart from this looseness of expression, I gather from Dr. Dukes's paper that ophthalmia has for long been endemic in the school with which he is connected. His figures, at least, will bear no other interpretation. For example, the cases have ranged from 1 to 31 per annum, and once only, since 1874, has the malady been wholly absent. The yearly average stands at 8·52 (not at 7·16, as the writer makes it appear in Table III.). This, then, is the state of things that has prevailed for many years, "notwithstanding the greatest care, the provision of hygienic surroundings, and even of 800 cubic feet for dormitories." I feel tolerably certain that in a Poor-law school such an unfortunate condition would not be permitted to continue without repeated and vigorous protest from the Press, both lay and medical. Some of these maligned barrack schools can certainly show a better record. Take, for instance, the Central London District School, with an average population of more than 800, and compare its annual percentage of ophthalmia with that recorded by Dr. Dukes for the last five years. The figures come out as follows:—Ophthalmia among the State children: 1891, 1·87 per cent.; 1892, 1 62 per cent.; 1893, 1·12 per cent.; 1894, 0·5 per cent.; and 1895, 0·5 per cent. Among Dr. Dukes's adolescents: 1891, 6·25 per cent.; 1892, 5·25 per cent.; 1893, 7·75 per cent.; 1894, 4·25 per cent.; and 1895, 4·5 per cent. It will at once be seen that there is a considerable balance in favour of one of the very Poor-law schools concerning which Dr. Dukes remarks that its inmates "are apparently as

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grossly neglected in all sanitary precautions as were our prisoners in the sixteenth century." The foregoing comparison, furthermore, takes no count of two important facts: first, that the State schools admit young children, who are notoriously more subject to ophthalmia than "adolescents"; and secondly, that many of those received are in a delicate state of health, either from heredity or upbringing. Were these two factors given their due weight the comparison instituted would tell still more in favour of the Poor-law school. Dr. Dukes lays it down that the prevalence of ophthalmia "is the surest test of unsanitary conditions where the young are concerned, especially the want of soap and water and fresh air." I am not disposed to dispute this dictum, the logical outcome of which clearly is that the hygienic state of the Central London School is better than that of the institution from which Dr. Dukes draws his figures.

I am, Sirs, yours faithfully,

SYDNEY STEPHENSON,

Ophthalmic Surgeon to the North-Eastern Hospital for Children; Surgeon to the Ophthalmic School, Hanwell, W.

Welbeck-street, W., May 12th, 1896.

QUALITY OF MILK.

To the Editors of THE LANCET.

SIRS,—Medical men not infrequently give directions for infants to be fed on milk produced by *one cow*, but they seldom or never take the necessary precaution of warning parents to see that the cow selected for the purpose is *in calf*. The milk of a healthy cow that is *in calf* can be safely used at all times provided it is fed on suitable food, and a delicate infant may derive all the benefit hoped for by the daily supply of milk so produced. But it seldom happens that cows kept in urban districts are *in calf*. Town dairymen usually buy newly-calved cows and milk and fatten them simultaneously. Such cows may come in service every three weeks, and whenever they happen to be in service their milk is more or less unwholesome and may prove to be absolutely poisonous if given to a delicate infant. When an *in-calf* cow is not available it would be far better to use the mixed milk from an entire herd rather than to run the risk of having milk supplied from a cow that may have been in service at the time the milk was drawn.

I am, Sirs, your obedient servant,

ROBERT E. TURNBULL.

Claremont, Shrewsbury, May 11th, 1896.

"THE BATTLE OF THE CLUBS."

To the Editors of THE LANCET.

SIRS,—My attention has been drawn to a letter in your issue of May 2nd signed "Sophocles" the paragraphs of which are numbered from one to seven, my reply to them shall be in the same order only referring to numbers.

No. 1. Only four Associations use the word "Aid," which is a misnomer, the Alliance has nothing to do with names but did suggest an alteration.

No. 2. Such a resolution was not submitted to the meeting and therefore could not be discussed.

No. 3. In abstract statistical reports the mode by which the Value is attained cannot be set forth, and misinferences have been drawn from them, yet this was not discussed, nor any instructions given to me respecting it. I refer "Sophocles" to THE LANCET of November 7th, 1895, in which is given "partly" how one of the most valuable of these F.S.M.A. obtained its value; namely, by money raised four months prior to opening the Institution by Entrance Fees, Bazaar, and special donations. The salaries paid the Medical Department have been and will continue to be inserted in the Alliance Reports. As medical statistics are frequently computed, and the nature of what is termed Visits, Consults, and prescriptions are of no value, difficult to understand through the modes in which they are given in Associations reports and the various manners in which different Doctors compile them, the Conference after discussion declared them unnecessary and misleading, and ordered them not to be printed in their Report. This does not effect Associations, who doubtless will in future as in the past print the work of of their Institions.

No. 4. No application was received from the medical officer of Tonbridge Wells and such advice as named was not given to the Tunbridge Wells Association.

No. 5. The Registering of the Alliance (which is unnecessary) could only give security to its funds which are small and could not effect any Association, the idea of securing greater power over the profession was never thought of.

No. 6. No such resolution was submitted or discussed nor was any such advice given to any Association about their Surgeons as named in this paragraph. The Lincoln Telegram was to its own Delegates, and altho read to the meeting no instruction was asked and none given, nor was a reply sent.

No. 7. This Appears the freest from error of any of the statements made by "Sophocles." Yes, a deputation was appointed who in due time will wait upon the General Medical Council, and should they, "The G.M.C." attach any importance to an Anonymous letter doubtless the deputation will be able to answear any query arising therefrom.

This is the firstime I have replied to an Anonymous writer, and "Sophocles" will have to sign his own name and whereabouts if he desires a further reply. Our Report is in printers' hands; copies will be sent to the G.M.C.

I am, yours faithfully,

Markham-street, York, May 11th, 1896. JOHN BROWN.

"THE BRONCHITIS KETTLE, POULTICES, AND OVER-FEEDING IN ACUTE LUNG AFFECTIONS."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of April 18th Dr. de Havilland Hall, writing upon the treatment of bronchial and pulmonary diseases, deprecates in the main the use of the "bronchitis kettle" and the application of poultices generally, but extols in lieu the use of "Gamgee tissue or cotton wool upon which is sprinkled some stimulating liniment." Some fifteen years since or more I read a letter in THE LANCET by a medical man advocating the application of olive oil to the chest and between the shoulders in all chest complaints of an inflammatory nature, the patient to be also enveloped in a jacket of cotton wool. I have adopted this practice ever since and have been delighted with its results. Especially have I been pleased with this form of treatment among children of all ages, and so satisfied have many of my patients also been with it that they often make use of the olive oil and cotton wool before—or instead of, alas!—sending for me.

I am, Sirs, yours faithfully,

Putney, S.W., May 12th, 1896. J. FFRENCH BLAKE.

THE EVOLUTION OF THE SURGICAL TREATMENT OF THE BROAD LIGAMENT PEDICLE.

To the Editors of THE LANCET.

SIRS,—Mr. Lawson Tait has done good service to the literature of this important subject by his paper in THE LANCET of May 16th, in drawing attention to the superiority of the actual cautery in the intra-peritoneal treatment of the stump. He also rightly insists that, to be effectual, the stump must be thoroughly "cooked" and not merely seared. I find, on reference to my books, that I followed this method at the Hospital for Women in 1873, and I suppose I afterwards took to using the intra-peritoneal ligature as being more rapid. Finding that the petroleum cautery often did not do more than sear the stump, and that there was consequently a risk of oozing, I had made an oblong block of iron, and this being thoroughly heated in a fire was applied to the stump above the cautery clamp, so that the heat being conveyed to the steel flanges of the clamp thoroughly cooked the stump and reduced the risk of hæmorrhage to a minimum. While Mr. Lawson Tait's ingenious electric cautery clamp promises to be most effectual, yet in ordinary practice the slightly complicated apparatus might militate against its universal adoption.

I am, Sirs, yours faithfully,

Harley-street, W., May 18th, 1896. HEYWOOD SMITH.

To the Editors of THE LANCET.

SIRS,—Absence from home prevented me sending you revised proof in time, correcting a few mistakes and making the additional statement that we have now applied the instrument to seventeen pedicles with uniform success. The first two were cases operated on by my late assistant, Dr. Howard Morgan of Brisbane. The last case was one where

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the pedicle was so rotten that no ligature could have held, as everything tore on the slightest tension. The hæmostat completely shrivelled the pedicle and the patient is now (sixth day) quite well.—I am, Sirs, yours faithfully,

Birmingham, May 18th, 1896. LAWSON TAIT.

*** The makers of the new hæmostat are Messrs. Philip Harris and Co. of 144 and 146, Edmund-street, Birmingham.

"MATERNAL SYPHILIS."

To the Editors of THE LANCET.

SIRS,—It appears to me that Dr. Coutts's own statement in his first lecture is in favour of the possibility of maternal syphilis in every case, as well as in favour of the view that immunity to syphilis is the equivalent of the acquisition of the complaint itself. Both these views Dr. Coutts takes exception to in his letter of May 9th. The statement I refer to is: "There are other inherent difficulties in the way of estimating the paternal influence as regards the frequency of transmission of syphilis and its severity in the infant. One such difficulty lies in the fact that the mother may possibly have been affected in the ordinary manner although she may exhibit no signs of the disease, and then it becomes a matter of impossibility to rightly assign to either parent his or her due share in the production of the complaint." In my letter of April 18th I ventured to suggest that syphilis or its sequelæ was more prevalent in parous women than children's hospitals seem to indicate. Dr. Coutts in his first lecture stated that "a very large proportion of the mothers of syphilitic infants exhibit no outward evidence of the complaint even after prolonged and careful search." In his letter of May 9th he states his impression is that "mothers who are apparently free outnumber those where she is obviously syphilitic by three or four to one." If it can be shown that immunity is only apparent and not real, another argument, I think, must be conceded to primary syphilisation and maternal syphilis, especially if we bear in mind Dr. Coutts's disbelief in "syphilis by conception." I did not intend to give the impression of any dogmatic view. I thought I was careful to say I had no complete or comparative statistics, but that I had collected cases of syphilis in parous women in whom no history of previous illness could be obtained. I shall hope before long to bring forward the cases on which my letter of April 18th was founded, and I hope the experience of others will then be elicited. In the meantime I gladly admit with Diday that "nothing is constant in syphilis." The truth of such a remark is emphasised in these days when fixed belief in the absoluteness of Colles' observations and in the contagious character of hereditary syphilis is being shaken.

I am, Sirs, yours faithfully,

JOHN A. SHAW-MACKENZIE.

Savile-row, W., May 11th, 1896.

FOUNDATION OF A JENNER MEMORIAL MEDAL.

To the Editors of THE LANCET.

SIRS,—At the annual meeting of the Epidemiological Society of London, which was held at the address given below on May 15th, it was unanimously resolved, having regard to the historical connexion of the society with vaccination and other preventive measures, to found a medal in memory of Edward Jenner on this the centenary celebration of a discovery which has been attended with such brilliant results in the direction of preventive inoculation. It is proposed that the medal shall be founded with a view to the promotion of epidemiological research, and that it shall be bestowed from time to time by this society on persons who shall have contributed to the knowledge of preventive medicine. It is felt that in the foundation of a memorial of this character the members of the medical profession should be afforded an opportunity of taking part. Donations (not exceeding one guinea) may be sent to the honorary treasurer, 6, Hereford-mansions, Bayswater, W., and a list of donors to the fund will be issued in due course.

We are, Sirs, your obedient servants,

SHIRLEY F. MURPHY, President.
R. D. R. SWEETING, Treasurer.
H. TIMBRELL BULSTRODE, Hon. Secretary.

11, Chandos-street, Cavendish-square, W., May 18th, 1896.

"DECIDUOMA MALIGNUM."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of May 16th I am reported as having in all seriousness suggested to the Obstetrical Society at their last meeting the adoption of the terms "syncytioma" and "trophoblastoma" instead of "deciduoma malignum." It will hardly be necessary for me to state that the suggestion was playfully offered to those who seek a pleasure in discovering old diseases under new names. I am satisfied with the terms in general use and find no necessity for new ones.

I am, Sirs, yours faithfully,

St. John's Wood, May 19th, 1896. A. A. KANTHACK.

"THE ARMY MEDICAL STAFF."

To the Editors of THE LANCET.

SIRS,—In the number of THE LANCET dated May 16th "An Old Subaltern," who dates his experience from forty years ago, most favourably contrasts the position of the officers of the Army Medical Department of that date with the somewhat degraded position which they now hold. Your present correspondent can date back not only forty years but fifty-seven years ago, commencing from 1839, and during nine years he was first assistant surgeon of the 71st Highland Light Infantry and finally surgeon of another distinguished Scotch regiment, and can quite confirm what "An Old Subaltern" says. Were I again a young man, with or without means, nothing would induce me to enter the Army Medical Department as now constituted, knowing as I do what it was in former times. Permit me briefly to state what changes I would make in the Department were I in authority. First and foremost, I would restore the old regimental system and a suitable staff of non-regimental officers for garrison, detachment, and extra regimental duty. Secondly, I would abolish the titles of surgeon and assistant surgeon and replace them by senior and junior medical officer. Surgery is only one branch of our profession, and in peaceful times perhaps the least prominent in the practice of the army. Thirdly, I would recommend that in the choosing of candidates for commissions those holding university degrees should be preferred, and seeing that the possession of such degrees gives precedence, according to the official reports of presentations at her Majesty's Levées, before all military rank unsupported I would abolish that most ridiculous innovation whereby the nominal titles of combatant officers are tacked on to the titles of medical officers. Never was a more senseless scheme devised and carried out, or one more liable to place medical officers in false positions in society. Let it be abolished, retaining, however, such nominal grades as will secure to medical officers, according to their rank and length of service, their proper position as to choice of quarters, allowances, and precedence in all regimental non-combatant affairs, such as those connected with mess and other matters, to the carrying out of which they contribute their shares.

I venture to send these few suggestions, being, I believe, nearly, if not, the oldest retired medical officer of her Majesty's service now in existence.

I am, Sirs, your faithfully,

May 20th, 1896. J. D. J.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The Ingleby Lectures.

THE Ingleby Lectures for the present year are to be delivered on June 10th and 17th at Mason College by Mr. Priestley Smith, the subject being the Mechanism of Binocular Vision and the Causes of Strabismus.

Sudden Death after Extraction of a Tooth.

A singular termination to an apparently simple operation was the cause of a coroner's inquiry at Brierley Hill on the 16th inst. A woman had a double tooth extracted by a registered dentist; a few minutes afterwards she expired. No chloroform or drug had been used during the operation. A post-mortem examination showed that death was due to failure of the heart's action from natural causes. Had an

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anæsthetic been given or any new drug tried no doubt the result might have been credited to its use. It is important to recognise the fact that death occasionally takes place when no agent of this kind is used.

Action against a Dentist.

An action was brought in the County-court on the 9th inst. by a labourer against a druggist to recover damages for injuries sustained through the extraction of a tooth. The plaintiff went to the defendant's shop where the assistant proceeded to operate upon a double tooth. Something came out, the tooth was broken, and the plaintiff protesting against the rough usage he had been subjected to consulted his club medical officer, under whose treatment he remained for five weeks subsequently, and who found that the jaw had been splintered and the tooth broken. The patient afterwards went to the hospital and several pieces of necrosed bone were removed. Evidence was given as to the competency of the druggist and as to the accident being liable to occur in skilled hands. The jury found a verdict for the defendant.

The Workhouse Scandals.

An inquiry by one of the Local Government Board inspectors was recently held at the Birmingham Workhouse into the circumstances connected with the death of two inmates. The subject has given rise to some correspondence in the local press and to a considerable amount of discussion upon the administration of the house. The inspector stated at the opening that the inquiry was not suggested by the guardians, but from the amount of expression of opinion it was thought better to have the whole matter thoroughly gone into by an inspector who could examine witnesses on oath. The inquiry was a little unusual because it arose not upon any charge made by the guardians against their officers and they had not asked for it, though they made no objection to it. His instructions were to inquire into the circumstances connected with the deaths of the two persons, not to hold a general sort of investigation. Various witnesses were called and examined. The result of the proceedings is awaited with interest.

Birmingham Will Case.

The outcome of the appeal in this case, which was dismissed on the 15th inst., has settled definitely the former verdict for the plaintiff. The case was tried by a special jury at Birmingham on March 27th. The testator died in September, 1895, and the ground on which it was sought to set the will aside was mental incapacity, in support of which evidence was brought forward to show that the testator's memory was failing, that he was of dirty habits, and that he had delusions about poverty and persecution. It was alleged that undue influence had been used and that the testator was insane. At the time of the trial a large array of expert evidence was brought to bear on either side. The issue involved a large sum of money—some £30,000—and great interest was exhibited in the course of the trial, which will probably stand as a record case.

Hospital Saturday Collections.

At West Bromwich the recent collections in aid of the District Hospital amounted for the day to £514 odd, being a considerable increase compared with last year. The Oldbury Hospital Saturday Committee in pursuit of the same cause received also £347, an increase of £30 upon last year. It is gratifying to note the augmentation of these charitable funds in the district as indicating a revival in trade and consequently increased support for the institutions in the locality.

May 19th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Trafford Park.

ACCORDING to the most recent estimate by the medical officer of health the population of Manchester is 531,697, and there is every prospect of its steady and perhaps rapid increase. For this population, a very large proportion of which is of the working class, the open spaces and parks cover altogether 311 or 312 acres—not a very extravagant provision—and on their purchase and development £306,000 have been spent. It seems that Glasgow possesses 881 acres and has spent £473,000 on purchase alone, while Liverpool has spent £783,000 on 854 acres. There is now an opportunity of acquiring the extensive area of Trafford Park, containing 1180 acres, which Sir Humphrey de Trafford wishes to sell. An idea of its extent may be given by saying that it is three times the size of Hyde Park, which has 390 acres. As the *Manchester Guardian* says: "It has lain by Manchester, secure in its seclusion, century after century"—indeed, from before the Norman Conquest; "at the western gate of the city," in the picturesque but, alas, inaccurate phraseology of another local paper, for the city has no gates. It is near the county cricket ground and one of its main entrances is just opposite that of the Botanical Gardens, while from the Central Station passengers could be set down at the park in five minutes, and easy access can also be obtained from its extensive frontage to the Ship Canal. The inner or deer park of 700 acres, in which the hall is situated, is well wooded and has a lake of some size, while the flower gardens round the hall are of rare beauty. Belts of fine timber enclosing the greater part of this inner park shut out from view the smoke of Manchester and Salford. It is believed by those who may be considered competent to judge that in a comparatively short time by the development of the "fringes" of the outer park—along the canal frontage for business and on the other side for residential purposes—the cost would soon be reduced to a penny on the rates, or even to the vanishing point, especially when it is remembered that Sir J. Harwood and the Waterworks Committee, by judicious management, were able to spend £3,000,000 on the Thirlmere scheme without adding a single penny to the city rates. There is an immense population of boys and young men in Manchester eager for out-door exercise and recreation, which they greatly need, and it becomes more and more difficult to find the necessary space. The park is the only ground sufficiently near the city where large agricultural shows could be held. The Hulme Cavalry Barracks are not far away, but the removal of the troops from Manchester on account of the want of suitable exercise ground, which the park would supply, has long been talked of; the Home Office is pressing the corporation for a review ground for the police, while one is wanted also for the Volunteers. It is estimated that the removal of the troops would entail an annual loss of £20,000. The arguments in favour of purchase are irrefutable, and were it not for the heavy responsibilities which he city will, for some little time at all events, have to bear in connexion with the Ship Canal the corporation would no doubt at once take steps to acquire a property which, from the public health point of view, to say nothing of the public convenience, is of such inestimable value. A meeting of the city council was held yesterday to consider this matter, and after a long discussion a resolution was carried, with a few dissentients, appointing a committee to consider the subject of the purchase of the park. If £3,000,000 could be spent for water without adding to the rates, there is not much doubt that with the special opportunities which the park gives for recoupment the £300,000 or £350,000 said to be required for its purchase would soon cease to be any addition to the burdens of the city.

Charitable Bequests.

By the will of the late Mr. Thewlis Johnson of Manchester, whose personalty is sworn at £446,304 3*s.* 10*d.* net, the Manchester Royal Infirmary, the Ancoats Hospital and Dispensary, the Derbyshire Royal Infirmary, and the Bishop of Manchester's Fund receive £500 each.

Withington Recreation Grounds.

Withington, Didsbury, and Chorlton-cum-Hardy are rapidly growing suburbs of Manchester, and there seemed a probability of their being speedily covered with bricks and mortar without any reservation of open spaces. About two years ago, however, Lord Egerton of Tatton, who is a large landowner in the district, presented the public, through the district council, with eleven acres of land to be used as recreation grounds. They are situated in convenient parts of the council's area, and with the Didsbury ground of between four and five acres in extent, which was purchased by the council for £3500, they constitute air spaces which will become increasingly valuable with the inevitable growth of the population. The Withington ground is rather more than five and a half acres, two other spaces are two acres and rather more than two and a half acres respectively, and there is another small plot. They are conveniently distributed and have been carefully laid out. No attempt has been made to convert them into public gardens, but iron railings have been placed round, trees have been planted,

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and shelters erected, the present intention being to have them used as play-grounds for the young folks. The three principal grounds were formally opened by Lord Egerton on Saturday last.

The Coronership.

A special meeting of the city council was held yesterday to consider the appointment of a successor to the late Mr. Edward Herford, who has been coroner for very many years. For the last fourteen years the duties of the office have been performed by the deputy coroner, Mr. Smelt, a barrister. The state of things appears to have been somewhat anomalous. The coroner himself, being in failing health, some eighteen years ago appointed Mr. Smelt his deputy, and for fourteen years this gentleman has done the whole of the work, with, it must be acknowledged, satisfaction to the community. Mr. Herford has enjoyed the emoluments of the office with the dignity of ease and has paid Mr. Smelt by private arrangement with him. The corporation has chafed at times, but under the conditions of his appointment had no power to remove the city coroner. The election to the office is now, however, in the hands of the council, and by a local Act the corporation has the power, if it think fit, to pay the coroner by salary, as in the county, instead of by fees. The town-hall committee was instructed to consider and report as to what arrangement they would recommend as regards the office, and it was moved and carried that the appointment of coroner be postponed to the meeting on June 3rd. It was mentioned in the course of the discussion that "the average amount paid in medical fees for the last four years was £346, the average number of the inquests being 915 per year. The average sum received by the coroner during the last four years was £1220, and a total sum of £1821 16*s.* 10*d.* had been distributed on an average in each of the last fifteen years in coroner's fees and other expenses."

Manchester Medico-Ethical Association.

The Manchester Medico-Ethical Association devoted the last meeting to a discussion on the Registration of Nurses. The members present at the meeting—a large one—took a considerable amount of interest in the question, and after an animated discussion the following resolution was passed unanimously: "That any scheme for the legal registration of all nurses with a common standard of education is inimical to the interests of the public, the general body of nurses, and the medical profession, and that this meeting requests the committee to take steps to oppose any such scheme."

May 19th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Unqualified Medical Practice in the County of Durham and Some of its Results.

IN the very able report of the medical officer of health of the county of Durham Dr. Hill pointedly directs the attention of the county council to the number of uncertified deaths in the county palatine during the year 1895. The districts in which the practice is most prevalent are Spennymoor, Blaydon, Hetton, and portions of Chester-le-Street. It is due to the circumstance that so large a proportion of the medical practice is in the hands of unqualified persons. In Spennymoor last year 33 per cent. of the deaths were uncertified as the result of unqualified medical practice. Dr. Hill shows conclusively that this practice by unqualified men has a vicious effect upon the public health. "The proportion of deaths under one year and under five years to total deaths has been among those certified by registered medical practitioners only 34·4, and 49·1 per cent. respectively; the proportions among those deaths uncertified as a result of unqualified medical attendance were as high as 50·0 and 68·0 per cent. respectively. This excessive proportion of infant deaths in the practice of unqualified men is noticeable in all the districts where such practice prevails, so that it is certainly suggestive that many children die whose lives might have been saved had they received skilled medical attention." The object of the Infectious Diseases Notification Act is also defeated to a considerable extent by unqualified practitioners, for unqualified men are under no obligation to notify cases of infectious disease under the Act, and should they do so they are not entitled to any payment, consequently cases of infectious disease attended by these men are not reported to the sanitary authority. It is not creditable to the county that the percentage of uncertified deaths in it is twice as high as that for England and Wales. It ought not to be. It is the duty of the Durham County Council to bring the facts reported to them by Dr. Hill to the notice of the Local Government Board and of the General Medical Council, and to use its utmost endeavour to have a condition so disgraceful checked and put a stop to.

Labour Dispute on the North-East Coast.

Owing to a misunderstanding as to the interpretation of an agreement about wages a dispute has arisen between the men and the masters, and without any adequate attempt being made to arrange matters the men at Stockton-upon-Tees have recklessly struck work. In reply the masters on the Tees, Wear, and Tyne have given notice to 25 per cent. of the engineers to cease work in a fortnight. The men have now given power to their executive to bring out the 75 per cent. to whom notice has not yet been given by the masters. The masters propose arbitration. The men reply that their case is so good that arbitration is not necessary. The dispute involves only a matter of 6*d.* a week to 135 men—some £3 4*s.* a week—and for this paltry sum of money the whole district is not unlikely to be plunged into trouble, trade disorganised, and angry feelings excited, which will leave behind bitter feelings of clan animosity. How long, it is to be wondered, will this stupid, wicked system of settling disputes between capital and labour be tolerated? Mr. Knight, the able secretary of the Boiler-makers and Iron Shipbuilders Society, speaking upon the subject on a public occasion last November, expressed himself in the following terms: "I feel so strongly on this matter [strikes] that I would say without hesitation that if better means of settling differences cannot be obtained than by an awful strike I would advocate going to Government to pass a law to compel societies to adjust their differences by arbitration. As a last resort I would absolutely make arbitration compulsory." As a matter of fact, strikes and lock-outs are rare in the trades over which Mr. Knight has influence, and it is very much to be regretted that the affairs of the engineers are not managed in an equally judicious manner.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh University.

AT a special meeting of the senatus of Edinburgh University the degree of LL.D. was conferred upon Sir J. Russell Reynolds by the Vice-Chancellor *in absentiâ*, and the usual diploma was forwarded to the recipient of the honour. The University field at Colinton Road is to be formally opened on Friday afternoon. His Grace the Lord High Commissioner, accompanied by the Marchioness of Tweeddale, is to take the leading part in the opening ceremony, after which there is to be a cricket match between the staff of the Royal Infirmary and the University eleven.

Death of Two Eminent Edinburgh Men.

Last week the death was recorded of two men eminent in different spheres of life who had studied and qualified at Edinburgh. The one was the Hon. Thomas Christie Smart, F.R.C.S. Edin., who died at Hobart, Tasmania. He was not only a prominent practitioner, but filled the mayoral chair and was elected to the Legislative Council. He was a public-spirited man, taking an active share in public work of various kinds. For eighteen years he was chairman of the Board of Management of the Hobart General Hospital, and did much to effect its efficient management. The other was Dr. Moxey, who died in Paris on his return journey from the Holy Land. He was a graduate in medicine of Edinburgh University and a Member of the Royal College of Physicians of London. In his early years he practised in England, but abandoned practice for elocution, and in that department was well known as Leo Ross. About eighteen years ago he came under the influence of evangelical teaching, and since that time has taken a part in evangelical work in Edinburgh and elsewhere. At several of the theological colleges in the country he held the position of lecturer on elocution. His death was quite unexpected and came as a great blow to his numerous friends in Scotland.

Dr. G. Hunter Mackenzie, Edinburgh, has been elected a Corresponding Member of the Société Française d'Otologie, de Laryngologie, et de Rhinologie.

May 19th.

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IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

"Cyclopia."

THERE are two annual events in Dublin which have of late years assumed much prominence; one is the Horse Show, which, for an exhibition of its kind, is now unrivalled in Europe, and the other the May Carnival, Bazaar, or *fête* in connexion with the hospitals and medical charitable institutions. Both are held in the spacious grounds and buildings of the Royal Dublin Society at Ball's-bridge—a fact to which they certainly owe a large amount of their success. His Excellency the Lord Lieutenant for the time being is, as a matter of course, present. Lord Cadogan has recently shown a specially active interest in both undertakings, having received an influential deputation in connexion with horse breeding yesterday, while he has this afternoon (the 18th inst.) performed the inauguration ceremony at the formal opening of "Cyclopia," the monster bazaar in aid of the funds of the National Eye and Ear Infirmary. The hospitals of Dublin have benefited by such bazaars to the extent of many thousands of pounds, while some of the members of the medical staffs and committees have acquired wonderful skill in stimulating the generosity of the public. The first of the series of charitable carnivals was the memorable Masonic *fête*, which, besides being in itself a great success, served to rouse and excite the public taste for such displays. There is every reason to anticipate that "Cyclopia," which has just been opened, will outrival all its predecessors, for no trouble or expense has been spared towards that end. The preparations were begun more than a year ago and the attention of the public was first caught by advertisements in the daily journals of a competition and reward offered for the best suggestion as to a name for the coming festival. The title "Cyclopia" was then chosen from no less than 129 suggestions. Then came a poster competition with prizes of £10, the posters to become the property of the Bazaar Committee. These prize posters, of large dimensions, have been familiar to the streets here for many weeks. Moreover, the work on the committee was not, of course, confined to Dublin; ladies of social position and influence in each of the counties of Ireland were asked to become patronesses of stalls named after each county. The railway companies were induced to run excursions from all parts of Ireland. The prospects of this monster bazaar are good in every respect, but the entertainment is to a large extent an open-air one. There is, therefore, one matter which no skilled secretary can foresee—the Irish weather. During the next week it will go far to make or mar the success of the enterprise, and will certainly affect to the extent of several thousands of pounds the funds of the National Eye and Ear Infirmary.

Queen's College, Belfast.

The new lectureship on Ophthalmology has been filled by the appointment of Dr. W. A. McKeown, surgeon to the Ulster Eye, Ear, and Throat Hospital, a former distinguished student of the college. He is to give a three months' course of lectures during the winter session. The new pathological laboratory is practically finished, and Dr. Lorrain Smith has commenced a post-graduate course on Bacteriology, which is being well attended. The Dunville Trustees, who founded the chair of Physiology, have made a grant of £100 towards the fitting up of the new physiological laboratary. The arrangements for the new lectureship on Hygiene and Public Health are not quite completed, but the duties will probably be discharged by the professor of Chemistry and the public officer of health of the city of Belfast. It is also contemplated to establish a special course for those graduates who wish to read for the sanitary diploma of the Royal University. In addition to the Professor of Chemistry and the Public Officer of Health special courses will be given by the Professor of Geology and the Lecturer on Bacteriology. It was felt to be a distinct want that hitherto men preparing for this diploma could not get the necessary lectures and teaching in Belfast.

The Water-supply of Belfast.

Owing to the present dry and exceptionally hot weather 1,500,000 gallons of water extra are being used per day. Consequently the citizens have been urged to waste as little as possible, as with the continuance of this weather the stock of 208 days' supply might soon get exhausted. Some of the towns adjacent to Belfast have at present a very limited supply, and it is said that Bangor, a health resort much frequented by Belfast citizens, is in this condition.

Transfer of Lunatics rom Asylum to Workhouse at Belfast.

The everlasting question of the transfer of lunatics from the asylum to the Belfast workhouse came on again at an inquest held on May 18th in reference to the death of an old woman who was sent from the asylum on May 25th, 1895, to the lunatic department of the workhouse, where she died from exhaustion, at the age of seventy-five, on May 16th. This transfer of patients has been going on, it seems, for a period of fourteen years. The coroner having condemned very strongly the present system of transferring patients, the jury returned a verdict in which they condemned the system at present pursued of transferring patients from the asylum to the workhouse as being detrimental to those patients and unfair to the Belfast ratepayers; further, they stated that the transfer of the present case contributed to hastening the death of the deceased, and they requested the coroner to forward the evidence and verdict to the proper authorities. I understand that at the next meeting of the asylum governors an attempt will be made to come to some definite plan for arranging accommodation for lunatics.

The Battle of the Clubs at Cork.

Cork is threatened with the invasion of another medical club. A meeting was held last Friday in the Lecture Hall of the Young Men's Christian Association for the purpose of establishing a branch of the Independent Order of Foresters. "Dr." Oronhyateka, Supreme Chief Ranger, explained the objects of the Order, and in the course of his remarks mentioned that "he had been informed that there was a certain feeling among the physicians of Cork against the benefit society system, and that the medical men had banded themselves together with the object of trying to put down that system. Well, he believed that that matter would cure itself before very long. They had met such a feeling as that in Canada, but the Order became so strong that it was enabled to overcome any difficulty that arose, and he was sure that the same state of things would come to pass in Cork." *Nous verrons.* It is only necessary to recall the fact that some twelve months ago a very vigorous attempt was made to start a similar commercial speculation in Cork. The agent of the undertaking appeared before the medical association and explained that his company proposed insuring members, sending out touters, charging a certain sum for medical attendance and deducting a percentage to cover the cost of advertising and other expenses. Whilst impressing on the association that he was making them a splendid offer he informed them that whether they accepted it or not a project so pregnant with good for the public at large was bound to be started at once. But so chilling was the reception he got from the medical association that his beneficent designs have not so far assumed a practical shape. Despite the oratorical thunderings of "Dr." Oronhyateka his Order in Cork is destined to share a similar fate. One sentence in his speech was such a sparkling gem that it were a pity not to spread its effulgence in the medical world. "Perhaps," quoth "the doctor," "one of the greatest privileges of the Order was medical attendance practically free of charge." It is sincerely to be hoped that "Dr." Oronhyateka, imbued with the well-known American contempt for "the almighty dollar," gives his own services to the Independent Order on equally easy terms. "Do as you would wish to be done by" is a well-known saying; and as two clergymen from Belfast presided at the meeting with "the doctor," one as High Chief Ranger of Ireland and the other as High Vice-Chief Ranger, it may not be amiss to mention that there is an equally well-known text—"The labourer is worthy of his hire."

May 18th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Jenner Commemoration.

THE centenary of Jenner's first vaccination has been impressively celebrated in Berlin. Articles on his life and his work were published by all the leading medical and lay journals, the *Deutsche Medicinische Wochenschrift* having a special Jenner number devoted entirely to vaccination

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matters and containing a portrait of Jenner, a biography of him by Dr. Pagel, a historical essay on Variolation by Dr. Behrend, articles on Vaccination in the German Army by Staff-Surgeon Dr. Wernicke, on the Arguments of the Anti-vaccinationists by Dr. Köhler, on Small-pox Mortality in Prussia by Dr. Heymann, and on Sterilised Instruments for Vaccination by Dr. Witte. A centennial exhibition has also been formed consisting of portraits of Jenner and other notable supporters of vaccination, of vaccination instruments past and present, of statistical tables, of anti-vaccinationist pamphlets, &c. On May 14th there was a meeting in the town hall presided over by Professor Virchow and attended by a very distinguished assembly, including the Minister of Public Instruction, the Director of the Army Medical Department, the Rector of the University, representatives of the municipal council, the medical corporations, and a large number of medical men. After Professor Virchow's inaugural address Professor Gerhardt gave an account of Jenner's work. He pointed out that while epidemic diseases, such as plague or typhoid fever, were suppressed or at least diminished by hygienic improvements small-pox, on the other hand, was subdued, not by the gradual progress of scientific knowledge, but by the genius of a single man. Jenner, it is true, had predecessors. Variolation, or inoculation with small-pox virus, which was introduced by Lady Mary Wortley Montagu, was a step in advance; but although it diminished the mortality it unfortunately propagated the disease. To understand how a country surgeon succeeded in making one of the most important discoveries of modern medicine it is necessary to bear in mind that he was so proficient a naturalist that the great explorer, Captain James Cook, when about to make the second of his voyages of discovery, offered to take Jenner with him. He was also a man of indomitable energy, which enabled him to triumph over obstacles and opposition. Those who were assembled on the present occasion for the purpose of doing honour to Jenner's memory might confidently expect that posterity a hundred years hence would not less freely acknowledge their indebtedness to his discovery. After the conclusion of Professor Gerhardt's speech addresses were delivered on behalf of the town council by Dr. Strassmann, who is a member of the council, and by Dr. Kruse, a medical member of the German Parliament; the proceedings then terminated. At the same hour the anti-vaccinationists held a meeting in commemoration of Jenner's "victims," which was opened by a funeral march, and after several speeches a resolution was passed demanding the abolition of compulsory vaccination, while anti-vaccinationist pamphlets were distributed both inside and outside the building and in the streets.

Leprosy in Eastern Prussia.

Leprosy is very rare in Germany in modern times. It seems to have disappeared since the sixteenth century, and the few cases which have been observed occurred in strangers coming from other countries where the disease was endemic. The public and the medical profession have, therefore, been much surprised to learn that in 1889 several cases of leprosy were observed in the district of Memel in Eastern Prussia, near the Russian frontier. The nearest centre of leprosy in Russia was about one hundred English miles from Memel, and contagion seemed, therefore, rather unlikely. The disease, however, slowly increased, and has recently been investigated by Dr. Blaschko, a Berlin dermatologist, who visited the district for the express purpose, and has since his return given an account of his observations at a meeting of the Berlin Medical Society. He first spoke of the hygienic condition of the population, saying that the country people are almost exclusively Lithuanians, are very ill-fed, and are in the habit of consuming an enormous quantity of spirits. Their dwellings are very small, unhealthy, and not at all ventilated; domestic animals occupy the same apartment as the family. Medical men are very seldom consulted, the population being not the least afraid of illness, and Dr. Blaschko sometimes saw sick persons sleeping in the same bed with the healthy. The leprosy cases hitherto observed in the district are twenty-two in all, nine of whom are still alive; this is not a small proportion in a population of about 16,000 persons. All the patients were Lithuanians, living in three distinct villages round the town of Memel, and have been leprous for several years; Dr. Blaschko was informed that no new cases had happened during the last two years. In no instance had the illness been communicated from husband to wife or *vice versâ*, but sometimes the children of leprous parents became affected. A hereditary influence was quite uncertain, as the children developed the disease at a somewhat advanced age. Notwithstanding the total want of isolation and cleanliness the extension of the disease is slow, the great majority of the people being apparently insusceptible. The medical men of Memel are of opinion that the disease is not due to infection, but is caused by the condition of the soil and by the food, which almost exclusively consists of fish. These causes are, however, not sufficient, as other localities where the same conditions exist are exempt. According to Dr. Blaschko the disease has been imported from Russia; for although the principal Russian centres of leprosy are somewhat distant from the frontier sporadic cases are found in nearer places which are in constant trading communication with the adjoining parts of Germany. He thinks that energetic measures should be taken to avoid the possibility of extension, and he suggests that a Government commission composed of dermatologists and hygienists should be sent to Memel in order to search for cases which may have been overlooked, while Russian immigrants should be most carefully observed. A gaol-like isolation, which was the rule in former times, is quite unnecessary, but the patients should be received in a special institution in the country where they may live apart from the healthy population. Dr. Blaschko closed his address by saying that the example of Russia, where 500 patients live in each of the provinces of Livonia and Kurland, should induce the German Government to keep a watchful eye on the endangered districts. Dr. Wassermann, of the Imperial Health Office, said that the Government intends to receive the lepers partly in the University Hospital of Königsberg, in Eastern Prussia, and partly in Professor Koch's hospital for infectious diseases in Berlin. If the malady were to become more widely spread a special hospital, as suggested by Dr. Blaschko, would be erected in the district of Memel.

May 19th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Supply of Quinine to Malarious Districts.

IN THE LANCET of Dec. 14th and 21st of last year I summarised and commented on the Bill introduced by the late Government for the supply of quinine to those malarious districts in which the chemist and druggist or the local dispensary are unknown. The present Government has adopted the Bill, with, however, what I cannot help thinking to be an unfortunate modification. Signor Boselli, its original author, was careful in the preamble of the Bill to disclaim all intention of creating in quinine, as in tobacco, a State monopoly. He was simply legislating for exceptional circumstances—the annual death in Italy of 16,000 persons from malarial fever, the existence of 4000 communes in which quinine is not to be had, and the excessive price, as well as the adulteration, of the quinine in those malarious districts where the specific is really (or nominally) on sale. At best the measure could be no other than temporary, pending the reclamation of those waste lands where malaria is endemic and the consequent stamping out of the disease. His successor in office, Signor Branca, proposes, however, to convert the sale of quinine into a source of gain to the Treasury, thus departing from the purely humanitarian and provisional view of the measure taken by Signor Boselli. A very serious complication is thus introduced. The legitimate claims of chemists and druggists were not ignored by Signor Boselli, and clauses in protection of their rights were contemplated as the Bill passed through Committee. But the creation of a monopoly in quinine, as in salt and tobacco—a monopoly, however, conceived and carried out in the interests of the Revenue—means the negation of the principle on which alone the Bill in its original form was framed and introduced. The career of the Di Rudini Ministry has already been a stormy one. It may suffer actual shipwreck on a measure which must arouse a much more uncompromising opposition than its highly contentious predecessor.

Ptomaine Poisoning from the Consumption of Fish.

This is a frequent cause of illness, sometimes of actual death, in Italy. In the November of 1894, as commented on in THE LANCET at the time, an eminent Florentine professor, his mother, and his wife died after having dined on a "cefalo" (a fish that frequents the mouths of rivers), with

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all the signs of poisoning from some cadaveric alkaloid contained in the food, while the son and the cook, who had also shared the meal, narrowly escaped with their lives. Some six months afterwards here in Rome a well-to-do farmer with his wife and four children nearly died from the same cause, a prompt use of the stomach-pump being just in time to arrest the severe intestinal pains and violent retching that followed the ingestion of the unsound fish, and now, on the 14th inst., at Naples a family of three had to be removed to the Ospedale di Loreto after dining on a "mureno" (a favourite fish with the Neapolitan poor), all of them afflicted with "atrocissimi dolori viscerali" (the most excruciating abdominal pains). They are now out of danger, but pending the bacteriological investigation of the residue of the fish and of the egesta from the stomach they are supposed, like the Florentine and Roman families aforesaid, to have been the victims of ptomaine poisoning. Generally speaking, the tourist world is safe from such risks, as the hotels and *pensions* it affects are careful to supply such food as shall not repel their *clientèle*; but once let the artistic or archæological enthusiast venture out of the beaten track and dine on what is put before him at the rustic *osteria* or seaside inn and he will be fortunate if he escapes without intestinal disturbance or worse. We seldom open a newspaper without reading of "famiglie avvelenate" (families poisoned) by the consumption of food which, in spite of sanitary censorship, is bought up from butchers and fishmongers by itinerant hawkers, who vend it in suburban villages or the obscurer quarters of large towns.

Professor Andrea Verga.

On Dec. 7th last THE LANCET contained a full obituary notice of this greatest of recent Italian alienists, and at Milan on Friday, the 15th inst., in the edifice of the Società di Patrocinio pei Poveri Pazzi (Society for the Protection of the Insane Poor), a bust was unveiled to his memory. The Società (which, like many other organisations of the same kind in the Alta Italia, is his special creation) was largely represented on the occasion, while the legislature in both its branches, the municipality, the Lombard Medical School, and the *élite* of Milanese life had all their delegates at the ceremony. Below the bust—a *chef d'œuvre* of Branca—runs the following inscription from the pen of the Senator Massarani: "Ad Andrea Verga—Senatore del Regno—Intelletto serenamente profondo di molta e varia coltura nutrito—Che scrivendo ed operando irraggiò di nova luce—Gli arcani e le ambagi dell'anatomia e della pazzia—La società di patrocinio pei pazzi poveri, quella Freniatrica—amici ed ammiratori—Questo ricordo, testimonianza d'affetto, riverenti posero." (To Andrea Verga, Senator of the Kingdom, an intellect serenely profound, nurtured on extensive and varied learning, who by his precept and his practice shed new light on the obscure and intricate developments of the anatomy and pathology of mental disease, the Society for the Protection of the Insane Poor, the Phreniatric Society, as well as his friends and admirers, have with due reverence, in token of their affection, placed this memorial). The speakers (among whom Dr. Tamburini, Professor of Medico-Psychology at Modena, was present) recapitulated effectively the great services of the deceased to alienist medicine; but, as previously observed in these columns, a selection from his many masterly monographs read before scientific and clinical societies would, if republished, form a not less enduring and worthy monument to his name.

May 18th.

BUDAPEST.

(FROM OUR OWN CORRESPONDENT.)

Hungarian Millennium Exhibition.

THIS exhibition was opened on May 2nd by the King of Hungary Francis Joseph I. and the Queen Elizabeth. The sky kept cloudy in the morning, but about noon the sun came out and favoured with his genial smile the splendour of the festivities. Budapest looked very bright indeed, every house being flagged with the national red white and green tricolour and ornamented with carpets of every colour and shade. The ornaments bore the interesting character of a mixture of Western taste with Oriental luxury. Especially the broad and straight Andrassy-street, which leads to the site of the exhibition, offered a splendid view to those who were fortunate enough to secure a place on one of the balconies or a seat on one of the tribunes. The *cortège royal* driving to the opening festivities, with its shiny uniforms and brilliant national garments, was a delight to the eye, and gave a certificate of the wealth and good taste of our "upper ten thousand." The exhibition, which will be of six months' duration, is to commemorate the thousand years of the settlement of Hungarians in Europe. An early Hungarian anonymous writer stated that it was the year 889 of the era in which the Hungarians on their way from Asia had taken possession of this country. But the "Section of History" of the Hungarian Academy of Sciences found this to be an unreliable date, and after careful investigations and a long debate declared the year 896 as such, of which it can be made historically quite certain that the Hungarians were in possession of their present country under their chief, "Arpad," who is rightly considered to be the founder of Hungary.

Millennium Congress of Hygiene and Medicine.

This will be held in Budapest in September next and will bear rather a national character, as it will chiefly embrace questions dealing with the local statistics of hygiene, the dwellings of the poor, medical clubs, medical aid associations, infectious diseases, gratuitous medical aid and the like, with special reference to the wants of the country.

Anti-diphtheritic Serum in the Stefania Hospital for Children.

Professor J. Bokai has treated 402 children suffering from diphtheria with antitoxic serum of German, French, and Hungarian make respectively. He noted a mortality of 22¼ per cent. In those cases which required operative measures the mortality rose to 44½ per cent., while in lighter cases it sank to 10½ per cent. Taken as a whole the mortality from diphtheria in Budapest attained in pre-antitoxic times an average of from 34 to 37 per cent., whilst in the days of serum treatment the mortality is 21 per cent. It is also to be noted that formerly only from 8·6 to 15·2 per cent. of the diseased escaped operative interference, while under serum treatment 26 per cent. of the cases did not require any operation for laryngeal obstruction. In 22 per cent. a more or less marked exanthema followed the injections, especially those which have been effected with Hungarian serum.

Obituary.

PROFESSOR GERMAIN SÉE.

OUR Paris correspondent has sent us the following obituary notice of Professor Germain Sée:—

On Wednesday, the 13th inst., there disappeared from the medical arena of Paris a well-known figure in the person of Germain Sée. Although still retaining his chair of Clinical Medicine at the Hôtel Dieu Dr. Sée has practically been *hors de combat* for the last two years, and his death, which occurred at his house in the Avenue Montaigne, was no surprise to his friends. Born on March 6th, 1818, at Ribeauvillé, in Alsace, of a Jewish stock, he pursued his preliminary education in the Lycée of Metz, and, migrating as usual to Paris, graduated as M.D. at this Faculty in 1846. Six years later he was appointed *médecin des hôpitaux*, and then began a series of extra-academical lectures on pathology which attracted great attention. In 1866 he was, thanks to the strong recommendation of the Empress Eugénie, appointed to succeed Trousseau in the chair of Therapeutics at the Faculty. As the new Professor was never a *Professeur-agrégé* his nomination raised quite a storm of protestation amongst the teaching staff of the Faculty. He was, however, elected by 13 votes out of 23; but his difficulties were not over, for the students "made it so hot" for him that the Dean had to interpose so as to allow him to continue his lectures in peace. Although unpopular his strong individuality as a teacher soon compelled respect. Unfortunately his materialistic views drew upon him the thunders of the ultramontaine party, which culminated in a stormy discussion in the Senate. This incident enabled him to pose as a martyr, and a revulsion of feeling gave him a popularity that would otherwise not have been his. In 1867 he succeeded Professor Monneret in the chair of Clinical Medicine at the Charité, and in the following

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year he was elected a member of the Academy of Medicine. In the fatal year 1870 he was the chief actor in a consultation which, had his recommendations been acted upon, would most probably have had the effect of preventing the international struggle of that year. The deceased professor's version of the affair is as follows. The Emperor Napoleon being very ill, a consultation took place at the Tuileries on July 1st, 1870, the consultants being Nélaton, Ricord, Fauvel, Corvisart, and himself. Professor Sée was entrusted with the drawing up of the report, which Dr. Conneau, the Emperor's body physician, was to have had countersigned subsequently by Professor Sée's fellow-consultants. This historical document is still extant, signed only by Professor Sée, Dr. Conneau having, for reasons unknown, not followed his instructions as to the other signatures. Professor Sée's and his *confrères'* diagnosis was stone in the bladder. Dr. Conneau further omitted to communicate the contents of this report to the Empress. The report was seized, amongst other documents found by the agents of the Government of Sept. 4th, in Dr. Conneau's rooms, and published subsequently in the collection of State papers found in the Tuileries and elsewhere. It would thus appear that two and a half years before the death of the Emperor the French medical men had diagnosed the existence of a calculus, and advised direct exploration of the bladder, which only took place thirteen months later, when the deposed monarch was an exile in England. It is quite possible that had their advice been followed extraction would have been decided on and war, declared only a few days after the consultation, deferred or perhaps abandoned altogether. Professor Sée remained to the end of his days convinced that war would have been averted had this fatal secrecy not been maintained. In 1877 Professor Sée was summoned to Constantinople to attend the Sultan Mourad, but on his arrival he found the Commander of the Faithful deposed and replaced by a successor who was in no need of medical advice. As to the late Professor Sée's contributions to science, it is probable that, despite the extent and varied character of his labours, his name will be associated in history with the therapeutical applications of salicylate of sodium and antipyrin as anti-rheumatic and analgesic remedies respectively; of milk diet and later of lactose in the treatment of chronic Bright's disease; and of potassium iodide and pyridine against asthma. The following is a list of his works: "Les Effets du Seigle Ergoté sur le Cœur et la Circulation" (Thesis, 1846); "Mémoire sur la Chorée et les Maladies Nerveuses" (1850); "Leçons de Pathologie Expérimentale: du Sang et des Anémies" (1866); "Mémoire sur l'Asthme" (Dictionnaire de Jaccoud, tome i., 1866); "Diagnostic et Traitement des Maladies du Cœur" (lectures delivered at the Charité, 1874–77); "Traitement du Rheumatisme par le Salicylate de Soude" (Bulletin de l'Académie de Médecine, 1877); "Médecine Clinique" (seven volumes, the last in collaboration with Dr. Labadie-Lagrave). This encyclopædia was begun in 1884, the first tomes being on pulmonary diseases, at the head of which was placed *la phtisie bacillaire*. The 1885 volume treated of pneumonia, which was recognised as a parasitical disease. One of the succeeding volumes is on "Diet of the Healthy and the Sick" Then came a work on "Diseases of the Kidney," by Dr. Labadie-Lagrave, and finally one by Professor Sée on "Diseases of the Heart." Amongst the other publications due to the pen of this prolific writer are "Hypertrophie Cardiaque de Croissance" (Académie des Sciences, 1883); "Des Pneumonies Infectieuses et Parasitaires" (*ibid.*, 1884); "De la Dilatation Atonique de l'Estomac" (in collaboration with Dr. Mathieu, 1894); and "Epilepsie et Bromure" (1884). His works on experimental therapeutics are very numerous and comprise a Memoir on the Treatment of Asthma with Potassium Iodide and Ethyl Iodide (1878); Researches on Convallaria Majalis (1882); Discourse on the Treatment of Typhoid Fever by Quinine and Large Doses of Alcohol (Académie de Médecine, 1883); Treatment of Asthma with Pyridine; On Spartein Sulphate as a Cardiac Remedy; On the Physiological action of Cinchonamine Sulphate (Institut, 1885); and Treatment of all forms of Bronchitis by Terpine (Académie de Médecine, 1885). In 1888 he contributed several papers to the Academy of Medicine on Stomach Affections (hyperchloridia, atony, &c.), and on strophanthinine. In 1889 he wrote (Bulletin de l'Académie de Médecine) on the Treatment of Diabetes by Antipyrin, and in the same year on Lactose as a Diuretic, on Iodide of Potassium in Heart Diseases, and on the Prophylaxis of Tuberculosis. In 1890 several interesting memoirs appeared: "Action de la Caféine sur les Fonctions Motrices et Respiratoires" (Sée and Lapicque), "Pouvoir Antiseptique de quelques Couleurs d'Aniline, le Chloral Antipyrine, le Pneumocoque Lancéolé dans la Pneumonie Grippale" (Académie des Sciences), "Noix de Kola, and the Usage du Cannibis Indica dans le Traitement des Névroses et des Dyspepsies Gastriques" (Académie de Médecine). Since 1890 Professor Sée had worked at a great treatise on experimental therapeutics, which he hoped to publish in conjunction with several co-workers. A few notes on nucleine had been issued, but increasing infirmities took the upper hand and his work was done. The vast range of his clinical activity may be judged of by the preceding long list. He was very strong in bibliography, and was an insatiable devourer of all foreign works bearing upon new discoveries, which he received and adopted with an open mind. Conservative medicine was abhorrent to his progressive instincts, and he warmly welcomed any innovation that promised to shed light on obscure points in pathology. Thus he did not fear to announce his belief in the bacillary origin of valvular disease of the heart. Despite his somewhat overbearing manners, his large athletic figure and strong, determined physiognomy will be missed at the Hôtel Dieu, where his clinical lectures were delivered for many years past. The funeral took place on May 18th at Montmartre, the pall-bearers being MM. Gréard (Recteur de l'Académie), Brouardel (Dean of the Faculty of Medicine), Hervieux (President of the Academy of Medicine), Roussell (Senator and Member of the Institute), Debove (Professeur Faculté de Médecine), and Lévy (Member of the Institute). Speeches were delivered by Professor Debove and Professor Landouzy the latter of whom, speaking for the Academy of Medicine, recalled the fact that the deceased learnt to read and write unaided and became the apostle of therapeutics and pathology in his native country. Professor Sée was promoted Commander of the Legion of Honour in 1880.

THOMAS CHRISTIE SMART, F.R.C.S. EDIN,

EX-M.P. FOR HOBART, AND PRIVY COUNCILLOR, TASMANIAN GOVERNMENT.

COLONIAL papers to hand convey the regrettable news of the sudden death of the Hon. Thomas Christie Smart, F.R.C.S. Edin., at his residence, Hobart, Tasmania, on March 26th. The deceased gentleman, who was an elder brother of Dr. Andrew Smart of Edinburgh, was educated in that city, and after taking his degree he left Scotland for Australia. When he reached the Antipodes he resolved to make Tasmania his home, and for about half a century he has been one of her most honoured citizens. After acting as Government medical officer at Manx Island, Mr. Smart began practice in Hobart, where his professional skill and personal qualities speedily established him in popular favour. He was a public-spirited man and his interest in civil and political affairs was very keen. He filled the mayoral chair, and he was unanimously elected to a seat in the Legislative Council, and he became a member of the Giblin Administration. In all these capacities Mr. Smart displayed marked ability and untiring zeal. The present efficient condition of the Hobart General Hospital is mainly, if not entirely, due to his self-sacrificing efforts, he having acted as chairman for the long period of eighteen years. Mr. Smart was a typical Scotsman and a capable exponent of Scottish song and story. Warm-hearted and generous, he was a staunch friend to the poor and needy, and his death is universally deplored throughout the length and breadth of Tasmania.

HENRY O'NAGHTEN FRASER-LUCKIE, M.B. LOND.

ALL who knew Henry O'Naghten Fraser-Luckie will hear with a sense of personal loss that he died from phthisis on May 5th. The knowledge that death came as a happy release after many months of illness takes away some of the sting of sorrow. In December, 1894, he took the degree of M.B. Lond., and in March, 1895, he entered into partnership with Mr. Coomber at Fakenham in Norfolk. He had an attack of influenza about a month after starting his new practice, and a second attack before he had recovered from the first still further weakened him. A fresh cold started a pneumonic phthisis, affecting the whole of his left lung and the upper lobe of the right lung. Dr. Fraser-Luckie gave up his partnership and returned to London early in June. He gained ground for about two months, then began to get worse again, and in October went to Bordighera, but in December he developed tuberculous laryngitis. As he

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was getting steadily worse he came home in February. He gradually sank and on Easter Monday developed a pneumothorax. His heart failing towards the end, he passed quietly away at 1.15 P.M. on Tuesday, May 5th. He was buried at noon in Wandsworth Cemetery on the 9th. Dr. Fraser-Luckie was educated at the International College at Isleworth. He entered St. Bartholomew's Hospital in 1884. The reasons for Dr. Fraser-Luckie's great popularity were not hard to discover. Gifted with a sunny nature, his cheery voice and merry laugh put everyone into a good temper at once. His sound common sense and powers of observation enabled him to tackle difficult problems both in his work and in his life with success. He was a sportsman of the purest type, always willing to give a beginner a hint or to do a friend a good turn. His fine physique and natural aptitude for sport made him a good football player, oarsman, swimmer, and boxer. His splendid pluck and kindly nature were very evident all through his long and trying illness. What a trial nine weary months in bed must have been to such an active man can readily be realised; but Dr. Fraser-Luckie never once complained, and when the end came he passed quietly away, leaving in the memory of his friends a blank which will never be filled.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent medical men are announced:—Dr. Finkelnburg, Extraordinary Professor of Hygiene in the University of Bonn.—Dr. F. Semal, who was President of the International Anthropological Congress at Brussels.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the First Professional Examination in Anatomy and Physiology for the diploma of Fellow on Wednesday, May 13th:—

Ramon Horace Castellote, M.R.C.S. Eng., L.R.C.P. Lond., University College, London; Francis James Steward, M.R.C.S. Eng., L.R.C.P. Lond., Guy's Hospital; Vaughan Pendred, M.R.C.S. Eng., L.R.C.P. Lond., Durham University and Guy's Hospital; Edwin Claude Taylor, M.D. Lond., M.R.C.S. Eng., L.R.C.P. Lond., Cambridge University and Guy's Hospital; Neville Reginald Howse, M.R.C.S. Eng., L.R.C.P. Lond., London Hospital; Edward Hugh Edwards Stack, M.B., B.C. Camb., M.R.C.S. Eng., L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital; Wallace Charles George Ashdowne, M.R.C.S. Eng., L.R.C.P. Lond., St. Mary's Hospital; and Arthur Ferguson MacCallan, Cambridge University and St. Mary's Hospital.

Eight gentlemen were referred back to their professional studies for six months.

Thursday, May 14th:—

Herbert Edwin Harris, M.B. Camb., M.R.C.S. Eng., L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital; William Henry Quicke, M.D. Brux., M.R.C.S. Eng., L.S.A. Lond., Surgeon-Major I.M.S., Westminster Hospital and King's College, London; Arthur Ruscombe Crane Parsons, King's College, London; John Alfred Barnes, St. Thomas's Hospital; Thomas Percival Barry, Guy's Hospital; Cyprian Royston Pike, London Hospital; and Ernest Edward Glynn, Cambridge University.

Nine gentlemen were referred back to their professional studies for six months.

Friday, May 15th:—

George Thomas James, M.R.C.S. Eng., L.R.C.P. Lond., Westminster Hospital; William Layard Griffiths, University College, London; George Haywood Herbert, London Hospital; Edred Moss Corner, Cambridge University and St. Thomas's Hospital; Alfred Henry Gedson, Cambridge University, Owens College, Manchester, and Guy's Hospital; Leonard Hugh McGavin, Guy's Hospital; and Sidney Maynard Smith, St. Mary's Hospital.

Nine gentlemen were referred back to their professional studies for six months.

Monday, May 18th:—

Arthur Robinson, M.B. Edin., M.R.C.S. Eng., Edinburgh University; Francis Barclay Willmer Phillips, M.B. Oxon., M.R.C.S. Eng., Philip Northcott Vellacott, M.R.C.S. Eng., L.R.C.P. Lond., Shaik Abdur Ruzzark, and Walter Henry Maxwell Telling, Guy's Hospital; Harold Shuttleworth Barwell, St. George's Hospital; Hugh Fitz Neville Hine, Middlesex Hospital; Frank Cole Madden, M.B. Melb., Melbourne University and St. Mary's Hospital; Arthur Martin-Leake, University College, London; and Irwin Walter William Hunter, Otago University, New Zealand, and London Hospital.

Ten gentlemen were referred back to their professional studies for six months.

Tuesday, May 19th:—

Frederic Victor Millward, M.B., B.C. Camb., M.R.C.S. Eng., L.R.C.P. Lond., Cambridge University and St. Thomas's Hospital; Michishige Takayasu, M.R.C.S. Eng., L.R.C.P. Lond., St. Thomas's Hospital; John William Geary Grant, M.R.C.S. Eng., L.R.C.P. Lond., St. Thomas's Hospital and Newcastle-on-Tyne College of Medicine; and Frederick Edward Walker, Guy's Hospital.

Eleven gentlemen were referred back to their professional studies for six months. One hundred and nineteen gentlemen presented themselves for this examination, of whom forty-nine passed and seventy were referred.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.—The annual general meeting of this society will be held on Monday, June 1st, at 8 P.M., when, in addition to the usual business, Dr. Washbourn will read a paper on "Some Points in Connexion with the Bacteria of the Mouth," to be illustrated with lantern slides.

THE CITY OF LONDON TRUSS SOCIETY.—The eighty-ninth yearly dinner in aid of the funds of the City of London Truss Society was held on Tuesday evening last at the Albion Tavern, Aldersgate-street, under the presidency of the treasurer, Mr. John Norbury. The chairman, in proposing the toast of the evening, dwelt at length on the objects of the society, and announced donations to the amount of nearly £735.

PRESENTATIONS TO MEDICAL PRACTITIONERS.—Mr. Henry R. Powell, L.R.C.P., L.R.C.S. Edin., has been presented by the members of the Anfield Conservative Club, Liverpool, with an illuminated address and portrait as a token of their esteem and for his valuable services to the club.—On leaving Warwick Dr. Guthrie Rankin was recently presented by his numerous friends and patients with an artistically designed pair of silver candelabra and other pieces of silver plate, besides many valuable presents from individual patients. He was also entertained at a farewell dinner by the members and friends of the Warwickshire Burns Club, presided over by Dr. George Wilson, and on that occasion was presented with a handsome album containing an illuminated address and numerous photographs of the other presidents and friends of the club.—Mr. Fox T. Jackson, L.R.C.P. Lond., M.R.C.S. Eng., has been the recipient from members of the Huyton section of the St. John Ambulance Association, Liverpool Brigade, of a clinical thermometer in a silver case.

CLINICAL SOCIETY OF LONDON.—The annual meeting will be held this (Friday) evening at 8.30 P.M. The following is a list of the officers and members of Council recommended by the Council for election for the year 1896-7:—President: Thomas Buzzard. Vice-Presidents: Thomas Barlow, Frederick Taylor, Thomas T. Whipham, William Henry Bennett, Rickman John Godlee, and William J. Walsham. Treasurer: William Miller Ord. Council: W. H. Allchin, W. P. Herringham, Constantine Holman, Patrick Manson, Sidney Martin, F. W. Mott, F. G. Penrose, Seymour J. Sharkey, E. Markham Skerritt, W. Hale White, Dawson Williams, W. Bruce Clarke, A. Pearce Gould, C. R. B. Keetley, C. B. Lockwood, Rushton Parker, Bilton Pollard, A. Q. Silcock, W. G. Spencer, and J. Bland Sutton. Honorary Secretaries: G. H. Makins and J. Kingston Fowler. Trustees: Christopher Heath, William Miller Ord, and J. Burdon Sanderson.

THE WHITSUNTIDE HOLIDAYS.—Great Eastern Railway.—Whitsuntide on the Continent.—For the holidays cheap return tickets will be issued to Scheveningen (the Dutch Brighton) *viâ* Harwich and the Hook of Holland. Passengers will leave London or the northern and midland counties on Friday, May 22nd, and crossing by a special steamer will reach Scheveningen in time for breakfast next morning. These tickets will be available to return any day up to and including May 30th. Return tickets at single fares will be issued to Berlin for the Exhibition on May 22nd. Cheap tickets will also be issued to Budapest for the Millennial Exhibition. Short Belgian tours, including Brussels (for Waterloo), the Ardennes, and the picturesque Flemish cities, have been arranged *viâ* the Harwich-Antwerp route.—The General Steam Navigation Company's fast passenger steamers *Peregrine* and *Seamew* will leave Harwich on May 20th and 23rd for Hamburg, returning May 24th and 27th.—The London and North-Western Company announce that the ticket offices at Euston, Broad-street, Kensington, and Willesden Junction will be open throughout the day until Whit-Monday, May 25th, so that passengers wishing to obtain tickets for any destination on the London and North-Western Railway can do so at any time of the day prior to the starting of the trains.

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ROYAL METEOROLOGICAL SOCIETY.—The monthly meeting of this society was held on Wednesday evening, the 20th inst., at the Institution of Civil Engineers, Great George-street, Westminster, Mr. E. Mawley, F.R.H.S., President, in the chair. An interesting collection of photographs of clouds sent to the society by Mr. H. C. Russell, F.R.S., of the Sydney observatory, was exhibited.

A DINNER in aid of the funds of the National Orthopædic Hospital was held on May 14th in the Whitehall Rooms of the Hôtel Métropole. The President, the Duke of Marlborough, who was accompanied by the Duchess, took the chair, and in proposing the toast of the evening, "The Prosperity of the Hospital," said that a deficit of £1600 had to be cleared off. Donations to the amount of £681 were announced.

THE PHARMACEUTICAL SOCIETY.—The annual dinner of the members of the Pharmaceutical Society of Great Britain was held on Tuesday night last at the King's Hall, Holborn Restaurant, Mr. M. Carteighe, the President of the society, being in the chair. Mr. J. Harrison proposed "The Medical Profession," and Mr. Christopher Heath, President of the Royal College of Surgeons of England, in response, acknowledged the indebtedness of the medical profession to the Pharmaceutical Society.

MUNIFICENT GIFT TO THE JENNY LIND INFIRMARY FOR SICK CHILDREN, NORWICH.—Mr. J. J. Colman has presented to the Governors of the Jenny Lind Infirmary three and a half acres of freehold land as a site for a new infirmary. The land has been purchased from the Ecclesiastical Commissioners and has been presented to the trustees of the infirmary as a memorial to the late Mrs. Colman, who always took the warmest interest in the institution. Donations for the building fund are urgently needed in order that the erection of the new hospital may be carried out forthwith.

DIPHTHERIA IN LONDON.—The data for the four-weekly period ended April 18th show a diminution in the amount of diphtheria in London, the cases notified during each period of four weeks in the present year up to the date just named having been as follows:—To Jan. 25th, 988 cases; to Feb. 22nd, 1054 cases; to March 21st, 1009 cases; and to April 18th, 785 cases. The deaths during each week of the fortnight ended with Saturday, May 2nd, were only 41 and 36 respectively. In the week ended on May 9th the fatal cases in London increased again to 41, and were 10 in excess of the corrected weekly average, including 9 residents in the parish of Islington and 3 each in Hammersmith and Lambeth sanitary areas. There was only one death in an infant under one year of age, but 25 occurred in young children in the next four years of life. The admissions to hospital were 101, and the patients remaining under treatment on May 9th reached a total of 707. In Greater London the deaths registered were as many as 14, and no fewer than 9 of these belonged to the West Ham district.

THE ROYAL SOUTH HANTS INFIRMARY.—If any reason were needed to prove the necessity for the scheme which the governors of this infirmary at Southampton have in hand, it is afforded by a resolution recently passed by the medical staff and which was read at a public meeting on May 14th. The staff wished to record their "opinion that for many years past numerous outbreaks of preventable disease had occurred among the patients, and more especially among the resident staff, nurses, and servants of the institution, and that these outbreaks are directly attributable to the insanitary condition of the hospital. We are of opinion that this insanitary condition is largely due to the faulty structural arrangements of the buildings, and that nothing less than a reconstruction of the greater part of the hospital can render the institution suitable for the successful treatment of disease. It is well known that the diseases alluded to above are almost unknown in modern hospitals built in accordance with the now well-recognised principles of hospital construction." The scheme has been in hand for some time, and it is now proposed to erect additions at the rear of the present infirmary, adopting the circular system. The difficulty in remedying existing defects lies in the fact that the infirmary is of different dates and is practically a series of additions to the original nucleus. Only the large Eyre Crabbe wing is said to be thoroughly satisfactory. The cost of the amended scheme is put at £19,000, and of this, although an appeal is only just issued, the sum of about £5800 is promised.

CAMBRIDGE UNIVERSITY: EXAMINATIONS FOR MEDICAL AND SURGICAL DEGREES, EASTER TERM, 1896.—The certificates of candidates for the First and Second M.B. Examinations, accompanied by their postal addresses, must be sent to the registrary on or before Wednesday, June 3rd, for the First Parts, and on or before Friday, June 5th, for the Second Parts.

SOUTH-WEST LONDON MEDICAL SOCIETY.—A meeting of this society was held at "Stanley's," Lavender-hill, S.W., on the 13th inst., Dr. Gilbert Richardson being in the chair. A paper was read by Dr. Amand Routh on Hæmorrhage during the Early Months of Pregnancy, which appeared in THE LANCET of May 16th. A discussion followed, in which Mr. Benjamin Duke, Dr. Caldwell Smith, Mr. John Gay, Surgeon-Major Mark Robinson, Dr. Hillstead, Mr. T. A. I. Howell, and others took part. Dr. Amand Routh having replied, a hearty vote of thanks was accorded to him for his paper.

WALSALL MEDICAL SOCIETY.—The first meeting of the members of the newly-formed Walsall Medical Society was held in the Committee Room of the Walsall and District Hospital on Friday, May 8th. There was a good attendance of members. The President (Mr. Phillips), after pointing out the immediate objects in forming the society, gave a very interesting address based upon a comparison between the Medical Directory of 1779 and that of the present year. He drew attention to the modes of treatment in vogue at that time and showed how many of these were being rediscovered and presented to us in a more modern form. After a vote of thanks the meeting terminated.

OXFORD UNIVERSITY: EXAMINATIONS FOR MEDICAL AND SURGICAL DEGREES, TRINITY TERM, 1896.—The examinations for the degree of Bachelor of Medicine will commence in the Examination Schools on Monday, June 22nd, 1896. The Secretary to the Boards of Faculties will receive the names of candidates—either by letter or from the candidates in person—at his office in the Clarendon-building, Broad-street, at any time not later than 10.30 A.M. on Monday, June 8th, 1896. The examination for the degree of Master in Surgery will commence on Monday, June 29th. The names of candidates must be sent to the Clarendon-building, Broad-street, at any time not later than 10.30 A.M. on Monday, June 15th.

THE DIFFUSION OF SMALL-POX.—For the weeks ending May 9th there was a clean sheet so far as regards registered deaths from small-pox in the thirty-three great towns tabulated by the Registrar-General. The small-pox admissions to hospital in London were only 5, the cases admitted in the preceding three weeks having been 4, 8, and 3 respectively, and 15 patients remained under treatment. Small-pox seems to have been recently spreading in and around Wycombe, traceable in the first instance to infection from rags brought from Gloucester. Mr. Carlile, M.P., has given notice of a question to be addressed to the President of the Local Government Board having reference to the matter, in which he makes mention of the occurrence of 15 cases in the district, and propounds the subject of disinfection of rags before they reach the sorters' hands. The matter of disinfection would be one of great difficulty and would also involve no small expense. With a general enforcement of the Vaccination Acts among the workers in paper mills there should be no necessity for disinfection of rags in so far as small-pox is concerned, and other diseases spread by the medium of rags seem to be few in number and such outbreaks to be of rare occurrence. As a matter of fact the Acts have been in abeyance in the Wycombe Union for some years, so that it is not only in the mills that there is danger of dissemination of small-pox when once introduced. In Gloucester there is no longer that rush for vaccination and revaccination which set in a month ago, and the guardians have been summoning some defaulters before the magistrates, but they have met with only scant success. We read of parents summoned in respect of dead children, of wrong individuals named in the summons, and of parents having had their children vaccinated prior to appearance in court, and of the guardians having omitted to direct their vaccination officer to proceed against defaulters under their seal. In the week ended May 7th the new cases of small-pox reported to the town council numbered 81, the totals in successive weeks having steadily fallen, the numbers having been 211, 201, 168, and 131

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immediately prior thereto. The patients admitted to hospital were 23 and those discharged 15, whilst 16 deaths were recorded, of which 10 occurred in home-treated patients. The Registrar-General, in respect of the week ended two days later—namely, on May 9th—gives the registered deaths from the disease occurring in residents within the municipal borough as 24, and one death without the city boundary. The total cases heard of up to the end of last week amounted to 1700. The patients in hospital at the close of the week were within one or two of 300. Further cases of small-pox are reported from Heywood, where there are said to be 3000 unvaccinated children. The Clayton Hospital, near Manchester, has had to be reopened on account of the occurrence of a case of small-pox in the city.

QUEEN'S COLLEGE, BELFAST.—The following is the prize-list at the close of the winter medical session of the Medical Faculty:—Anatomy—Seniors: A. B. M'Master; Junior Division A: J. E. Clements and David M'Mordie; Junior Division B: Annie H. Crawford and J. W. West. Practical Anatomy—Seniors: A. B. M'Master; Second Year: Annie H. Crawford, W. M. Hunter, and Alexandrina C. Hunter (equal); First Year: David M'Mordie and J. E. Clements. Physiology and Histology—Senior Division: R. A. L. Graham and David M'Cay; Junior Division: W. M. Hunter, Robert Hilton, and W. D. Hamil (equal). Practical Physiology and Histology—R. A. L. Graham, G. H. Grills, and A. B. M'Master. Medicine—David M'Cay and Wm. Simpson. Surgery—Second Year: O. E. M'Cutcheon, B. A., and R. W. G. Stewart; First Year: C. E. M'Dade, B.A., David M'Cay, and A. B. M'Master. Materia Medica and Therapeutics—Hugh Donnelly. Midwifery, Gynæcology, and Diseases of Children—R. W. G. Stewart, O. E. M'Cutcheon, B.A., David Fleck, and G. A. Hicks. Practical Chemistry (Arts and Medicine)—Junior Division: Eleanor R. Sproule, J. A. Smith, S. S. Miskelly, and Robert Mathewson. Zoology (Arts and Medicine)—Senior: W. D. Hamill; Junior: A. G. Heron, J. C. Rankin, David M'Mordie, and A. L. Black.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Introduction of Sir William Priestley.

AT the commencement of proceedings on Thursday, May 14th, Sir William Priestley was introduced to the House on his election as the representative of Edinburgh and St. Andrews Universities by Mr. Curzon, Under Secretary of State for Foreign Affairs, and Sir John Mowbray, the member for the University of Oxford.

Pauper Aliens.

Mr. Ritchie, President of the Board of Trade, has made it known that he entertains little hope of being able to introduce a Bill dealing with the immigration of pauper aliens during the present session of Parliament.

London Water-supply.

The Bill of the Government to create a Water Board for the Metropolitan Counties passed the Committee stage in the House of Lords on Monday, May 18th, and while it was altered in very few respects it received several additions. For instance, a clause was introduced enabling county authorities to make arrangements of their own for a water supply, and on doing so to withdraw from the Water Board. This was done on the motion of the Government, while on the motion of Earl Cowper another clause was inserted providing that nothing in the Bill shall affect the right of a metropolitan county to be heard before a committee of Parliament in opposition to a Bill promoted by the Water Board.

HOUSE OF COMMONS.

MONDAY, MAY 18TH.

Court-house Accommodation.

Mr. Pickersgill asked the Secretary of State for the Home Department whether any steps had recently been taken to complete the objects of the Home Office Committee of 1887, appointed to inquire into the accommodation provided for prisoners in the court-houses of England and Wales, and how many of the places of detention in these court-houses still continue in a defective condition.—Sir Matthew White Ridley replied. It was stated in 1891 by the Home Secretary of the day, in reply to a similar question, that as a result of the action taken by the Home Office on the report of the committee the accommodation at court-houses for prisoners brought up for trial might at some 150 places be regarded as satisfactory. I am happy to be able to say that since that date a satisfactory result has been arrived at also in the majority of the forty or fifty cases in regard to which correspondence was then going on. In a very few cases the local authority has failed to comply with the requirements of the Secretary of State, and in default of fresh legislation I am unable to compel them. I may add that the matter is one to which attention is paid by the inspectors of prisons and prison governors, who report annually and call attention to any defect requiring remedy.

Registration in Belfast.

Mr. Gerald Balfour said, in reply to Mr. Young, that the Registrar-General had again carefully considered the question of the sufficiency of the existing arrangements for the registration of births and deaths and he had suggested to him (Mr. Balfour) the desirability of holding a public inquiry at which all persons locally interested might appear either personally or by solicitors. In this way the facts could be more fully investigated and he had authorised the Registrar-General to hold the inquiry in Belfast as soon as could be conveniently arranged.

The New Tuberculosis Commission.

Mr. T. W. Russell, Parliamentary Secretary to the Local Government Board, announced, in reply to questions by Dr. Farquharson and Mr. Field, that he could not hold out any expectation that a measure would be brought in this year with regard to tuberculosis, but the President of the Local Government Board hoped to be able to name the Royal Commissioners and the order of their reference shortly after Whitsuntide.

The Pleuro-pneumonia Account.

Mr. Walter Long, President of the Board of Agriculture, said, in reply to a question, that the total payments out of the Cattle Pleuro-pneumonia Account for Great Britain in 1895-96 were £216,769, while the receipts were £25,000 from the Exchequer, £165,000 from the Local Taxation Account, and £27,223 from the sale of carcases, &c. The balance to the credit of the account at the end of the year 1895-96 was £887, and at the present moment it was £15,373.

TUESDAY, MAY 19TH.

Treatment of Verminous Persons.

Mr. Hazell asked the Secretary to the Local Government Board whether the local sanitary authorities and the guardians had already the power to expend money upon the gratuitous cleansing of any verminous persons who might apply to them without treating such persons as paupers or detaining them longer than was necessary for the purpose, or whether any expenditure for this object would be surcharged against the local authorities by the Government auditors.—Mr. T. W. Russell said he was advised that boards of guardians had no legal authority for the expenditure of the rates for the purposes referred to in the question and that urban and rural district councils were in the same position in this matter. With regard to the second question he could only state that it was the duty of an auditor to disallow any expenditure by a local authority whose accounts were subject to audit by him which in his opinion was illegal.

Vaccination Prosecutions.

Mr. Thomas Bayley asked the President of the Local Government Board whether he was aware that a fifth summons had been taken out against William Guest of Quinton by the Stourbridge guardians for refusing to vaccinate, and that the said William Guest had been imprisoned several times under the Vaccination Acts, and on one occasion was sentenced to hard labour contrary to law; and whether he would advise the guardians that the case came within the letter to the Evesham guardians and should not be prosecuted?—Mr. Chaplin replied: I have no reason to doubt the accuracy of the statement in the question as to the proceedings which have been instituted against William Guest for the non-vaccination of his children. I have directed that a copy of the Evesham letter should be forwarded to the guardians of the Stourbridge Union.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ALLEN, A. H., has been appointed Public Analyst for the City of Sheffield.

BOND, F. T., M.D. Lond., M.R.C.S., has been reappointed Medical Officer of Health by the Cirencester Rural District Council.

FITZSIMONS, J. B., M.D. Irel., L.R.C.S. Irel., has been appointed Medical Officer for the Hospital by the Hereford Town Council.

FRASER, A. MEARNS, M.B. Edin., D.P.H., has been appointed Port Sanitary Medical Officer and Medical Officer of Health to the Borough of Portsmouth, vice Dr. Mumby, resigned.

FREER, E. LUKE, M.R.C.S. Eng., has been appointed Honorary Assistant Surgeon to the Birmingham Royal Orthopædic and Spinal Hospital.

GARSTANG, T. W. H., M.R.C.S., has been appointed Medical Officer of Health by the Winsford Urban District Council.

GREEN, JOHN, M.R.C.S., has been reappointed Medical Officer of Health by the Heath Town Urban District Council.

HARRIS, F. W., has been appointed Public Analyst for Burnley.

HITCHCOCK, JAS., M.B., C.M. Aberd., has been appointed Medical Officer for the Fochabers Ward by the Bellie Parish Council.

IRONSIDE, S. C., M.B., C.M. Aberd., has been appointed Medical Officer for the No. 1 Bellie Ward by the Bellie Parish Council.

JOHNSON, J. J., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the King's Sutton Sanitary District of the Brackley Union.

JUCKES, F. A., M.B., C.M. Edin., has been appointed Medical Officer for Horsham.

KAYE, J. B., M.B., C.M. Glasg., D.P.H. Camb., F.C.S., has been appointed Medical Officer of Health for the West Riding, Yorkshire.

KNOWSLEY, SIBLEY W., M.A., M.D. Camb., M.R.C.P., has been appointed Medical Examiner to the New General Life Insurance Company.

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KNOX, J. J., M.B., M.C. Camb., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer by the East and West Molesey District Council.

MACGREGOR, D. A., M.B., C.M. Edin., has been appointed Medical Officer of Health by the Denby and Cumberworth Urban District Council.

MERSON, A. G., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Parochial Medical Officer by the Aberdour Parish Council.

MEYER, W. R., L.S.A., has been appointed Medical Officer for the fourth Sanitary District of the Cuckfield Union.

MORGAN, THOS., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer for the Parishes of Forden, Llandyssil, and Llanmerewig.

MORTIS, H. E., L.R.C.P. Lond., L.S.A., has been appointed Medical Officer for the Fifth Sanitary District by the Oswestry Incorporation.

MOSSOP, A. G., L.R.C.P., L.R.C.S. Irel., M.R.C.S., has been reappointed Medical Officer for the Port of Newhaven.

NICOLL, J. MACD., M.B., C.M. Edin., has been appointed Medical Officer of Health by the Jarrow Town Council.

PELLY, H. N., L.R.C.P., L.R.C.S., L.F.P.S. Glasg., has been reappointed Medical Officer for the Stewkley District of the Winslow Union.

PRIDEAUX, C. S., L.D.S. R.C.S., has been appointed Honorary Surgeon Dentist to the Dorset County Hospital.

RIDLEY, N. C., M.B. Lond., F.R.C.S., L.R.C.P., R.N. (retired), has been appointed Honorary Ophthalmic Surgeon to the Leicester Infirmary, vice Frank H. Hodges, deceased.

ROBERTS, LLEWELYN, M.D. Lond., L.R.C.P., M.R.C.S., has been appointed Medical Officer for the Caerswa Workhouse.

SAUNDERS, A. L., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the First South-Eastern Sanitary District of the Freebridge Lynn Union.

STEVENS, T. G., M.D. Lond., M.RC.P., F.R.C.S., has been appointed Obstetric Physician to the Surrey Dispensary.

STRITCH, G. S. R., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Tudhoe Sanitary District of the Durham Union.

THOMPSON, A., M.D. St. And., M.R.C.S., has been reappointed Medical Officer of Health by the Grange Urban District Council.

WOOLLCOMBE, W. L., F.R.C.S.E., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Senior Honorary Surgeon to the South Devon and East Cornwall Hospital, Plymouth, vice the late Wm. Squire.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BEDFORD GENERAL INFIRMARY AND FEVER HOSPITAL.—House Surgeon for one year. Salary £100 a year, with apartments, board, lodging, and washing.

BRIDGWATER INFIRMARY.—House Surgeon. Salary £80 per annum, with board and residence.

BUCKS COUNTY LUNATIC ASYLUM.—Assistant Medical Officer, unmarried, at the Asylum at Stone, near Aylesbury. Salary £100 per annum, with board and furnished apartments in the Asylum. Applications to the Clerk, County Hall, Aylesbury.

CHARING-CROSS HOSPITAL, London.—Surgical Registrar. Salary £40 per annum.

CITY OF BIRMINGHAM.—Medical Superintendent for the City Hospital for Infectious Diseases, Little Bromwich, Birmingham, unmarried. Salary £200 per annum, rising by £20 per annum to £300 per annum, with apartments, rations, and attendance. Applications to the Town Clerk, Council House, Birmingham.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. Salary at the rate of £30 per annum, with board and residence.

DUNDEE INFIRMARY.—Resident Clinical Assistant. Board, lodging, and washing provided.

GOVAN DISTRICT LUNACY BOARD.—Assistant (unmarried) to the Medical Superintendent for the Asylum at Hawkhead, near Paisley. Salary £100, with board and apartments. Applications to the Clerk, 7, Carlton-place, Glasgow.

HAVERSTOCK-HILL AND MALDEN-ROAD PROVIDENT DISPENSARY, 132, Malden-road, N.W.—Two Medical Officers.

HOSPITAL FOR WOMEN, Soho-square, London.—Assistant House Physician, for three months (non-resident).

LAMBETH WORKHOUSE.—Assistant Medical Officer and Dispenser for the Workhouse, Renfrew-road, Lower Kennington-lane, and other specified duties. Salary £100 per year, rising after two years' service to a maximum of £125 per year, with board, apartments, and washing at the Renfrew-road Workhouse.

LONDON HOSPITAL, Whitechapel, E.—Medical Registrar. Salary £100 per annum. Also Assistant Physician.

LONDON LOCK HOSPITAL, Harrow road, W.—House Surgeon to the Female Hospital. Salary £50 per annum, with board, lodging, and washing.

LOWESTOFT HOSPITAL.—Dispenser. Salary 50 guineas and a fortnight's holiday each year. Applications to Mr. J. B. Cook, 30, High-street, Lowestoft.

MANCHESTER CLINICAL HOSPITAL FOR WOMEN AND CHILDREN, Park-place, Cheetham-hill-road.—Honorary Assistant Physician.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer, unmarried, at the Fountain Fever Hospital, Lower Tooting, S.W. Salary £160 for the first year, £180 for the second year, and £200 for the third and subsequent years of service, with board, lodging, attendance, and washing.

MIDDLESEX HOSPITAL, W.—Assistant Surgeon.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—Physician to Out-patients. Applications to the Secretary, Office, 27, Clement's-lane, E.C.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—House Physician for six months. Salary at the rate of £80 per annum. Also Junior House Physician for six months. Board, lodging, and washing provided. Applications to the Secretary at the City Office, 27, Clement's-lane, Lombard-street, E.C.

PADDINGTON GREEN CHILDREN'S HOSPITAL, London, W.—Surgeon to Out-patients. Also Physician to Out-patients.

PAISLEY INFIRMARY AND FEVER HOSPITAL.—House Surgeon. Salary £60, with bed and board.

PARISH OF CREICH (Sutherland).—Resident Medical Officer and Vaccinator. Salary as Medical Officer, to include medicines, £45 per annum; as Vaccinator, the statutory fees, with an allowance of £5 per year on certain conditions. Applications to Inspector of Poor, Bonar Bridge, Sutherland.

PARISH OF KINCARDINE, Ross.—Resident Medical Officer and Vaccinator. Salary as Medical Officer, to include medicines, £42 10s. per annum, as Vaccinator the statutory fees, with an allowance of £5 per year, on certain conditions. Applications to the Chairman of the Parish Council, Ardgay, Ross.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, N.W.—Resident Medical Officer for four months. Salary at the rate of £80 per annum, with board and residence.

ROYAL BERKSHIRE HOSPITAL, Reading.—Assistant Medical Officer for six months. Board, lodging, and washing provided, and an honorarium of 10 guineas awarded if the duties have been satisfactorily performed.

ROYAL EYE HOSPITAL, Southwark, or Royal South London Ophthalmic Hospital.—Honorary Surgeons and Assistant Surgeons.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London, E.C.—House Physician, for six months. Salary at the rate of £40 per annum, with board, lodging, and laundry.

STAMFORD-HILL, STOKE NEWINGTON, CLAPTON, &c., DISPENSARY, 189, High-street, Stoke Newington, N.—Junior Resident Medical Officer. Salary at the rate of £50 per annum for the first quarter, afterwards at the rate of £75 per annum, with board and lodging.

STOCKPORT INFIRMARY.—Junior Assistant House Surgeon, for six months. Board and residence and an honorarium of £10 after six months' satisfactory services.

SUSSEX COUNTY HOSPITAL, Brighton.—House Physician, unmarried. Salary commencing at £50 per annum, with board and residence in the Hospital, and washing.

WESTON-SUPER-MARE HOSPITAL AND DISPENSARY.—Medical Officer to the Provident Dispensary attached to the Hospital. Salary £80 per annum, with board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

APPERLY.—On May 16th, at Jesmond Lodge, Redhill, the wife of Herbert Apperly, L.D.S.R.C.S. Eng., of Chandos-street, Cavendish-square, W., of a daughter.

COLLIER.—On May 12th, at High-street, Oxford-road, Manchester, the wife of Joseph Collier, B.S., F.R.C.S., of a son.

DAY.—On May 10th, at Surrey-street, Norwich, the wife of Donald D. Day, F.R.C.S., of a daughter.

HEWER.—On May 16th, at 33, Highbury-new-park, N., the wife of J. Langton Hewer, M.D., B.S. Lond., F.R.C.S. Eng., of a son.

JONES.—On May 17th, at Ashton Old-road, Higher Openshaw, Manchester, the wife of Edwin B. Jones, Surgeon, of a son.

MARSHALL.—On May 8th, at Simla, the wife of Surgeon-Captain D. G. Marshall, of a son.

MATTHEWS.—On May 13th, at Pembroke-road, Clifton, the wife of Charles B. Matthews, M.D., M.R.C.S., of a son.

PASTEUR.—On May 14th, at Chandos-street, Cavendish-square, W., the wife of William Pasteur, M.D., of a son.

ROBINSON.—On May 16th, at 1, Upper Wimpole-street, W., the wife of Henry Betham Robinson, M.S. Lond., F.R.C.S., of a son.

WREFORD.—On May 15th, at Osborne-road, Newcastle-upon-Tyne, the wife of John Wreford, M.R.C.S., L.R.C.P., of a daughter.

MARRIAGES.

BARNARD—ORFORD.—On May 19th, at St. Peter's, Cranley-gardens, Richard Barnard, M.R.C.S., youngest son of the late William Barnard, of Harlow, Essex, to Jane, only daughter of the late John Orford, of Brooks Hall, Ipswich.

BRODIE—ARMSTRONG.—On May 15th, at Hove Parish Church, Charles Gordon Brodie, F.R.C.S., of Harley-street, eldest son of Frederick Brodie of Fernhill, Wootton, Isle of Wight, to Antoinette, eldest daughter of Major-General Armstrong.

THORPE—SELF.—On May 13th, at St. Mark's, Lewisham, Reginald Thorpe, M.R.C.S. Eng., L.R.C.P. Lond., of Holwood, Elmbourne-road, Tooting-common, to Clara Mary, only daughter of the late John Pearce Self, of Beckenham, Kent.

DEATHS.

GARDNER.—On May 10th, at Villa Regina, Mustapha Supérieure, Algiers, Richard Connell Gardner, L.F.P.S. Glasg., L.R.C.P. Edin., formerly of Painswick, Gloucestershire, in his 69th year.

RUMBOLL.—On May 12th, at his residence, Surrey-square, S.E., Walter Rumboll, M.R.C.S., L.S.A., aged 55.

STAPLETON.—On May 14th, at Rossye Lodge, Upper Norwood, Joseph Whitaker Stapleton, M.R.C.S., in his 82nd year.

WIMBUSH.—On April 2nd, on board the s.s. *Loanda*, at Brass, West Coast of Africa, aged 33 years, Samuel Wimbush, Surgeon to the Royal Niger Company, eldest son of the Rev. Samuel Wimbush, Rector of Terrington, Yorkshire.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 21st, 1896.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Maximum Temp. Shade	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
May 15	30·08	W.	63	56	112	72	53	...	Fine
,, 16	30·20	N.	53	47	93	62	49	...	Overcast
,, 17	30·20	S.W.	59	52	102	71	51	...	Fine
,, 18	30·20	S.W.	66	59	109	77	58	...	Overcast
,, 19	30·08	N.W.	59	57	119	71	55	...	Cloudy
,, 20	29·88	N.W.	55	47	108	61	51	...	Cloudy
,, 21	30·11	N.	51	43	107	57	42	...	Fine

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (25th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.).

TUESDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (27th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY (28th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Great Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (29th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.) Gt. Northern Central (2.30 P.M.).

SATURDAY (30th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (26th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Sir Alfred B. Garrod: On the Use of Guaiacum in the Treatment of Chronic Gouty Affections, and its Value in warding off Acute Attacks.—Dr. S. West: Case of Splenic Anæmia (splenomegalie primitive), with an Account of the Disease.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

TUESDAY (26th).—ROYAL INSTITUTION.—3 P.M. Prof. T. G. Bonney: The Building and Sculpture of Western Europe.

WEDNESDAY (27th).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Dr. Beevor: Paralysis of the Soft Palate.

HOSPITAL FOR CONSUMPTION, &c. (Brompton).—4 P.M. Dr. Biss: Intra-Thoracic Aneurysm of the Aorta.

LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Payne: Seborrhœa.

THURSDAY (28th).—ROYAL INSTITUTION.—3 P.M. Dr. R. Munro: Lake Dwellings.

LONDON POST-GRADUATE COURSE.—Brit. Inst. of Preventive Medicine, Gt. Russell-st., W.C., 3.30 P.M., Dr. Allan Macfadyen and Mr. A. G. Foulerton: Quantitative Estimation of Albumins Present.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Dr. T. H. Green: Clinical Lecture.

VICTORIA HOSPITAL FOR CHILDREN (Tite-street, S.W.).—4 P.M. Mr. T. Pickering Pick: On Operative Interference in Morbus Coxæ.

FRIDAY (29th).—LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Tuberculosis and Leprosy.

ROYAL INSTITUTION.—9 P.M. Mr. A. Birrell: John Wesley: some Aspects of the Eighteenth Century.

SATURDAY (30th).—ROYAL INSTITUTION.—3 P.M. Dr. E. A. Wallis Budge: The Moral and Religious Literature of Ancient Egypt.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

"THE POISON OF THE PRIMULA."

To the Editors of THE LANCET.

SIRS,—Permit me to report a case of primula poisoning which came under my care last summer. The patient consulted me concerning an eruption on her face and hands of an eczematous nature and which I pronounced eczema. It did not yield to treatment, and I began to suspect that she might be suffering from contact with some poisonous plant—such as the poison ivy—as the eruption resembled that caused by the Rhus radicans and Virginia creeper, but was assured that such was not the case. She recovered perfectly when the cold weather came on, and she now remembers that the trouble followed handling the primula. Upon making further inquiries I am informed of three cases, all ladies, in which handling the plants causes a painful burning itching, with an eruption of small vesicles having an inflamed base, evidently more eczematous than erysipelatous in character. I am inclined to think primula poisoning rather common.

I am, Sirs, yours truly,

Port Hope, Ontario, April 23rd, 1896. J. W. CLEMESHA.

Veritas will find full information respecting the Army Medical Service in our Students' Number, published on Sept. 7th, 1895.

A MEDICAL BOTANIST.

THE following is a perfectly true story:—

A medical man was examining a rash upon a patient's back.

M.D.: "Is this rash growing?"

Patient: "Yes, of course it's growing."

M.D.: "Why do you say 'of course'?"

Patient: "'Cos it's a plant."

M.D.: "Yes, it is a plant; but how did you know that?"

Patient: "Why, they told me at the 'orspital it was a 'sycamore.'"

M.D.: "A sycamore!"

Patient: "Yes, they said as 'ow it was a 'variety of sycamore.'"

The rash was that of pityriasis versicolor.

X. Y. Z. is informed that we neither prescribe nor recommend individual practitioners. His ordinary medical attendant should be able to give him the names of medical men who make a special study of such matters.

Observer.—1. Our correspondent is right in his estimate of the part played by muscle. It is notorious that muscular power has but little to do with the force of the stroke, the pace with which the ball travels is almost entirely dependent upon the accuracy with which the stroke has been timed. 2. The family medical man would be able to decide whether the boy is too delicate to play, but cricket at public schools is a well-managed sport. The risks of catching cold or of compulsory play lasting for too long a time are very small, and we think that the boy must be very delicate or organically unfit to go to school at all if he cannot take part in the game.

Inquirer.—Dr. Barry's qualifications were obtained in Edinburgh; but the members of the Army Medical Service were not necessarily doubly qualified in those days.

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NOVEL USES FOR THE "X" RAYS.

THE new photography is fast becoming a useful adjunct to every-day life and promises to be serviceable in many fields besides that of medicine. Experiments have been made in France, attended, we believe, with some success, with a view to ascertaining the contents of an infernal machine. With packages made to explode upon their being opened by the recipient the "x" rays should perform a useful *rôle*, but where the machine is timed to explode the new process will, we fear, be of little use. Among the newest uses of the "x" rays is the detection of imitation gems. From an illustrated article in *La Nature* it would appear that the new photography is likely to act the part of an important detective in this direction.

Practitioner.—The necessary competition taking place in an overcrowded profession accounts for many annoying incidents. We do not see that there has been any breach of professional etiquette.

THE MERE MALE.

To the Editors of THE LANCET.

SIRS,—Being up in London for a few days' holiday and being anxious to see as much hospital practice as possible during my stay, I thought that I should like to attend the practice of the New Hospital for Women in the Euston-road. Seeing in THE LANCET that the out-patients were attended at 2 o'clock every day I went there last Wednesday afternoon and saw the secretary, and told her that I was a medical practitioner and wished to see the out-patients. She said the hospital was conducted by female practitioners only, and no medical man could be admitted as the patients would not like it. I have visited a large number of hospitals at different times and never before been refused admission. How is it that a notice is put in the medical journals advertising the hours at which out-patients are seen and operations performed and yet it is impossible for a medical man to take advantage of it?

I am, Sirs, yours truly,

Boston, May 19th, 1896. ED. B. RECKITT, M.D.

*** The limitations laid down by the secretary to Dr. Reckitt have not been brought to our notice by the hospital. Our correspondent will probably be neither surprised nor, under the circumstances, displeased to read in our present issue that the Pathological Society of London has refused by a large majority to admit women members.—ED. L.

A. H. C.—We cannot endorse our correspondent's assignment of evil motive to the action of the late tenant. He is, we presume, in possession of information warranting him in making the assumption. It is usual for a medical man when leaving the house where his patients have been in the habit of seeing him to indicate where he may be seen for the future. The size of the notice board and the amount of details given upon it must be left to individual taste, as must also the length of time during which the board is kept up.

AT AN INQUEST.

WE extract the following paragraph from the *Daily Mail* of May 16th. Surely the coroner did not really allow this scene to take place.

"Yesterday, during the holding of an inquest at Shoreditch, a doctor witness said he could not say the actual cause of death.—The coroner: Then go and make a post-mortem examination.—On his return the doctor said there was congestion of the lungs, but he could not say whether that or suffocation was the cause of death.—A juror: I don't think the doctor knows what he is about.—The doctor: Oh, yes, I do.—Another juror: I don't think so. I've been in the Army Medical Corps and know a little.—The doctor: And I've been an army surgeon.—Another juror: Are you a doctor?—The doctor (indignantly): Most decidedly.—The foreman: Well, you are a funny one. (Laughter.)—A juror: I don't think he knows where he are. (Renewed laughter.)—The coroner said that the doctor was a duly qualified man and was giving the jury his opinion.—Eventually the doctor said that the cause of death was natural.—A juror: At last! (Laughter.)"

M. D. E.—It is, of course, impossible for us to decide upon the merits of the diagnosis not having seen the case, but accepting our correspondent's account of the signs and symptoms there can be no doubt that he was correct. The second medical man appears to us to have not been well advised in his conduct of the matter. It was not his fault that his experience in this particular direction was small, but it is to be regretted that on so small an experience he should have founded a direct contradiction to his senior and should not have made a representation to the parents of the patient that a third opinion was necessary to decide between the opposing diagnoses.

Final M.B.—Our correspondent's time is too short if we are to understand that he is intending to commence reading now. Erichsen's Surgery, Taylor's or Osler's Medicine, Luff's Jurisprudence, Green's Pathology, Mitchell Bruce's Materia Medica, and Lusk's Midwifery are recommended, but each might be supplemented with advantage by other text-books.

"A NEW CIGARETTE" (*sic*).

MESSRS. DRAPKIN AND MILLHOFF, of 27, Commercial-street, E., send us some specimens of "a new cigarette" which is said to be free from irritating properties. The cigarettes, while cool-smoking and devoid of pungency, are, judging from the pleasant aromatic character of the smoke, composed of selected leaf of the Dubec type. They do not strike us as possessing any marked advantage over many well-known brands, the good quality of which is probably dependent also upon the selection of superior leaf.

L. B. S.—We see nothing offensive whatever in the circular. It is stated at the top to be "Addressed to Medical Practitioners" only, and the process is so clearly auxiliary in many ways to the duties of the practitioner that it is right that facilities for its application should be placed within his reach.

SOME QUERIES.

To the Editors of THE LANCET.

SIRS,—Will any of your readers kindly answer the following questions?—What proportions of liniments of aconite, belladonna, and chloroform are most useful to make the A.B.C. liniment? How is it best applied and in what cases most suitable? Which is the most useful chloroform inhaler and which the best chloroform drop-bottle for a general practitioner? I am, Sirs, yours truly,

May 18th, 1896. SURGEON.

WE have received from Messrs. Reynolds and Branson a hammer which should recommend itself to practical pathologists with highly endowed sensibilities. It is for use in making a necropsy, and has a head protected with a mass of resilient indiarubber so that strokes upon the chisel will be silent.

Drugs.—No medical right would be thereby infringed.

INFECTION AND FEAR.

WE extract the following from an American journal:—

"A story has been told at times during the past ten years in this city of a resident who, imagining he was ill, went to bed, and when told by the physician who had been summoned to attend him that nothing was the matter with him replied that he was sick, he knew he was sick, and would be dead in less than a week. He fulfilled his prediction by dying. Another case, somewhat similar, was told on Friday. A young man residing in the Ninth Ward has the measles, and caught it by imagination. His home is in the country, where he went a fortnight ago. A brother at that time told him how he had been exposed to measles over a month before and of his luck in escaping contagion, and when the young man, who boards in the city, returned he told his shopmates about his brother, adding that he felt sure he would take the disease. Every day he brooded over the matter, saying he knew he would get it, as it was just his luck, and sure enough he did get it, and is now ill at his boarding-house with the old-fashioned measles."

ERRATA.—In the letter on "Jenner and His Work" in THE LANCET of last week, the following corrections should be made in the extract from Sir John Simon's Vaccination Report, 1857:—page 1388, column 2, line 44, instead of "formally" read *formerly*; line 64, instead of "immortal" read *mortal*; line 72, the sentence should close with "fruitful" and a new sentence should begin with "To arm."—Mr. C. H. W. Remmett, the inventor and manufacturer of Lamp No. 4, referred to in our article on Safety Paraffin Lamps last week, writes to say that his present address is 37, Tarn-street, Newington-causeway.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Northampton Mercury, Wolverhampton Chronicle, Eastern Morning News, Leicester Post, Bury Guardian, Ayrshire Post, Times of India, North Star, Bradford Observer, Civilian, Pioneer Mail, Birmingham Post, Sheffield Weekly Independent, South Wales Daily News, Sussex Daily News, Jackson's Oxford Journal, Mid-Surrey Gazette, Scotsman, Architect, Birmingham Gazette, East Anglian Daily Times, Yorkshire Herald, Builder, Western Morning News, Goole Times, Hampshire Independent, Southampton Times, Liverpool Daily Post, Llandudno Directory, Brighton Argus, Derbyshire Advertiser, Yorkshire Post, Sanitary Record, Reading Mercury, Bristol Mercury, West Middlesex Standard, Leeds Mercury, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, Mining Journal, Hertfordshire Mercury, City Press, Good Health, Family Doctor, Liverpool Review, Gloucestershire Chronicle, Macclesfield Courier and Herald, Surrey Advertiser, Local Government Journal, Chicago Dispatch, Dereham Standard, Lincolnshire Echo, Devon and Exeter Gazette, Freeman's Journal, Oban Times, Leyton Independent, West Middlesex Advertiser, Norwich Mercury, Carnarvon Herald, St. Andrews Citizen, Bedford Standard, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Dr. W. C. Arnison, Newcastle-on-Tyne; Mr. F. C. Allsop, Lond.; Anderson's College Medical School, Glasgow, Treasurer of.

B.—Dr. F. O. Buckland, Lond.; Dr. J. MacW. Bourke, Lond.; Dr. Bagshawe, St. Leonards-on-Sea; Dr. J. Banks, Aberdeen; Mr. R. T. Bate, Walmer; Mr. W. Black, Edin.; Mr. B. Brodie, Lond.; Mr. H. A. Bradley, Lond.; Dr. H. C. Bastian, Lond.; Miss Boultbee, Lond.; Messrs. Bates, Hendy and Co., Reading; Messrs. Burroughs, Wellcome, and Co., Lond.; Messrs. Burgoyne, Burbidges and Co., Lond.; Bedford General Infirmary, Sec. of; Bucks County Council, Aylesbury, Sec. of; *Birmingham Daily Post*, Proprietor of; Boscombe, Lond.

C.—Mr. T. Carwardine, Bristol; Mr. A. Camm, Smethwick; Mr. T. Christy, Lond.; Mr. A. Clark, Lond.; Miss Crippa, Colchester; Messrs. C. J. Cockran and Co., Lond.; *The Chronicle*, Gloucester, Editor of; Chemists' Exhibition, Lond., Manager of.

D.—Dr. R. Dawson, Arundel; Messrs. Davies and Co., Lond.; Messrs. Down Bros., Lond.; Dundee Royal Infirmary, Sec. of.

E.—Mr. A. P. Eldred, Sunderland; Messrs. Eason and Son, Dublin.

F.—Mr. P. Furnival, Lond.

G.—Mr. C. T. Grinfield, Weston-super-Mare; Messrs. R. W. Greeff and Co., Lond.

H.—Mr. C. T. W. Hirsch, Fiji; Mr. J. Heywood, Manchester; Messrs. P. Harris and Co., Birmingham; Messrs. Haasenstein and Vogler, Köln.

I.—Messrs. Ingram and Royle, Lond.; Institute for Infectious Diseases, Tokio, Japan, Asst. of;

J.—Mr. F. W. Jordan, Stockport.

K.—Dr. W. H. E. Knaggs, Cape Town; Dr. H. R. Kenwood, Lond.; Mr. A. Kidd, Dartford; Mrs. Kane, Betworth; Messrs. Keith and Co., Edin.; Messrs. H. King and Co., Lond.

L.—Dr. H. A. Lediard, Carlisle; Mr. R. L. Legate, Christchurch; Mr. E. Lee, Lond.; Mr. F. H. Lewin, Lond.; Lowestoft Hosp., Clerk of; Liquor Carnis Co., Aston Clinton.

M.—Dr. J. A. Macdougall, Cannes; Dr. P. M. A. McCambridge, Germantown, Illinois, U.S.A.; Dr. C. H. May, New York, U.S.A.; Dr. F. J. McCann, Lond.; Dr. E. P. Manby, Liverpool; Mr. D. A. Main, Banbridge; Mr. Rutherford Morison, Newcastle; Mr. B. F. Meadows, Hastings; Mr. J. Milne, Lond.; Mr. M. Morris, Lond.; Mr. R. Mosse, Lond.; Messrs. J. Maythorn and Son, Biggleswade; Messrs. Macmillan and Co., Lond.; Manchester Clinical Hosp., Sec. of; Mancester Southern Hosp., Hon. Sec. of; Maltine Mfg. Co., Lond.; Medico, Lincoln; M.O.S., Lond.

N.—National Typewriter Exchange Co., Lond.

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The Erasmus Wilson Lectures

ON

THE GENERAL PATHOLOGY OF BONE,

Delivered before the Royal College of Surgeons of England on March 16th, 18th, and 20th, 1896,

BY W. G. SPENCER, F.R.C.S. ENG.,

SURGEON TO THE OUT-PATIENTS AND THROAT DEPARTMENT, WESTMINSTER HOSPITAL; LECTURER ON PHYSIOLOGY AT THE WESTMINSTER HOSPITAL MEDICAL SCHOOL, ETC.

LECTURE I.

Delivered on March 16th.

INTRODUCTION.

MR. PRESIDENT AND GENTLEMEN,—Much of that which concerns the bones is familiar to all, but interest is chiefly taken in them as passive agents; they are looked upon as rods jointed together, as levers upon which the muscles pull, or as bars broken or wrenched out of position by force or eaten away by disease. Now it is with the general diseases of bone, as distinct from the local, that I propose to deal in these lectures. I shall not give any systematic account of them, that would be largely a repetition of what can be found in text-books; but by discussing one after another some of the processes common to these general diseases I may hope to throw some light upon deviations from the normal functions of bone. When we consider the bones from this less common standpoint as organs taking part in the active changes of the body the general affections of the skeleton become still more interesting, for they are found no longer to be isolated phenomena, but to be really linked to one another by many common features. Little information about the normal function of bone can be gathered from direct observations of healthy bone or by experiments strictly physiological in character except on one or two points, such as the formation of blood corpuscles in the red marrow; for the rest, we have to depend upon the changes provoked by disease. The points which I shall take up are such as can be largely illustrated by pathological specimens in the museum of the College.

THE COMPARATIVE PHYSIOLOGY AND EMBRYOLOGY OF BONE.

When we regard bone as one of the tissues of the body which takes an active part in changes, whether physiological or pathological, it becomes desirable in the first place to form some idea as to the general relationship existing between bone and other structures.

A. The relation of the osteogenetic cells to the epidermis and to the central nervous system.—In low forms of life epidermal cells collect salts of lime from the surrounding medium and secrete them in combination with albuminous material in order to form a protecting covering. Certain epithelial cells in a mollusc secrete a simple shell, which serves not only as a protection but also as an attachment for muscles. A crustacean has a shell or exoskeleton formed by epidermal cells from which there are projections inwards. These act as an endoskeleton, offering favourable points for the attachment of muscles, the force and variety of whose contractions are thereby increased. In lower vertebrates bony plates, placoid scales or scutes may constitute an exoskeleton which co-exists with an endoskeleton of considerable complexity. There is an instance of this even among mammals in the armadillo and its extinct relatives. Furthermore, a study of the development of the endoskeleton in fish and amphibia shows that the cells which give rise to cartilage and bone originate in very close connexion with the epiderm. Bone is said to take its rise in mesoblast. But this term mesoblast does not denote cells sharply separated from the cells of the epiblast on the one hand, or from those of the hypoblast on the other. Indeed, one is tempted to use such words as "epimesoblast" and "hypomesoblast" in order to express the fact that certain mesoblastic tissues remain stamped with traces of their descent from one or other of the two layers of the bilaminar blastoderm. Even when some of the mesoblast has already been formed cells may continue to be budded off from the epiblast, and these, after sinking downwards into the mesoblast, become the originators of cartilage and bone. In those fish which have bone in the base of their scales cells of the epiderm produce both the scale and the bone. Cells budded off from the epiblastic layer of a salmon embryo have been traced to form the operculum, clavicle, and squamosal. The cartilage of the head of newts, such as Menobranchus or Necturus, has been also followed back to an origin from epidermal cells.[1] Although it may not be possible to demonstrate so clearly the same connexion for the chondroblasts and osteoblasts of higher vertebrates, yet it is evident that in them the skull, lower jaw, and spinal column are very closely connected with the epiblast during development, whilst it is known that the bones of the limbs spring from the same masses of cells as do the vertebræ. In the first place, therefore, the essential characteristic of the osteoblast—viz., the picking out salts of lime from the surrounding medium in order to secrete them in combination with albuminous material—is met with under its simplest form as a function of epiblastic cells. Secondly, cartilage and bone originate from cells which, although belonging to the layer of the mesoblast, arise close by or amongst the cells of the epiblast.

If a developmental relationship between the bones of the epiderm be allowed, some reason can be given for a pathological connexion between the bones on the one hand and the skin and central nervous system on the other. This developmental connexion is the more interesting because it can be made use of in order to throw some light upon abnormalities of the skeleton of which, as they happen before birth, the cause and the pathology are alike obscure. A sympathy on the part of the bones with the central nervous system brought about during the earliest periods of life by some common causes is illustrated in the following affections: anencephaly, acephaly, spina bifida, hydrocephalus, microcephalus and other kinds of congenital idiocy, congenital skin abnormalities, elephantiasis, or excess of skin with œdema, mikromelia, hydramnios (Salvetti) or adhesions of the amnion noted at birth,—all these occur along with irregularities in the development of the skeleton. The varieties of congenital bone disease have received a great number of names, for observers when examining specimens chiefly of premature or still-born fœtuses have been wont to liken the conditions they found to those diseases which affect the bones after birth. In this country the terms fœtal rickets, fœtal cretinism, fœtal scurvy, multiple fractures or fragility of bone in the fœtus are in common use. Foreign writers employ other names: chondritis fœtalis, mikromelica chondromalacia, vel pseudorachitica, osteogenesis imperfecta, rachitis annulans et mikromelica, achondroplasia, pseudochondritis, chondromalacia fœtalis, osteoporosis, dysplasie crétinoide, osteosclerosis and osteoporosis, aplasie périostale avec osteopsathyrosis (Kaufmann). We may remark of all these names that doubtless the one used by each writer most suitably described the general condition met with by him, nevertheless the general applicability of any of them when used as the name for a distinct disease of the fœtus may be as freely doubted.

Practically in all instances of congenital bone disease there is found a deficiency in length from impaired epiphyseal ossification. In some cases it is the preliminary formation of cartilage which is wanting; in the majority, however, the endochondral and periosteal formations are also deficient, so that the bones are friable; indeed, the diaphysis may be scarcely ossified at all. More rarely, along with marked deficiency in length, periosteal ossification has gone on to produce an eburnated, hard, and massive bone. But to compare the details of the changes occurring before birth with those due to disease in after life involves an obvious fallacy. No fœtal disease can be identified in its causation with rickets, scurvy, or cretinism, and to use such terms tends to beg the question of origin. The mothers have not suffered from rickets or scurvy. The so-called "fœtal cretinism" does not occur with any greater frequency in districts where goitre is endemic than in those places where goitre is only sporadic. Indeed, there is an essential obstacle to the inheritance of cretinism to be found in the fact that cretins are notoriously sterile. Children of goitrous

[1] Platt: Klaatsch.

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parents living in an infected region are born quite healthy, and only show signs of cretinism after some months. All evidence tends to limit the cause of cretinism to the water drunk (Kocher). The removal, however, of the thyroid gland from a pregnant bitch is said to cause the puppies to be born with "rickets." In some diseased fœtuses the thyroid gland has been affected or has been noted to be absent, but in others with apparently similar bone lesions the thyroid gland was normal (Shattock). Therefore, neither disease nor absence of the thyroid gland can be a general cause of fœtal bone affections. After birth, however, the thyroid gland becomes such an important factor that both removal and disease, in proportion to its severity, check growth of the bones in length. An absolute arrest of growth took place in a boy aged ten after thyroidectomy, so that he was found eighteen years afterwards to be no taller than at the operation. The removal of the thyroid gland from young rabbits and lambs likewise arrests growth. The epiphyseal ossification ceases, the cartilage cells stop proliferating and become either flattened or distended with fluid. Fibrous tissue grows in from the periosteum and so separates the epiphysis functionally from the diaphysis. It is well known that as a consequence of removal or disease of the thyroid gland affections of the central nervous system and of the skin occur, forming another illustration of the sympathy which connects the bones with the skin and central nervous system.

When in the decline of life the central nervous system suffers excessive fragility of bone may be found, especially in insane and ataxic patients. Gigantic overgrowth, whether of the skeleton as a whole or of part or of the extremities, may be accompanied by similar overgrowths of the skin. In the case of the so-called "elephant man" described by Treves there was a hypertrophy of half the skull and of the right upper limb and feet co-existing with an enormous hypertrophy of the skin. It will be noted that in the comparatively simple cases where one or more of the toes or fingers are affected the overgrowth of the bone is *pari passu* with the skin. Further on I shall refer to two other points in which bone resembles skin, to the possibility of transplanting bone, and the tendency of periosteal sarcomata to spread rapidly by way of the lymphatics and lymphatic glands like the carcinomata.

B. The relations of the bone marrow to the vascular system and to the lymphadenoid tissues.—The bone marrow cells have functions totally different from the osteogenetic cells; in one respect, indeed, the action of the latter is the reverse of the former, for they absorb bone instead of forming it. Bone is absorbed by a process of digestion on the part of the marrow cells; not only does this process affect the septa surrounding the marrow cavity, but also any foreign bone inserted into the medullary cavity is likewise removed. The lymphadenoid tissues—the spleen, lymphatic glands, and thymus as well as the bone marrow—all originate in close connexion with the bloodvessels from the splanchnopleural layer of the mesoblast which surrounds the hypoblast of the alimentary canal. First of all, some of the cells of the splanchnopleure form the walls of the vessels whilst others produce the blood corpuscles. At a later stage lymphadenoid tissue arises in the connective tissue around blood capillaries by the white cells which have emigrated collecting in the fine meshwork (Gulland). The bone marrow forms from the vessels which push their way into the previously solid cartilages. These structures—the spleen, the lymphatic glands, and bone marrow—produce red as well as white corpuscles during fœtal life. In the adult the production of red corpuscles is no doubt confined on the whole to the red bone marrow, but whenever a more rapid formation is required—e.g., in order to make good losses by acute hæmorrhage—the spleen supplements the red marrow. The absorptive or digestive properties of certain marrow cells is a feature shared in common with the cells of lymphadenoid tissue. It is especially well marked in the lymphatic gland tissues surrounding the alimentary canal. I may recall the fact that Metchnikoff took one of his earliest instances of the digestive properties of these cells from those which are found around the alimentary canal of the water flea, Daphnia, whilst later Ruffer described the phagocytic properties of the cells in Peyer's patches. It is well known that the general diseases of the bone marrow are closely allied to those of the spleen and to those of the lymphatic glands, the chief features of which are anæmia or leucocythæmia, with new growths such as myeloma and lymphadenoma (Spencer).

THE EFFECT OF ALTERATIONS IN THE CIRCULATION OF THE BLOOD THROUGH BONE.

In many books one may find bone formation and bone absorption, hypertrophy and atrophy, hyperplastic and atrophic inflammations ascribed both to an increase and also to a decrease in the amount of blood circulating through the bone. In such different conditions as mollities ossium and osteitis deformans the same observations may be met with—viz., that the bones were "excessively vascular," "congested," "contained much blood," &c. Something is evidently wanting to the explanation when one and the same result, atrophy, is attributed both to an increased vascularity and to a diminished vascularity, when an increased vascularity can be said to promote both bone formation as well as bone absorption. In vascularity as found post mortem there is no distinction between the arterial and venous forms. Observations have to be made at surgical operations on this point.

A. A slight increase in the arterial blood-supply favours bone formation and normally occurs in those parts of bone in which growth is active—A relatively large supply of blood to any tissue corresponds with physiological activity, and conversely physiological activity necessitates a correspondingly large blood-supply. During the years of growth, especially between ten and seventeen, the greatest activity is at the epiphyseal and diaphyseal junction. The epiphyseal end of the bone, at which growth is most rapid, has the greater blood-supply. The lower epiphysis of the femur, the upper epiphysis of the tibia, the upper epiphysis of the humerus, and the lower epiphysis of the radius are sites of active growth. The course of the nutrient artery in these bones may be held to favour the blood-supply to the epiphyses above mentioned. Any injury which tends to separate an epiphysis from its diaphysis during the growing period is always attended by the extravasation of much blood on account of the previously existing vascularity. During the active period of growth the vascularity may be so increased as to be a cause of actual pain—"growing pains" (Poncet). There can be no doubt, moreover, that it is this special vascularity of growing bone which causes the juxta-epiphysary ends to become so frequently the seat of septic inflammations. The greater the vascularity the more easily will extravasation and thrombosis follow upon a slight injury. The greater the vascularity the more likely are the micro-organisms which chance to be in the blood to reach to and to settle down in the blood-clot. The frequency with which boys between thirteen and seventeen are attacked by acute inflammations in the lower end of the femur or in the upper end of the tibia may be compared with the relative freedom from attack on the part of girls of the same age. The tendency to anæmia in consequence of menstruation along with the smaller bone formation and muscular activity in girls supplies a ready explanation of the smaller vascular supply and thus the rarer occurrence of septic inflammations. A slight increase of the arterial supply to an epiphysis such as results from disease in the middle of the shaft of the bone may cause a disproportionate growth of the bone in length. Very rapid growth of the bones in length may follow the occurrence of a continuous fever—e.g., typhoid fever—apparently from the greater blood-supply to the bones during the course of the fever. An active use of muscles not only improves their own blood-supply, but also that of the bone to which they are attached. Thus by muscular exercise the development of the skeleton as a whole is favoured. But also, as will afterwards be mentioned, the part of any bone of an adult to which active muscles are attached has a larger blood-supply than the rest.

B. Any considerable increase of the arterial blood-supply to bone promotes its absorption—1. The absorption of the preliminary cartilage during the development of bone is brought about by the entrance of bloodvessels from the periosteum, which thus are said to vascularise the calcified cartilage. 2. An absorption of the pre-existing tissue by means of cells having digestive or phagocytic properties takes place in consequence of the increased arterial blood-supply which constitutes an acute inflammation whether of bone or of the soft parts. In the course of operations for acute epiphysitis surgeons have frequent opportunities of observing how much absorption of bone has happened during the few days that the inflammation has lasted. 3. If a foot be wrenched and so an increased arterial blood-supply or inflammation be brought about in the ligaments, these ligaments will then yield to a force which they would have completely resisted before the inflammation had promoted absorption. So, also,

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if in order to correct the rickety curve of a long bone a strain short of breaking be put upon the bone traumatic inflammation and absorption are caused, so that a week afterwards it will bend or break when the same amount of force is again applied. A slight injury to the limb of a growing boy has been sufficient to cause bending or fracture some time afterwards on account of the absorption which had in the meanwhile gone on. 4. The absorption of bone from increased vascularity is not necessarily connected with inflammation. Nævi or the larger angiomata, the true aneurysms of bone, may produce such an increase of the arterial circulation as to stimulate the absorptive properties of the osteoclasts.

When an attack of scurvy causes an increased arterial blood-supply to the periosteum and bone absorption is very rapid the compact bone becomes very porous or cancellous, the medullary cavity enlarges, and spontaneous fractures occur. When young children are attacked extravasations of blood take place in the neighbourhood of the epiphyses. In adults there may be so much tendency to absorption as to prevent the formation of any callus should a fracture occur during the attack of scurvy. If the scurvy follow shortly after a fracture there may be rapid absorption of callus already formed, so that the fragments again move on one another. Likewise the teeth in such cases become loose and fall out, owing to the absorption going on in the alveoli. Hæmophilia also induces excessive absorption of bone.

C. A diminution in the arterial blood-supply checks the formation of bone whilst absorption continues, so that "eccentric atrophy" is brought about.—As a result of the diminution in the arterial blood-supply the compact bone tends to become cancellous, and the cancellous bone is in its turn absorbed so that the whole shaft may be reduced to a mere shell. There is no evidence of any greater rapidity of absorption than normal. It is the want of a steady formation of bone which is the chief factor. As a consequence of disuse, whether due to ankylosis of a joint or to paralysis, the blood-supply diminishes both to the muscles and to the bones, and hence there follows a marked atrophy of bone. "Eccentric atrophy" regularly occurs as a senile change, varying very much in degree in different cases, and the gradual decline in the periosteal bone formation is the more marked the greater the disuse of the muscles.

Mollities ossium or osteomalacia.—Mollities ossium has been so often used as the name for a variety of affections in which a common end—viz., softening, bending, and pathological fractures—has been attained in such different ways that neither it nor its synonym, osteomalacia, can be applied as the term for a special disease. It is necessary to distinguish—(*a*) fœtal osteomalacia, which has been referred to; (*b*) infantile osteomalacia due to scurvy, which has also been referred to; (*c*) rickety osteomalacia arising in childhood and youth from errors in diet or hygiene (vide *infra*); and (*d*) fragility of bone or osteopsathyrosis.

Some typical cases of fragilitas ossium may be classed as spontaneous pathological variations, a condition which may appear in several members of the same family, for like other spontaneous variations the fragility may be transmitted to some of the descendants, tending soon, however, to die out. Still one can scarcely ever exclude the possibility that other tendencies to fragility have been present. The occurrence in several members of the same family may be due to a similarity of environment, exposing them to the action of causes allied to those producing rickets. The disuse and often distortion of the limb following on the multiple fractures, by lessening the patient's muscular activity, may reduce the circulation below the normal and so lead to "eccentric atrophy." Moreover fragility is the more frequent among girls about puberty (vide *infra*).

Mollities ossium of pregnancy occurs with such frequency in certain places—notably in some of the lateral valleys of the Rhine—as to be there termed endemic. Such facts must be considered by the side of observations made on animals. Certain pastures may give rise to osteomalacia owing to unfavourable seasons, excesses of cold and damp, or, on the other hand, in times of drought. So many cases have before now happened in the same district as to cause the disease to be then regarded as an epizootic one. From this point of view the osteomalacia of pregnancy is allied in its causation to rickets, the general nutrition being impaired, whether by bad food or unfavourable surroundings or by both. But the mollities ossium of pregnancy is connected in some way with the activity of the ovaries, even when the disease has occurred in regions where its frequency has given rise to the notion of a supposed endemic origin. It has been long known that a case of osteomalacia until then progressing may become arrested at the climacteric and the bones even harden again. Of recent years the climacteric has been artificially induced by removing the ovaries, and this so often that the success of the operation is beyond question (Fehling and others). Patients long bed-ridden may soon be able after double oöphorectomy to get up and walk, the bones being again enabled to bear the weight of the body. Some important light has been thrown upon the mollities by the examination of the bones of women dying in the course of normal pregnancy. An increased vascularity has been noted especially in the pelvis and femora, with signs of increased absorption of bone, so that many septa were found covered by a layer of decalcified fibrous tissue (osteoid tissue). That the pelvis and femora are very vascular, due to an increased arterial blood-supply, in mollities ossium of pregnancy I observed myself in a goat which I examined shortly after it had given birth to a kid. The animal was suffering from marked softening and bending of the pelvis and spontaneous fracture of both femora had occurred. I may here observe that such specimens kept in spirit do not preserve the condition existing during life, glycerine must be employed instead. In confirmation of the increased arterial supply to the pelvis and femora I may refer to the fact that the first signs of mollities ossium in pregnancy are aching pains in these bones, and even during normal pregnancies slight but similar pains in the same bones may be met with. Moreover, in confirmation of the excessive absorption due to the increased arterial supply we have the same noted as in the scurvy of adults concerning the delay or non-union of fractures at that in an otherwise perfectly healthy woman. Definite callus may not form until the termination of pregnancy. Excision of the knee-joint in a pregnant woman, the cut surfaces being left healthy, was followed by non-union and dislocation backwards, requiring subsequent amputation. Women who suffer from osteomalacia have been abnormally fertile. It seems, therefore, that the slightly increased vascularity in the pelvis and femora attending a normal pregnancy may become in an excessively fertile woman further increased, and produces the excessive absorption in the pelvis and femora. Girls about puberty suffer from forms of osteomalacia, indicating a connexion with the activity of the ovaries but not necessarily with pregnancy. Sometimes the facts are stated in this way—viz., that the fragilitas ossium occurs most frequently in girls. If osteomalacia occur in a girl about puberty its course may be arrested and restoration of the bones brought about by oöphorectomy. Von Recklinghausen considers the increased arterial blood-supply amounts practically to an inflammation, so that osteomalacia from this point of view may be called osteitis fibrosa. Osteomalacia is not entirely and exclusively an absorption of bone, for irregular formations of bone, osteophytes, &c, have been found.

With *senile osteomalacia* must be classed the osteomalacia of lunatics, of ataxia, and other nervous diseases, as well as that occurring in wasting disease, excluding new growth. In all these cases the "eccentric atrophy,"—i.e, a diminished periosteal formation with absorption continuing, is at bottom due to impaired general nutrition in addition to disturbance of nerve influence.

NORTH-EASTERN CHILDREN'S HOSPITAL.—The twenty-eighth annual meeting of the governors of this hospital was held on May 13th at Devonshire House, Bishopsgate-street, under the presidency of Mr. J. Lister-Godlee. The deficiency shown on the balance-sheet had been reduced during the year from £5323 to £2820, and the mortgage debt had been reduced from £4500 to £3000. With the object of helping further to get rid of the debt still existing there is to be a grand rose *fête* and bazaar at the Queen's Hall on June 23rd, 24th, and 25th, which will be opened on the first day by the Duchess of Connaught.

LITERARY INTELLIGENCE.—The publication (S. Hirsch, Leipzig) is announced of a "Text-book of Gynæcological Diagnosis" ("Lehrbuch der Gynecologischen Diagnostik") by Professor G. Winter and Carl Ruge of Berlin. It contains twenty plates and 140 engravings (partly coloured) in the text. From the specimen pages and illustrations contained in the prospectus announcing the work it would appear to be clear, concise, and practical. The publication price is 14 marks (14*s*.)

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RATIONAL THERAPEUTICS AND THE USE OF COMMON REMEDIES.[1]

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THERE is, I think, no better work that we can do as practitioners of medicine than to meet together from time to time in a friendly and informal manner in order to discuss the drugs we are prescribing every day and to compare notes of our experience as to their use. Therapeutics has not yet passed out of the empirical stage, and from whatever source the suggested remedy comes its value has to be tested and proved at the bedside. It is to empiricism tested by bedside observation that medicine owes most of the remedies it finds of use. Yet we often hear this empirical bedside study of the action of remedies spoken of with disparagement, as if it were the opposite of rational, and it was a protest against this misuse of terms that formed one of the most striking passages in Dr. Gowers' recent address. Essentially false as the opposition between empirical and rational really is, it is based upon a laudable desire to bring therapeutics into closer relation with the general principles of science. Unfortunately, this is but a pious wish and not yet an achieved fact. The same confusion between a wish and a fact finds expression in another form in the contrast that is often made between pharmacology and therapeutics.

Pharmacology is a word of recent introduction. Ending in "logy" it is assumed to be a science, and, being a new word, to denote a new science. Now, it will be well to see how far this claim is just. I take down from my shelf some recent book which bears upon its back the title "Pharmacology," and another, written but twenty years ago, labeled "Therapeutics." I turn up in both the same drugs, and what do I find? First, an account of the crude substance and of the sources whence it is derived; then an account of its chemical constitution, of the methods by which the substance can be obtained, the impurities which are present, and the way in which they may be detected and removed; next the results of the physiological investigations into the action of the drug, for the most part performed in the physiological laboratory, upon lower animals, with a summary of the conclusions to be drawn from these experiments and the suggested application to their use in disease; and in all these respects there is no greater difference between the two accounts than the lapse of time and the progress of knowledge accounts for. But the greater part of the account in each case alike is formed, as would be expected, of a statement of the effect of the drugs upon man in health and in various conditions of disease. This part forms three-quarters, nine-tenths, or in some cases even more, of the whole. And how has it been obtained? By clinical observations such as you and I can make and are making every day. If, then, we take away from the account given of any remedy the materia-medical, therapeutic, and toxicological parts, there is nothing left for pharmacology but the physiological action of the drug upon animals, in which special subject of recent years great advance has been made. In this sense pharmacology as distinguished from what used to be called therapeutics comes to be nothing more than a special department of Applied Physiology.

The term is, however, often used in a less restricted sense, and taken in a general way to mean all methods of treatment and the explanations to be given of their mode of action. Thus of quite recent modern books on this subject some, like Ringer's in this country and Wood's in America, are entitled "Therapeutics"; others, like Brunton's, "Materia Medica, Pharmacology, and Therapeutics"; while others, especially on the Continent, bear the simple title of "Pharmacology." Yet there is no difference in the contents of any of these books, the difference lies all in the title—Pharmacology; this proves to be, in fact, but a new name for the old Therapeutics—Rationalistic Therapeutics, if we like to call it so—in which all the sciences, chemistry, physics, physiology, and pathology, are called into requisition to give or to suggest explanations of the results at which clinical observation has arrived. This double use of the term is responsible for much confusion and misconception. The most serious differences between men arise, not so much about things or facts, but because of words the meanings of which have not been accurately defined; and so it is with pharmacology. At the present time this matter has a practical bearing, for everywhere examinations for medical students are being instituted in this subject, and it becomes therefore necessary to define exactly what is meant. We should all agree that we ought to send our students out into practice as highly equipped as possible with therapeutic knowledge and to train them so that they should be able, not only to practise therapeutics, but to think and reason about the ways in which their remedies act, and this knowledge must be tested by examination; but it does not follow that an examination in a special department of applied physiology is also necessary for the purpose. Indeed, the requiring of such examinations seems to rest upon the assumption that therapeutics is an art based upon a science of pharmacology—in other words, that therapeutics is applied pharmacology. Put in this form the fallacy is obvious. It is an absolute reversal of the real relation between the two subjects at the present time, for even the most recent works on pharmacology contain, as stated, comparatively little beyond that which has been derived from empirical therapeutics. We trust this will not always be so, but it cannot be denied that this is the case at the present time.

This subject has a special bearing upon the present discussion, for none of us, I presume, claim to be pharmacologists in the limited sense of pharmacological physiologists, yet we are all therapeutists, and, I believe, thoughtful therapeutists. We use the remedies which experience recommends, and must therefore, I suppose, be considered empirics. Yet we bring to bear all our powers of clinical observation to determine the conditions under which these remedies act, and we try to find if we can some scientific reason why they produce their result. If we can get good reasons we are glad; if not we continue at any rate to use the remedies which we know by observation prove beneficial. If this is not rational treatment, what is it? We may at any rate claim to be rationalistic therapeutists. The real difference between a pharmacological physiologist and a clinical therapeutist is but one of method and of place. Each has an equal desire to know how remedies act and each attempts to solve the problem in his own way. The objects are the same, the methods different. Each field of research is necessary to the other, and each real worker knows it. The special line of research is determined by the man's opportunity and his taste. The physiologist investigates his remedy in the physiological laboratory upon animals, and he has the great advantage that he can modify his experiments at will and make them at his own time and in his own way. The clinical therapeutist's laboratory is the sick room or hospital ward; the subject of his experiments is man, not healthy man, but sick; the conditions of experiments he cannot vary for himself at will; he must take the patient as he is presented to him, at a time which he cannot choose, and when he is perhaps least inclined or fitted for such investigation. But the greater the difficulty the greater the honour of achievement, and I think no one will deny that the difficulties of the clinical investigation of the action of drugs are out of all proportion greater than those which attend physiological investigation. It is perhaps in their suggestiveness that the physiological and chemical studies of remedies have their chief value. For instance, how suggestive is the theory that substances with like chemical constitution have similar physiological action, and what a field of research does it seem to open out. To what brilliant results are Pasteur's observations on fermentation and the lower organisms already leading. Yet is not bedside observation rich in suggestions too? Can we afford to discourage, slight, or despise them because they come from another source than pure science, those happy thoughts, ideas, inspirations we might almost call them, seeds which chance and casual observation dropped into an observant mind? Is not Jenner's discovery of vaccination receiving at last the scientific explanation in Pasteur's work, and shall we call Pasteur's work rational and deny the term to Jenner's?

Yet, after all, wherever the idea comes from, whether from the chemist, physiologist, pathologist, or busy practitioner, in all cases alike, it is at the bedside that it must be tested. This is, after all, the crucial test, whatever the theory

[1] An introduction to a discussion, read before the Willesden and District Medical Society on Jan. 17th, 1896.

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be. Many remedies we use and cannot tell why they do good, though we much wish to know; experience proves their value, therefore they must be used. On the other hand, many remedies which come to us rich in scientific promise put to the test prove not to fulfil the promises they held out. Surely it would be as irrational to discard the first as to continue to use the latter.

Rational therapeutics consist in the use of remedies which we know to do good, whether we seem to understand their mode of action or not. But before we endeavour to explain a result we must know whether it is a fact or not, otherwise we are but beating the air. This constant testing and proving of stated facts is the chief function of the therapeutist and for the carrying on of certain lines of such research those have great advantages who are attending patients in their own homes. On practical points of this kind it is that discussions such as that which I have the honour to introduce are likely to prove full of instruction and profit.

The drugs which have been selected for consideration are five: iodide of potassium, liquor arsenicalis, tincture of digitalis, liquor strychniæ, and antipyrin. I propose to take them one by one, for in this way I think the discussion will be more precise and profitable.

IODIDE OF POTASSIUM.

The first on the list is iodide of potassium and this drug illustrates very well the evolution of the science of therapeutics. Crushed sponge was known as a successful remedy for goitre in the thirteenth century and it is probable that it was used by the Chinese much earlier. Fucus vesiculosus was also used later for the same purpose. Iodine was discovered by Courtois in 1811. In 1820 Coimdet of Geneva, finding that both these remedies contained iodine, suspected that iodine was the active agent in the cure, and his theory when put to the test proved to be correct. He extended its use to the treatment of scrofulous glands, and then came the discovery of its action in syphilis in 1831 and of its effect in the elimination of lead and mercury from the body in 1844. Further investigation has shown that iodide of potassium is eliminated chiefly by the kidneys, but it is found in the blood, saliva, milk, and even in the urine of a sucking child of a mother who is taking the drug, and that it is present also in the skin, liver, spleen, lymph glands, and muscle, but not in the brain. Its physiological action is not understood, and nearly all our knowledge of the drug is derived from the result of clinical observation—i.e., it is simply empirical therapeutics.

Syphilis.—On the use of iodide of potassium in syphilis there is no need to dilate. The rapidity with which tertiary lesions, such as periosteal nodes, skin eruptions, and iritis, disappear under its action are among the triumphs of therapeutics. Take again a patient with third nerve paralysis. What a comfort it is to know that as such a lesion is almost always syphilitic it will get well under iodide of potassium. In the early stages of syphilis the diagnosis is usually easy, but it is in the later stages that difficulties of diagnosis begin. It is then that diseases of the nervous system and of the viscera prevail. It is then that nondescript nervous symptoms develop: pains in the joints, pains in the bones and head, over the liver and in the abdomen, and even in the chest; perhaps paroxysms of intense neuralgia. Treatment on general lines has been tried without success until the syphilitic origin is at last suspected, and iodide of potassium effects the cure. Perhaps some of the most striking cases are those in which profound cachexia develops without obvious cause, a condition common enough in children and generally recognised, but not rare either in the adult. I saw a young woman some time ago who was healthy until marriage, and although she had had no sign of syphilis, and her medical attendant could not believe that she had been syphilised, yet her husband was known to have led a loose life, and iodide of potassium restored her to health when iron and all other treatment had failed. I saw a man not long ago with symptoms which might have been due to advanced multiple sclerosis or even, except for the want of mental symptoms, general paralysis of the insane, in whom no history of syphilis could be obtained, yet iodide of potassium and rest rapidly cured him, and the case was doubtless of a syphilitic nature. Of the cure of syphilitic diseases of the nervous system by iodide of potassium we must speak with caution, yet all will admit the benefit the drug does, though the question of complete cure may be more difficult to answer. I do not think we can go so far as to say that the cure of a doubtful disease by iodide of potassium is certain proof of specific origin, but in many cases it certainly is strong presumptive evidence. No doubt much depends upon the stage of the disease. The most advanced forms of syphilis of the nervous system consist in fibroid degenerations, and we can no more expect to remove these by drugs than we can to charm away the scar of the syphilitic ulcer in the skin. Yet in the early stages of syphilitic infiltration we may expect to do, and really probably succeed in doing, as much as we see daily happen under the action of the drug in the skin and superficial parts of the body. It is in the early stages of syphilitic disease of the nervous system, when the lesions are recent and gummatous, that cure may be effected, not in the later, when irreparable damage has been done and the wasted nervous structures have been replaced by fibrous tissue. It is in these stages, when the nervous affection can hardly be definitely named and before it can be called, e.g., tabes dorsalis or lateral sclerosis, that the good may be done and, as in some of the cases mentioned, apparent cure be the result of treatment. It is usually stated that in cases of syphilis which have been already treated with mercury iodide of potassium converts the insoluble compound which is supposed to be formed between mercury and the tissues into a soluble one, thus setting the mercury free again, and it is in this way that the salivation sometimes caused by iodide of potassium in these cases is explained. It is, however, proved that iodide of potassium has a curative effect on syphilis in a person who has taken no mercury at all. It would be interesting to hear of instances of this kind, for in the present day, when syphilis is treated with mercury as a matter of routine, such cases are necessarily rare.

Poisoning with lead and mercury.—There can be no doubt of the effect which iodide of potassium has in promoting the elimination of these two metals in cases in which symptoms have been produced by them. Clinical experience is confirmed by the chemical examination of the urine in which the administration of the drug is increased by an increased elimination of the metal. These metals form insoluble compounds with albumin and thus become fixed in the tissues. Iodine releases them and does so, it is supposed, by forming a soluble substance by double combination with the metal and albumin. This pharmacological explanation even if it proved to be incorrect would not affect the correctness of the clinical observations.

Aneurysm.—A great deal has been written about the efficacy of iodide of potassium in aneurysms, especially intra-thoracic aneurysms of large size, and I think there can be no doubt that it does relieve the pain and lead to diminution in the size of the sac, yet it is not easy to determine this point because the patient is usually at the same time being treated in other ways—e.g., by diet and complete rest. Certainly the improvement is not due simply to coagulation in the sac, for in many cases where much relief has been experienced the sac has been found empty of clot. It is tempting to believe, inasmuch as so many aneurysms are the result of syphilitic disease of the arteries, that iodide of potassium might cure them; but whatever action it might have upon early syphilitic disease of the vessels (and of this there can be little doubt) it can hardly be expected to produce any effect when a large aneurysm has formed, for the aneurysm is the consequence of past syphilitic disease and not associated in all probability with any active disease of the kind. The accepted explanation is that the iodide of potassium reduces blood pressure and diminishes the force of the heart's contraction, the aneurysmal sac being thus permitted to contract and the symptoms being relieved.

Rheumatism.—Iodide of potassium is one of the stock remedies for all forms of muscular rheumatism, though its place is being taken to a great extent now by salicylate of soda. In the same way it is one of the stock remedies for all forms of the chronic joint troubles which are called by the generic term of "rheumatism." It is, however, entirely without effect in rheumatic fever, a specific affection which, in my opinion, has nothing whatever to do with the great majority of cases which we call rheumatism in this country. Its effect is most striking perhaps in those cases of chronic rheumatism or gout which are associated with chronic lead poisoning.

Diseases of the chest.—In the treatment of diseases of the chest iodide of potassium does not play any great part. It seems to be of service in some cases of chronic bronchitis, possibly because it is excreted by the mucous membrane of the bronchi, as it is by all other mucous membranes. In

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asthma it certainly is a remedy of use, not so much at the time of the paroxysms as between the attacks, and it appears to have the effect of diminishing their frequency. Certainly, many asthmatic patients believe in the drug and attribute a great benefit to the taking of it. In plastic bronchitis it is said to be the only remedy which is of any service at all, and so far as my experience goes, which now extends to several cases, I certainly endorse that opinion.

Iodide of potassium appears to be an alterative—i.e., to have a subtle influence upon cell nutrition. For this reason it is largely given in the chronic processes of inflammation, with a view of controlling it or of removing its products. It is thus one of the chief routine remedies for almost all chronic inflammatory affections of the joints, especially of the serous membrane—e.g., of the joints and pleura. As an alterative also it is given in all forms of enlargement of the lymphatic glands, especially those of a tuberculous nature, and it is stated to have a strong action upon certain other glands, especially the testicle and the mamma; thus it is an efficient galactogogue, while prolonged administration of the drug may, it is stated, lead to atrophy of the testicles. It will be interesting to have any confirmation of these statements, of which I have no personal experience to bring forward. Upon dropsy it has been said to have a specific effect, but there are so many causes of dropsy, and the term is such a loose, indefinite one, that it is hard to know exactly what is meant. In diseases of the skin it is not much employed, unless in those of a syphilitic nature; but I have seen it do much good in large doses in scleroderma.

I now come to a very interesting part of my subject—viz., the consideration of the peculiar effects which are sometimes produced by the administration of the drug; and here we are brought face to face at once with one of the most disturbing factors in therapeutics—viz., idiosyncrasy, that great stumbling block in the way of applying any physiological results upon animals to man or even without caution to all men alike. Iodism in its ordinary form of headache and catarrh I need hardly do more than mention. I suppose we may assert that it is capable of being produced in every patient, yet there are striking differences in this respect following in one case the administration of the smallest dose, while in others not appearing until very considerable doses have been taken for some time. As iodism is one of the practical difficulties we have to deal with in the administration of the drug it will be well, therefore, to consider what means there are of obviating it. It is in many patients a merely transitory phenomenon, and after two or three days the symptoms pass off, though the dose has not been changed, and even if the dose has been increased; indeed, it has been paradoxically asserted that the cure for iodism is to double the dose. The subsidence of symptoms is aided often by the administration of a saline purge. Usually if the medicine be reduced or stopped for a day or two until the symptoms have passed off its administration may be then resumed and iodism will not return; but in some cases the idiosyncrasy is so marked that even the smallest dose produces the effect, and nothing short of the entire giving up of the drug will suffice. But before this it will be well to try whether the iodide of ammonium or of soda is not tolerated better. It is stated that the addition of carbonate of ammonia or of the aromatic spirit of ammonia to the mixture will check the occurrence of iodism, but I have failed to satisfy myself of this, and so I see has Ringer. Another form of iodism, though not quite so common as the catarrhal form, is that in which the drug causes great depression of mind and body, often without coryza or any other of the common symptoms. Sometimes it upsets the digestive organs, causing loss of appetite, nausea, vomiting, or watery purging. Puffiness and swelling beneath the eyes are not uncommon with marked coryza, but they occasionally occur without it, thus giving the face a renal aspect. Salivation and diaphoresis are also stated to be occasional results, but I cannot say that I have observed them.

The iodide eruptions have always excited interest. The commonest of them is acne, and this occurs in the usual places, but the acne spots are often of considerable size and attended with a good deal of inflammatory induration. Upon the face, usually associated with acne, a butterfly eruption is often seen, of an eczematous type, extending beneath the eyelids and across the bridge of the nose, and in most of these cases there are well-marked acne spots on the lower part of the nose and cheek. The most striking iodide eruptions, and those most commonly meant by the name, are those which are pustular or even bullous in character, and their usual seat is the face; and, strange to say, some of the most marked forms of eruption have appeared some time after the administration of the drug has been suspended. General diffuse erythema is met with sometimes over the whole body, but it is stated to be rare. I do not think it is so uncommon on the legs, and in this position it is often hæmorrhagic. A patient came under my treatment for a punctate hæmorrhagic erythema of the leg and he volunteered the statement that, among the many things that would produce it, iodide of potassium was the principal. I was subsequently enabled to observe that the administration of a few grains of iodide of potassium brought out markedly hæmorrhagic erythema. Lastly, cases of general purpura have been described, and one or two of these have proved fatal, but this condition is extremely rare.

The effect of iodine upon the lesions of syphilis has led to its use in other specific affections, especially, for instance, tubercle. In tuberculous affections of the lymphatic glands, as well as in tuberculous affections of the peritoneum and perhaps of the pleura, it does seem to have some effect. In phthisis and in tuberculous peritonitis I believe it to be useful. There is one other rare but remarkable disease in which it seems to be by far the most effectual remedy we possess: I refer to actinomycosis. In a little patient recently under my care suffering from this disease involving the pleura and chest-walls, the child, who had been reduced to a shadow and looked desperately ill, made no improvement until iodide of potassium was administered, and then at once gained flesh, colour, and strength, and seemed as if he might recover. Unfortunately, he died by misadventure during the administration of chloroform given for the purpose of opening one of the small abscesses.

The therapeutics of iodide of potassium open out a very large field of discussion, but there are, I think, one or two points upon which information would be specially valuable—viz., (1) iodism and the means of counteracting it; (2) iodide rashes and the way to remove them; (3) examples of peculiar idiosyncrasies; (4) instances in which the drug has caused stoppage of the secretion of milk or atrophy of the testicles, free purgation, or vomiting; and (5) instances in which effects have been produced upon a suckling child through the milk of the mother while taking the drug.

In respect of the mode of administration it is usually given in solution in water or it may be given in milk. One point has come out in recent years—viz., that very large doses of the drug may succeed in producing an effect when small ones have failed, and the amount so given in the twenty-four hours sometimes reaches extraordinary dimensions, even to the extent of four or five ounces.

LIQUOR ARSENICALIS.

The next remedy on the list is liquor arsenicalis. The history of arsenic in therapeutics is interesting from our present point of view. It was known to the ancients in the form of orpiment and sandarach or realgar. Dioscorides gives the following description of the drug: "Orpiment, auri-pigmentum—i.e., the yellow sulphide—is astringent and corrosive, burning the skin with severe pain with the production of an eschar. It removes fungous flesh and is a depilatory." He then describes sandarach or realgar—the red sulphide—in the same terms, stating that, "mixed with resin, it causes hair to grow when destroyed by pellagra, and that with pitch it removes rough and deformed nails. With oil it is used to destroy lice, to dissolve abscesses, to heal ulcers of the nose (probably lupus), of the mouth, and fundament (probably epithelioma). With wine it is given for fetid expectoration, and its vapours, with those of resin, are inhaled in chronic cough. With honey it clears the voice and with resin is very excellent for shortness of breath." In China it was used from very early times as an application to venomous wounds, also as a remedy for ague and as a tonic in several diseases. For skin diseases it has been employed by the Hindoos for centuries, though its use was not introduced for this purpose into this country until the end of last and the beginning of this century. It was introduced into Europe about the beginning of the seventeenth century, and was then used as a remedy for pulmonary affections associated with dyspnœa, probably asthma and chronic bronchitis, as well as for different forms of ague. The analysis of a patent ague medicine by Fowler, and the discovery in it of arsenic, led to its extensive use for intermittent fever in this country; and at the end of last century it was a common remedy also for various scaly skin eruptions and for neuralgia. After having had a period

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of popularity it fell into disuse and was almost forgotten until Boudin, in the middle of this century, resuscitated it, and since that time it has been one of our stock remedies for all the affections named. Of recent years numerous experiments have been performed on animals, and they seem to show that arsenic has a definite effect upon the nervous system, especially upon the cardiac ganglia and respiratory centres; but it is difficult to see any relation between the results of these experiments and the action of the drug in man; so that we are indebted again for our knowledge of the action of this drug in disease simply to observation upon man—in fact, to the oft-disparaged empiricism, or, as I should prefer to call it, to thoughtful clinical observation. I do not propose to speak of the local action of arsenic externally, but only of its internal use as a physic; and this limitation, I believe, the committee desired, when they placed upon the list they first sent me, not "arsenic," but "liquor arsenicalis."

The facts about the drug other than clinical which have been discovered by clinical and pathological investigation are these: that arsenic is rapidly absorbed from the stomach and found in a few minutes in the circulation; that it is eliminated chiefly by the urine and sweat, and also by the mucous membrane and glands; but the elimination takes place slowly, so that arsenic may be detected a fortnight or more after it has been stopped. It is also eliminated by the liver, and in full doses causes fatty degeneration of both the liver and the kidneys, with the occurrence of albuminuria. It has especial affinity for the nervous system and is found in very much larger amount in the brain and spinal cord than in the other tissues of the body, except, perhaps, the liver. In toxic doses, besides its effect upon the liver and kidneys, it destroys the red cells, dissolves the hæmoglobin, and as the result leads to hæmorrhages into the various tissues of the body.

Ague.—Arsenic is now recognised as the most powerful anti-periodic except quinine, and it may succeed where quinine has lost its power, and it is stated that the relapses are longer delayed under treatment by arsenic than by quinine. It is useful also in all affections of malarial origin, and especially in those malarial neuralgias the causes of which are often so difficult to determine. I do not know that any satisfactory explanation of its action in ague has been given, yet it may lie in the action of arsenic on the blood-cells in which the parasite of ague is found.

Diseases of the skin.—It is one of the stock remedies in all the chronic diseases of the skin, and especially in psoriasis. In some cases of chronic eczema it is found useful, but in many its use is disappointing, and in some it does positive harm. It is largely used in animals to give them a fine glossy coat, and in Styria and the Tyrol it is habitually taken by both men and women to produce *embonpoint* and fineness of complexion. Of recent years it has been largely advocated for the treatment of herpes zoster and post-herpetic neuralgias, but its use, I think, is disappointing.

For asthma it is a very old remedy and in certain cases almost a specific, being administered either by the mouth or by inhalation, as in the form of cigarettes. As a general tonic it is useful in a variety of conditions, provided it does not upset the stomach, but this can be generally avoided by giving it in small doses after food. Of recent years it has been largely used in affections of the nervous system, possibly because of the affinity which the drug shows, as already stated, for nervous tissues. Thus it has been given in epilepsy, but I think without much success. For neuralgias of all kinds it is an effective remedy. It is said to do good even in attacks of angina, but of this I am sceptical; but, having other more reliable remedies, I admit that my scepticism does not rest on much experience. As already stated, its chief use is in malarial neuralgias—e.g., brow ague.

The nervous disease for which it is most employed at the present time is chorea. It used to be recommended that small doses should be given and continued for some time. The result was not very obvious. Recently large doses have been advocated as soon as the patient comes under treatment, even as much as fifteen or twenty minims of the liquor arsenicalis three times a day even to a small child. It is often easy, if the drug be gradually increased, to reach amounts like this in the adult as well as in children, but it is somewhat startling to begin with such large doses from the first. However, I have myself tried this treatment in a number of cases and I have not seen any poisonous effects produced by it. Yet I cannot say that I am satisfied as to the immediate benefit which follows, nor can I endorse the statement that large doses will cut short a bad case within a few days. In a severe case of chorea which has been neglected and badly treated at home admission into a hospital is sure to be followed within a few days by marked improvement without the use of drugs at all, and if arsenic be administered as soon as the patient is admitted it becomes extremely difficult to know whether the improvement is to be referred to the drug or to the general management of the case. In private practice, where the cases are more closely under observation, it is quite possible that valuable information on this point may be forthcoming.

I do not propose to go into the question of acute arsenical poisoning, accidental or intentional. But on the subject of chronic arsenical poisoning of accidental origin, such as that acquired by arsenical papers and in other methods, a society of this kind would be likely to give information of great value and interest. The chief symptoms are general failure of health, loss of appetite and impaired digestion, with weakness of the eyes, thirst, salivation, cramps and colic, and in extreme cases emaciation, œdema of the face and body, perhaps albuminuria and ulceration in the skin. When symptoms of profound failure of health of this kind arise, for which no cause can be found, it is well to bear in mind the possibility of some accidental poisoning, of which, perhaps, arsenic is the most likely, sometimes accidental, as in the case of arsenical papers, sometimes intentional, with criminal intent, as in certain legal cases which we can all remember. Tolerance of the drug is easily established, so that the prolonged administration of the medicine necessitates the increase of the dose. The amounts which may be taken may be very large, as with the arsenic-eaters of Styria and the Tyrol. Cutting off the drug suddenly in such cases is said to produce grave symptoms of poisoning, which may be relieved when the drug is resumed. It would be interesting to know if any experiences of arsenic taking and its results can be communicated.

The prolonged administration of the drug is sometimes followed by mischievous, though very interesting, results, of which I may mention two—viz., arsenical pigmentation and peripheral neuritis.

Arsenical pigmentation is comparatively rare. Its colour is a dull brown. It may be general, but is more often irregular in distribution and sometimes more marked on exposed parts—e.g., the face and neck. When given to cure a skin disease—e.g., psoriasis—it may be limited to the seat of the eruption. Other skin eruptions are rare. Papular, measle-like rashes are described on the face and other parts of the body, and urticaria is comparatively common. Herpes zoster has been attributed by many writers to the drug, and pustular ulceration or even gangrenous eruptions have occurred after toxic doses. In these rashes the effect of idiosyncrasy is strongly marked. Thus marked pigmentation followed the taking of three minims only of the liquor arsenicalis three times a day for a week only, and in another case five minims had been taken three times a day for three weeks. Neuritis following arsenic is very rare and all cases of it should be recorded. It resembles lead poisoning and may appear as wrist-drop, though in advanced cases it may more closely resemble alcoholic neuritis and affect both legs and arms.[2]

TINCTURE OF DIGITALIS.

Digitalis is a drug that has no ancient history. It was used in the sixteenth century as an application to wounds, a vulnerary, and in the middle of the seventeenth century Culpepper writes that "it has been used by the Italians as a dressing for recent wounds and old sores, that it is recommended as a purgative, emetic, and deobstruent, and that it is beneficial in scrofula and scalded head, and that it has been found of late to cure divers of the falling sickness that have been troubled with it above twenty years." It was introduced into the London Pharmacopœia in 1721, and again omitted in that of 1746. It had been a popular remedy for some time in several parts of England for dropsy, and in 1775 was established as a good remedy for this condition by Withering, so that in 1788 it became a recognised article again in the Pharmacopœia. From this time it has been largely used in clinical medicine, but the more exact study of the drug dates from the middle of the present century. The investigation of its physiological

[2] Dr. James Taylor, in the course of the discussion, referred to the occurrence of neuritis following the administration of large doses of the drug in chorea.

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action shows that in animals small doses increase the contraction of the heart, while in large doses the heart becomes irregular and finally stops in a condition of contraction. It appears to stimulate the cardiac and vaso-motor nervous system, as well as to increase the force of muscular contraction.

In man it first produces slowing of the pulse with a rise of blood pressure, regulating the heart's action and strengthening it. This sedative and regulating action upon the heart caused Bouillaud to designate it "the opium of the heart." With larger doses the pulse becomes rapid and the pressure falls, and in toxic doses the pressure falls still more, the heart becomes slow, and more and more irregular until it finally stops beating.

In therapeutics digitalis is chiefly used on account of its effect upon the heart, and especially where the heart's action is irregular and weak, for which condition it has become one of the stock remedies. Inasmuch as digitalis prolongs diastole and increases ventricular contraction it is just in mitral stenosis that it would appear to be chiefly indicated, for the lengthening of diastole would give the blood longer time to make its way through the narrowed mitral orifice, while the increased ventricular contraction would drive a larger quantity of blood out into the arteries, thus improving the general nutrition of the body, in which the heart would also share. It is, in fact, in mitral stenosis that it is found to be most serviceable, but it is almost as useful in mitral incompetence too, and this does not seem quite so easy to explain. These theoretical considerations would suggest that it was distinctly contra-indicated in aortic regurgitation, and it is true that it has to be given with greater caution in all aortic cases; yet, with caution and in smaller doses, I am satisfied of its usefulness even in aortic regurgitation. It has been stated that it is not a desirable remedy in cases of fatty heart. I do not agree with this, for I have given the drug frequently in all forms of weak heart and with great advantage, iron and digitalis being the most effective combination I am acquainted with for these conditions. It is especially useful in those cases of dilated and weak heart which are not uncommon in advancing years, but it is equally beneficial in other forms of weak heart, as, for instance, in the later stages of granular kidney, or even where the heart is enfeebled in the course of fevers.

In a very remarkable group of cases, that of acute myocarditis, of which I recorded an interesting series some years ago, the drug was very useful, but it exhibited in a marked degree the effect of the prolonged administration of the drug. At the time of commencing the treatment the heart was making a number of feeble beats, 150 or more in a minute, and digitalis was given with the view of decreasing their number and increasing their force. This it effectually did, and then after a time suddenly, without any symptoms at all in the patient to draw attention to the change, the pulse-rate fell, quite abruptly in some instances, to not more than 40 in the minute. The patient seemed in no way worse for this, and it would not have been discovered if the pulse had not been felt and counted. The drug was stopped, some stimulants given, the pulse rose to 70 or 80, and convalescence proceeded satisfactorily. In most of the cases, grave as the disease was, recovery took place but slowly and after a prolonged illness, as would be expected. Digitalis is also of great service in the alcoholic heart—i.e., the degenerate, dilated heart of drunkards, what is described popularly in Germany as the Bier-herz; but in this country we see it more often in spirit-drinkers. As a diuretic digitalis acts not directly upon the kidney, but indirectly through the circulation by its effect upon the heart and vessels. In the early stage of acute renal disease, when the tension is raised, digitalis is not a good remedy, yet it is not infrequently prescribed, though for a different reason. It is given when the urine contains some considerable amount of blood, with a view of checking the hæmorrhage, but I do not think it a useful remedy even then. It is in the later stages of acute nephritis or in chronic parenchymatous nephritis, when the tension is low, the powers feeble, and the heart weak, that digitalis does most good, and then it acts by bracing up the circulation. In granular kidney, again, it is not until the later stages, when the tension falls and the heart is weak, that digitalis is a remedy of real use; then it does good, for when the tone of the vessels is restored the patient is better. High tension in granular kidney is a part of the disease, and though a man would be better without a granular kidney at all, still if he has one he is better with high than low tension in his arteries, and it is, I believe almost as great a mistake to use depressing remedies to lower tension in the early stages of granular kidney as it would be to refrain from giving digitalis, on theoretical grounds, in the later stages.

Digitalis has been advocated as a hæmostatic. Its introduction for this purpose was due to the accidental discovery that digitalis in full doses caused contraction of the uterus and therefore checked metrorrhagia. Thus, as in the case of ergot, its use became extended as a remedy for hæmorrhage from other places, but I think there is little or no evidence that it has any action of this kind. It used to be advocated in the treatment of hæmoptysis on theoretical grounds—digitalis contracting, it was thought, the small arteries and capillaries, from which it was then supposed that hæmorrhage in hæmoptysis took place. As a matter of fact, it was found to do little of the kind, and now we know that if action could not be beneficial, but, if it had any action at all would probably be harmful, inasmuch as the hæmorrhage comes not from small vessels but from an aneurysm or rupture of a large vessel in the lung, so that if digitalis produced the effect desired and contracted the small arteries it would dam the blood up beyond the ruptured vessel and thus make the hæmorrhage greater. I suppose the giving of digitalis for hæmoptysis would in the early days have been called rational because physiological reason could be assigned, yet, tested at the bedside, it was found to be useless. Now the theory upon which it was based is known to be incorrect, the treatment ceases to be rational and the rational therapeutist does not use it for this purpose any more. In chronic bronchitis its use has been advocated also, but here again, I think, its only benefit is due to its action upon the heart.

In acute pneumonia digitalis was for a long time one of the stock remedies as it was for other fevers. Upon the temperature in such fevers digitalis has no effect, and in large doses it has long been given up as a dangerous and harmful remedy. Yet it is by no means without its use on account of the effect it has upon the heart. It is from the heart that so many cases of fever die and many of these may be saved by a judicious use of this drug. For myself however, I prefer the citrate of caffeine, which, associated with strychnia, I believe to be one of the best combinations where the heart is falling in fevers. The effect of digitalis upon the falling sickness is referred to in the early description of the drug given by Culpepper, which I have quoted, and quite recently Dr. Gowers has advocated the use of this drug in epilepsy in combination with belladonna, as it seems to increase the effect of the bromides. A few years ago full doses of the infusion of digitalis were advocated in delirium tremens. The discovery was made by accident by Dr. Jones of Jersey, to one of whose patients an ounce of the fresh infusion of digitalis was unintentionally given, but so far from doing harm it did good, and subsequent experience led Dr. Jones to advocate this mode of treatment strongly. I have not used it myself much, for most cases of simple delirium tremens get well with general treatment and little medicine. It will be interesting to know what the personal experience of the society is on this point.

There is a general opinion that the best preparation of the drug is an infusion in cold or warm water, but that which in most common use is the tincture, the only objection to which is that its strength appears to vary somewhat. The different substances obtained chemically from digitalis and included under the term "digitalin" are not popular on account of the uncertainty of their composition and action. There appear to be at least four different glucosides, all of them very poisonous and with a somewhat different action as they occur in the different common forms of digitalin in different proportions: thus Homolle's digitalin consists almost entirely of Schmiedeberg's digitalin; Nalivelli's crystallised digitalin consists, on the other hand, almost entirely of Schmiedeberg's digitoxin. Until the composition and activity of these different digitalins become more constant I think we should do well to abide by the well-tried preparations—viz., the tincture and the infusion.

Digitalis is slowly absorbed and slowly eliminated; it is thus cumulative in action, so that it is wise to watch the effect of the drug. It may be necessary to suspend its action from time to time. Yet this is by no means always necessary, for I have had patients continue to take the tincture of digitalis for months together with nothing but advantage. However, the ill effects of digitalis may appear sometimes quite suddenly and without warning.

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ve already referred to the sudden drop which may take ace in the pulse, and another symptom produced by the ug is vomiting. The sickness, which is often spoken of as ardiac vomiting" because it is so often met with in rdiac cases, is in many instances due to the digitalis, for soon as the drug is stopped the symptom passes away and es not return unless the drug be given again. The influ-ce of idiosyncrasy is as well marked with digitalis as it is th the other drugs I have been speaking of, and in some stances hardly the smallest dose of the drug can be erated. I do not know, however, of any peculiar effect at idiosyncrasy causes.

Time has not permitted me to consider all the drugs placed on the list by your committee. The rest must be reserved other occasions. In preparing this paper I have had to view my own experience with the common remedies and consider the conclusions to which it leads me. This has oved a task not only interesting but useful, and I trust that hers may have found it so too.

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EIGHTEEN CASES OF INDURATED PSEUDO-CHANCRES.

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AM indebted for the following examples of this interest-lesion to the observations my father has made on cases urring in his private practice during the last few years. Hutchinson, in the London Hospital Reports for 1866, cribed twelve such cases, which he has preferred to call apsing chancres. The word "relapsing" seems to imply urrence in the original site. This is certainly the usual rse, but Mr. Hutchinson, in speaking of these lesions in the tsomian Lectures for 1886, said: "They occur to those have had syphilis, and usually, but not invariably, the site of former chancres." Again, in his work on philis,[1] in speaking of second infections of syphilis Hutchinson records the case of a man who came to him h a "well-characterised" chancre "which he made no bt he had caught by contagion, although it was only e months since a previous one, and he was not yet rid of secondary symptoms." The second sore was on quite a erent part of the penis. On the same page he quotes a ely resembling case under the care of Mr. Allingham. Hutchinson says: "I do not know what to make of these es of second chancres occurring before the first syphilis is ed and not on the site of the original chancre. It is sible, after all, they are only examples of relapsing or haps satellite sores."

gain, the word chancre in the term "relapsing ancres" seems to imply a greater resemblance of these ons to the initial sore of syphilis than is justified by course of after events. Microscopically it is, perhaps, ossible to diagnose an indurated pseudo-chancre from the infecting sore. But from this point all resemblance es. Mr. Hutchinson[2] says "they never lead to any-g in the way of secondary symptoms." Against this statement M. Fournier, in the *Archives Générales de ecine*, 1868, says they are often followed by secondary tertiary symptoms. The examples I have quoted below rather to bear out Mr. Hutchinson's statement. Those s in which secondary symptoms occurred after the arance of the pseudo-chancre were all cases in which pseudo-chancre appeared early in the disease—that say, within a few months of the primary infection—leading one to suppose that the presence of a do-chancre influenced in no way the occurrence of ndary symptoms. Bumstead, in the last edition of his on Venereal Diseases, calls these lesions "recurrent rations." The same objections seem to me to hold with d to the word "recurrent" as in the word "relapsing." have called these new sores pseudo-chancres simply d seem to imply some relation to the soft or non-ting sore or chancroid, besides omitting the one inal symptom, induration, so that I have preferred to adopt the name given to these lesions by M. Fournier—namely, indurated pseudo-chancres.

[1] Hutchinson: Syphilis, 1889, p. 467.
[2] Loc. cit., p. 121.

CASE 1. *Appearance of indurated pseudo-chancre without any known cause ten months after original infection.*—In June, 1892, this patient had several indurated sores at the corona and some slightly indurated inguinal glands. The sores appeared five weeks after infection, which took place seven weeks previously, during which time he had had no treatment. He was now treated with mercury, and in a month the sores had all healed, leaving some induration. He was slightly salivated. In August there was an ulcer on the lower lip, and also on both tonsils. In November the throat was still red, though not ulcerated, and the patient complained of weakness. In Feb. 18th, 1893, the throat, which had been quite well, was again red and congested. There was a small spot on the penis. In March all the original sores had again become indurated. The patient said there had been no fresh intercourse. The inguinal glands had not re-indurated; there was no eruption and the throat was still congested. In April the induration had almost disappeared, but the patient again complained of feeling weak. In June there was still some slight induration on the left side of the corona, but no other symptoms. In October there were no symptoms.

CASE 2. *Reappearance of indurated pseudo-chancre five times within eighteen months of the primary infection.*—In June, 1890, this patient had a sore on the penis, which had been irritated by some caustic application. The inguinal glands were hard and discrete. It was at this time two weeks since infection. He was given two-grain pills of mercury and chalk three times a day and was readily salivated. In four weeks the sore had healed and the (?) induration was much diminished, and in August the sore and all induration absolutely disappeared. In October the induration in the sore returned and disappeared again in January, 1891; there was then no salivation and no other symptoms. In March the induration was as marked as when first seen, and the patient was still taking the mercurial pills. In April the induration, which had disappeared, had again returned. In June there were no symptoms. In July the patient stated that he had had intercourse regularly and the induration had returned. In October the sore was again red and swollen after intercourse. In January, 1892, there were no symptoms. Since the previous June he had been taking potassium iodide. He had eczema badly, to which he had long been liable. In February the eczema improved under arsenic and there were no other symptoms.

CASE 3. *Reappearance of indurated pseudo-chancre twice within twelve months of the original infection.*—In July, 1892, this patient, aged twenty-six, had a single sore on the glans penis and some indurated inguinal glands. The last intercourse was five or six weeks previously. Mercurial treatment was employed. In August the sore had healed, but the induration and the glands persisted; in September there was ulceration of the left tonsil; in November the throat was well; and in January, 1893, there were no symptoms. In May, however, the left tonsil was again congested and red. The palate had been ulcerated, but by the end of the month there were no symptoms. In June the induration in the old cicatrix and in the glands had returned, but by October the induration had entirely disappeared and there were no other symptoms. In December there was a return of the induration in the old cicatrix; in January, 1894, the induration softened and the patient was much better; in April the induration still persisted, especially in the inguinal glands. In July, contrary to advice, he married. He had lately been taking a mixture containing mercury and potassium iodide. In March, 1895, there was still some thickening in the old cicatrix and he had patches of psoriasis in several places. He was ordered to try Donovan's solution. In May the psoriasis was not increasing.

CASE 4. *Appearance of indurated pseudo-chancre seven years after the primary infection.*—In 1878 this patient was treated for an indurated sore and indurated inguinal glands. He said that he never had any further symptoms. In November, 1885, he had a single indurated sore and very indurated inguinal glands. The sore appeared one week after infection, which took place a month previously. He was put on mercury. In December everything had cleared up. There were no symptoms. He was instructed to continue the treatment for some time longer. In March, 1889, the patient had had no further symptoms.

CASE 5. *Appearance of indurated pseudo-chancre six years after the original infection.* —In February, 1885, this patient

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had a single indurated sore on the penis and indurated inguinal glands. It was two months from the date of infection. Mercurial treatment was employed. In March he was salivated and the induration of the inguinal glands was more marked. In April there were secondary throat symptoms, in May the throat was well, and in August there were no symptoms. In March, 1886, a suspicious spot at the angle of the mouth and on the lower lip was noticed. In July there were no symptoms, but the patient had a gleet. In November he had buboes after gonorrhœa. During 1887 he had an indurated inguinal gland, but no other symptom. In July, 1891, the patient stated that he had a patch of inflammation sixteen days previously on the old cicatrix, which was then indurated. In September this had nearly healed, and in December all was perfectly healed under mercury, and there were no further symptoms.

CASE 6.—*Appearance of pseudo-chancre seven years after the primary infection, together with a relapse of rupia.*—In July, 1889, this patient had a return of induration, which was very decided in a cicatrix at the frænum, which had been ruptured since he had a hard sore seven years before. The last intercourse was in February, 1889. Some old scars, the result of rupia, which he had in the previous attack, when he took mercury for three months, were beginning to get red and swollen. Mercurial treatment was employed. In August the induration continued and also in the rupial scars. In October the rupial scars were all quieting down. Every one of them became red, thickened, and raised above the surface. The old cicatrix on the penis was still very indurated and a hard, ridge-like band extended from the frænum to the side of the corona. In May, 1890, there was still some induration in the cicatrix, and the rupial scars had all become pale and soft. In September mistura biniodidi was employed. In November there was some eruption on the forehead. In December iodide of potassium was administered, and in January, 1891, the eruption had all gone. In May there were no symptoms.

CASE 7. *Appearance of indurated pseudo chancre ten years after the original infection.*—This patient stated that in 1880 he had a sore on the penis, which was followed by secondary symptoms. In June, 1890, he had a single sore on the penis; this appeared four days after the last intercourse. The sore was treated with iodoform, but in spite of this it extended and indurated, so the patient was given mercury, and by the end of the month the sore was, though large and circular, commencing to clean. The gums were tender. In July the sore was still extensive, with an indurated base, but healing in part. In July, 1893, the patient stated that he continued with the mercury for some time and nothing followed; he at that time had an indurated chancre at the meatus. He was placed under mercurial treatment. In August the sore was spreading and sloughy. Iodoform was ordered as well as mercury. In November the sore was clean, not spreading but not healing. Potassium iodide was administered instead of mercury. In May, 1894, the patient stated that after his last visit the sores soon improved; he continued taking the iodide mixture up to January, 1894. About three weeks previously he had lived freely for a few days and very shortly after this he noticed an ulceration inside the mouth in the region of the upper left molar teeth. At the time he had a tertiary ulceration extending between the upper and lower jaws. He was instructed to resume the iodide mixture. In March, 1895, there was tertiary ulceration over the spine, which improved during the month under the administration of fifteen grains of iodide of potassium three times a day.

CASE 8. *Appearance of indurated pseudo-chancre nearly four years after the original infection.*—In January, 1888, this patient had an indurated sore, which was followed by doubtful secondaries. He stated that he certainly had a bad sore-throat. In November, 1891, he had a single sore near the frænum ten days from the last intercourse. The sore was indurated and so were the inguinal glands. Mercurial treatment was employed. Within a month all the induration disappeared from the chancre but not from the glands. In December the glands were marbly. In August, 1892, there was herpes on the penis, but there were no further symptoms.

CASE 9. *Appearance of indurated pseudo-chancre four years after infection.*—In 1888 this patient had a sore on the penis, which was followed by secondary symptoms. In June, 1892, he had a single sore on the penis, which came on immediately after intercourse one month previously. There was no definite induration, but one enlarged inguinal gland. The treatment was mercurial. At the end of the month the sore was indurated and not healing and the inguinal glands were enlarging. By August everything had cleared up. In November the patient had herpes and in December there were no symptoms.

CASE 10. *Appearance of pseudo-chancre twice within twelve months of infection.*—In February, 1892, this patient had two sores, one at the root of the penis which was indurated, and the other looking like herpes. The last intercourse was three weeks previously. Mercurial treatment was employed. In March the sore at the root of the penis healed, leaving a large indurated cicatrix. During the month the induration broke down and then healed again. The patient was slightly salivated. In May ulceration of the right tonsil was present. In August both tonsils had become ulcerated and the patient was very weak. In September the throat and tonsils were affected. In December the throat was well; the original chancre at the root of the penis was again red and swollen. There was a patch of psoriasis on the head. In January, 1893, the induration had nearly disappeared. In February, after intercourse a week previously, the chancre was again hard and inflamed. In March there was a circular ulcer on the palate. In May the patient was going on well, but by the end of the month complained of general rheumatoid pains, which were relieved by salicylates and iodide of potassium. During July he had continuous headache, great weakness, and relaxed throat. In October there was a return of the rheumatoid pains, an ulcer on the left tonsil, and a pustular eruption over the cicatrix on the penis. He had been living freely. In December the throat was sore and induration of the chancre was still present. In January, 1894, the throat was better and there was no ulceration. Iodide of potassium was ordered.

CASE 11. *Appearance of indurated pseudo-chancre within four months of the primary infection.*—In January, 1885, this patient had a single indurated chancre on the penis and indurated inguinal glands. The last intercourse was in December, 1884. He was treated with mercury, and this lessened the induration. In March the induration had almost disappeared in spite of the patient having been somewhat negligent with the treatment; some days, he said, he had taken no mercury. In April there was a return of the induration in the cicatrix of the original sore. In November he had had no further symptoms, but had two small sores after fresh intercourse.

CASE 12. *Appearance of indurated pseudo-chancre a year and a half after the primary infection.*—In November, 1888, this patient had an indurated sore on the penis, which was followed by secondary symptoms. In April, 1890, there were a small indurated sore on the penis and indurated inguinal glands. The last intercourse was seven weeks previously. He was treated with mercury and was slightly salivated, but the sore speedily healed. In September there were a deep ulcer on the right tonsil and superficial ulcers on the pharynx. By July, 1891, the patient had not progressed in an altogether satisfactory manner; he would not persevere regularly with the treatment and had fresh sores on the penis, which during the next month healed under mercury.

CASE 13. *Appearance of pseudo-chancre four years after infection.*—In January, 1888, this patient had an indurated sore at the frænum and indurated inguinal glands, it being four weeks since the last intercourse. Mercurial treatment was employed. In February the induration was softening. In March the gums were tender, the induration was less, there were commencing roseola and indurated cervical glands. In April there was roseola on the forehead and back and the throat was tender. In May there was no salivation, the throat, which had been tender, was well; the roseola had disappeared; and with the exception of the indurated inguinal glands there were no symptoms. In June the throat was ulcerated. In January, 1889, there were two sore places in the mouth, otherwise the patient was going on well. In August there were two small spots on the forehead. In October, after intercourse nine days previously, there was a sore on the scrotum and the left testis was swollen. The sore healed in about three weeks on the biniodide mixture. In April, 1890, there were no symptoms. In March, 1893, after intercourse nine days previously, there was a small indurated sore on the penis which in a week healed under mercury and the induration was much diminished. In April everything cleared up. In October the patient had herpes.

CASE 14. *Appearance of indurated pseudo-chancre twenty-two months after infection.*—In January, 1894, this patient, aged thirty, and rather delicate-looking, had a single indurated sore on the left side of the corona with slightly

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indurated inguinal glands. This appeared three weeks after infection, which took place one month previously. He had a very long prepuce. Mercurial treatment was employed, and in a week the sore was nearly healed. In February he was troubled with diarrhœa and at the end of the month the induration again increased after two or three emissions. In April the induration was more marked; he was still troubled with diarrhœa. In May the induration had nearly disappeared. In September there were no symptoms. In October the throat was sore. In January, 1895, he had taken a fresh cold and the throat was again sore. In February the post-cervical glands were enlarged and there was an eruption on the scalp; he had taken no mercury for a month. In April there were secondary throat symptoms and nodes on the tibiæ, the post-cervical glands were again enlarged, and he had general rheumatoid pains. In May there was a general improvement. In June he again took cold; the throat was again red and congested, the anterior cervical glands were enlarged and indurated, and there was an eruption on the forehead and vertex. In September the glands cleared up in about two weeks under treatment, but he had taken a fresh cold and they were again much enlarged. In October there was a small pustular ulcer on the forehead, also a relapse of the original chancre on the penis, which was indurated and resembled a typical infecting sore. The inguinal glands were slightly indurated. There had been no fresh intercourse. In November, under iodide of potassium, the ulcer on the forehead disappeared in a few days.

CASE 15. *Appearance of pseudo-chancre six years after infection.*—In June, 1894, this patient had a return of induration in the site of an old chancre which he acquired six years previously, when he took mercury and iodide of potassium for twelve months. He stated that for some time he had had a secondary affection of the tongue, but no other symptoms. He was much troubled with priapism, and he said that there had been no intercourse for two years. The present induration had only been present for a few days. In August the induration was diminishing under mercury.

CASE 16. *Appearance of indurated pseudo-chancre twice within ten months of the primary infection.*—In December, 1893, this patient had a single sore near the frænum with enlarged inguinal glands three weeks since infection. He was treated with iodoform. In January, 1894, the sore had almost healed, but the glands were very indurated. Mercurial treatment was employed. In February one gland was suppurating. In May the bubo had nearly healed, but he had several sores, some of which were indurating. He had had fresh intercourse a week previously. The sores improved under treatment, but the induration at the frænum persisted. The gums were tender. In August there was a return of the induration in the old cicatrix. In October there was another relapse of the induration. He had been living freely, had not gone on with the treatment, and stated that he had had no intercourse for six months. The sore was spreading and inclined to be phagedænic. In November the phagedæna was arrested only after considerable trouble by the free use of nitric acid, and by the end of the month it was all healing up soundly.

CASE 17. *Appearance of pseudo-chancre twenty-five years after infection.*—Twenty-five years previously this patient had syphilis. Two or three years later he had herpes, which lasted for nine months. He had also had diabetes, which irritated the prepuce, causing congestion, rawness, and adhesions. In August, 1894, there was a small sore beneath the edge of the prepuce near the frænum. This appeared at first as a slight thickening of the preputial edge. There was no history of infection. The glands were not enlarged. The induration had existed for five weeks and was extending. Mercury was employed. In October the preputial adhesions were broken down and the induration had become smaller. Later in the month a fresh separation was necessary, and the sore became swollen and thickened, like an infecting chancre. In November the induration had almost gone, but the prepuce was very tender and irritable.

CASE 18. *Appearance of pseudo-chancre within four months of original infection.*—In July, 1894, this patient had gonorrhœa, which commenced about one month previously. A week prior to date the underneath part of the urethra became swollen and a spot appeared on the scrotum. When first seen he had apparently four or five chancres, together with some induration of the inguinal glands. Mercurial treatment was employed and suitable treatment for the gonorrhœa. Within a week the induration was decided, and at the end of the month the sores had healed. In August one sore was still indurated. In October the patient had been under treatment in the north. The one sore soon disappeared, but at the end of September the induration had reappeared in the original site. There had been no eruption on the skin, but he had a very badly ulcerated throat. In November the throat was well, but he had been salivated. In January, 1895, a slight eruption appeared on the forehead; the mercurial treatment was continued. In May there was some enlargement of the right tonsil. In August the patient was going on well. In December he was still progressing satisfactorily.

In the above-quoted cases it will be noticed that the indurated pseudo-chancres appeared at the following intervals after the primary infection: Case 1, in ten months; Case 2, in five months, ten months, eleven months, fourteen months, and seventeen months; Case 3, in twelve months; Case 4, in seven years; Case 5, in six and a half years; Case 6, in seven years; Case 7, in ten years; Case 8, in three and three-quarter years; Case 9, in four years; Case 10, in eleven months and thirteen months; Case 11, in four months; Case 12, in one and a half years; Case 13, in four years; Case 14, in twenty-two months; Case 15, in six years; Case 16, in nine months and ten months; Case 17, in twenty-five years; and Case 18, in four months. Mr. Jonathan Hutchinson in the London Hospital Reports for 1866 described a series of cases of relapsing chancres and found that the relapses occurred within a short time of the original infection. In the *Archives Générales de Médecine*, 1868, M. Fournier also described a series of cases of this nature which he called "indurated pseudo-chancres"; he, too, found that the pseudo-chancres occurred within a short interval of the primary infection—viz., in the second month 7 cases, in the third month 4 cases, in the fourth month 3 cases, in the fifth month 3 cases, in the sixth month 2 cases, in the seventh month 1 case, and in the tenth month 1 case. Bumstead says "relapsing indurations," as he calls these lesions, may occur any time up to the tenth year. The cases I have given seem to satisfactorily show that there is no limit to the time in which these indurated pseudo-chancres may appear.

In Cases 1, 6, 14, 15, 16, and 17 intercourse as a cause of the reappearance of the chancre was denied by the patients. In Cases 3, 5, 11, and 18 there was no history either way. In Cases 2, 4, 7, 8, 9, 10, 12, and 13 the reappearance of the chancre followed on intercourse. In Case 2 the patient had had intercourse regularly. In Cases 4, 7, 8, 9, 10, and 13 the indurated pseudo-chancre appeared within a short time after intercourse—viz., Case 4, within a week; Case 7, within four days; Case 8, within ten days; Case 9, immediately; Case 10, within a week; and Case 14, within nine days. In Cases 1, 5, and 17 the glands were not affected by the new sore. In Cases 3, 4, 8, 9, 12, and 14 the inguinal glands re-indurated. Case 6 showed relapse of the rupia and tertiary symptoms, the patient stating that the last intercourse was six months previously. In Cases 10, 12, 14, and 18 the indurated pseudo-chancres appeared quite early in the disease; secondaries appeared, probably the result of the primary infection, and not influenced in the least by the presence of the pseudo-chancres. Cases 8, 9, 13, and 17 suffered eventually from herpes, to which, according to Mr. Hutchinson, syphilitic subjects are liable.[3] In Cases 2, 4, 11, and 16 the symptoms of syphilis in the primary attack were only the presence of an indurated chancre and indurated inguinal glands. In Cases 1, 3, and 10 the pseudo-chancre appeared while the patients were under treatment for the original sores. Case 2 lived very irregularly, all five relapses occurring while still under treatment. In Case 6 the original attack was severe, but the patient appears to have been only treated for three months. Case 11 took treatment irregularly. Case 14 was most careful in following out treatment. Case 15 was treated in the original attack for twelve months with mercury and iodide of potassium. Case 17 was due (?) to the irritation caused by an adherent prepuce. There is a case of relapsing chancre recorded by Mr. W. Robinson[4] in which mercury did no good, but in which circumcision cured the relapsing induration and relieved the patient of his phimosis.

The effects of treatment and predominant symptoms in these cases.—The treatment of the original attack of syphilis consisted of small doses of mercury such as hydrargyrum cum creta, two grains, three times a day. In Cases 13 and 16 the

[3] Loc. cit., p. 8.
[4] Brit. Med. Jour., Nov. 2nd, 1889.

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gums were tender; Cases 1 and 10 were slightly salivated; Case 5 was salivated; and Case 2 was easily salivated. And in all these cases, with the exception of Cases 2 and 16, it should be noticed that the predominant symptom was some affection of the throat or mouth or both. In Cases 1, 3, 5, 8, 12, and 15 though the mouth or throat were affected there was no eruption on the skin. In Case 10 the throat and mouth were badly affected; there was a patch of psoriasis on the scalp after the first relapse, and later general rheumatoid pains. In Case 13 the throat and mouth were affected. An evanescent roseola appeared on the forehead and back. In Case 14 the affection of the throat was very obstinate. There was no rash on the skin, but nodes on the tibiæ and frequently relapsing enlarged cervical glands. Later there was a pustular eruption on the forehead, which rapidly cleared up under iodide of potassium. In Case 15 there was obstinate secondary affection of the tongue. In Case 18 the throat was affected. There was slight erythema on the forehead. John Hunter,[5] in 1786, said: "It often happens that after chancres are healed and all the virus gone is the cicatrices ulcerate again and break out in the form of chancres." ..... "They appear to be a consequence of a venereal complaint having been there, as they seldom attack those who never had gonorrhœa or chancres." ..... "I know one case where they broke out regularly every two months exactly to a day." In the *Archives Générales de Médecine* for 1863 Diday published an account of 25 cases of what he called "second attacks of syphilis." He had personally seen 20 of the cases All had had syphilis, the symptoms of which had all cleared up except in a few where some tertiary symptoms were present. In 14 of these cases the only symptom of re-infection was the indurated chancre. He explained this by saying that the nearer the relapse came to the original attack the more feeble was the effect, yielding only a chancre, and *vice versâ* the longer the interval the greater the probability of secondary and tertiary symptoms appearing. The cases I have quoted do not agree with Diday's experience, for Case 4 relapsed seven years after the primary infection and had no further symptoms; Case 5 relapsed in six and a half years and had no further symptoms; Cases 6 and 7 relapsed in seven and ten years respectively and had no secondary symptoms; Cases 8, 9, and 13 relapsed in three and three-quarter years, four and a half years, and four and a quarter years respectively, and had no further symptoms except herpes; and Cases 15 and 17 relapsed in six years and twenty-five years respectively. These last two cases are unfortunately incomplete. Might we not consider fourteen at least of the twenty-five cases given by Diday as instances of indurated pseudo-chancres and not as examples of reinfection?

In 1874 Mr. Gascoyen read a paper before the Royal Medical and Chirurgical Society on Eleven Cases of Syphilitic Reinfection. Mr. Gascoyen thought that the induration at the base of the chancre is as pathognomonic of general syphilitic contamination as are the eruptions, and consequently would have us believe that in Case 1 of his series the patient was reinfected in 1867, 1868, and 1870, and that between 1870 and 1874, during which time he had married and had two healthy children, he was reinfected two or three times. His health throughout was good. The original chancre was in 1863; the relapses were not followed by secondaries. Case 3 was only under observation a fortnight, the only evidence of reinfection being the indurated chancre. Case 4 recovered without treatment. Case 5 was only under observation one month, the symptoms of reinfection being the indurated sore and enlarged glands. Case 9 is said to have recovered without treatment; he refused to take mercury, as he wished to see whether a man could have syphilis twice. The older writers on syphilis taught that a man might have syphilis over and over again.[6] Was this from their having observed examples of the lesion under discussion, or from their failure to comprehend the necessity for a long course of treatment during the original attack? In 1859 Ricord said "the indurated chancre never relapses and that the syphilitic diathesis is no more reproduced than any other kind of diathesis." In 1872 he qualified this by saying that, though possible, like a second attack of variola, yet in his long experience he had never come across an instance of a man having an indurated sore and secondary syphilis more than once in his life, and that so long as the patient is suffering under the syphilitic diathesis arising from an indurated chancre he cannot have another indurated chancre, nor while a man has secondaries can he have a chancre of an indurated character. Mr. Gascoyen and Follin, in that they regarded the induration of the chancre as pathognomonic of syphilis, would have regarded all the cases I have quoted as examples of re-infection. In 1873 Mr. Gascoyen said "that the presence of induration about a sore shows, in the first place, that the system was free from syphilis when the induration was acquired; and, secondly, it shows that the patient is at the time under the influence of syphilis." And again: "The formation of an induration in a man who has previously had syphilis is a proof that he has recovered from the previous attack." In my cases Nos. 1, 6, 14, 15, 16, 17, and 18 denied all possibility of re-infection; and in Cases 1, 2, 3, 12, 14, 16, and 18 the re-indurations occurred whilst the patients were still under treatment for the primary attack. Mr. Henry Lee said that a man might have syphilis twice, but that so long as he remains syphilitic he is incapable of being re-infected and considered the amygdaloid condition of the glands as the great proof that a person was still syphilitic unless he had passed into the tertiary stage. In my Cases 3, 12, and 14 the inguinal glands re-indurated with the relapse of induration in the chancres, yet the patient in each of these cases was still under treatment for the original attack. In the Harveian Lecture for 1877 Mr. James R. Lane said that a man does not contract a second indurated sore so long as he is under the influence of the syphilitic diathesis. Mr. Venning[7] said that when the indurated glands had disappeared, then and then only was the patient free from syphilis and again in a condition for re-infection. Mr. Hutchinson says that for a man to have a second attack of syphilis it is necessary that he should be cured of the first in so far as it is a blood disease, and insomuch as he considers the lesions under discussion occur within a short time of the original infection he does not allow that these cases are examples of re-infection. Further, he says that cases of relapsing chancre are rare, though they are infinitely commoner than second attacks of syphilis. Ricord, Sigismund, and Bumstead[8] all lay particular stress on the amygdaloid condition of the inguinal glands as evidence of syphilis. On reference to my cases it will be seen that in Case 4 the glands became re-indurated seven years after the original attack, in Case 8 three and three-quarter years, and in Case 9 four years, with no further symptoms of syphilis except herpes. Drysdale[9] said that for twenty years he had looked for cases of reinfection and found none. Mr. Edward Cotterell, in his paper read before the British Medical Association in 1895 on Syphilitic Antitoxin, says: "One attack of syphilis confers immunity from subsequent infection upon the individual affected, the exceptions to this rule being so rare that they may be entirely disregarded." In THE LANCET of March 10th, 1877, Mr. Henry Smith recorded a most interesting case which occurred in King's College Hospital. A man aged sixty-five years was admitted for epithelioma of the penis. Seven years previously he had contracted a chancre, which was followed by secondary symptoms. He was treated by a druggist and the chancre healed. It relapsed one year later in the original site after a drinking bout. It healed in three weeks and has relapsed four or five times since, always after heavy drinking. Sometimes he was treated, at others not. Secondary rashes appeared four or five times, not always as a direct sequence of the chancre. There had been no fresh intercourse. This case seems to illustrate two points so strenuously insisted upon by M. Fournier: (1) pseudo-chancres are often followed by secondary symptoms; (2) pseudo-chancres are especially prone to occur in patients who are careless or negligent about treatment; and (3) it bears out Sir William Gull's well-known aphorism, "If you wish to keep your syphilis preserve it in alcohol."

May these pseudo-chancres be considered as in any way analogous to the relapsing inflammations of Sir James Paget? Writing of these Sir James Paget says: "Relapsing inflammations are due to the disturbed or interrupted nutrition, not only of the tissues deteriorated in previous inflammations, but of the new materials that were formed among them." M. Fournier suggested that we should consider these lesions

[5] A Treatise on Venereal Disease, 1786, p. 265
[6] Hutchinson, loc. cit., p. 16.
[7] THE LANCET, Dec 19th, 1874.
[8] Berkeley Hill: Syphilis, 1868, p. 77.
[9] Brit. Med. Jour., 1872

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as belonging to constitutional manifestations of a special form, having their origin and their cause in the primary infection and absolutely independent of all further contagion. Taking into consideration how seldom these pseudo-chancres are followed by secondary symptoms (Mr. Hutchinson[10] says never), and the cases I have given agree with this except Cases 10, 12, 15, and 20, in which the relapse occurred quite early in the disease, thereby seeming to show that the presence of the relapses did not influence either way the onset of secondary symptoms, it seems that an explanation of these lesions might be found in combining the theory of M. Fournier with that of Sir James Paget on relapsing inflammations—viz., that we should consider these pseudo-chancres as due to the disturbed or interrupted nutrition of the new materials that were formed among the tissues deteriorated in the previous inflammations and that they owe their peculiar likeness to the infecting sore because they had their origin and their cause in the primary infection and are now absolutely independent of all further contagion.

The cases I have quoted seem to me to show: 1. That the indurated pseudo-chancre may appear at any interval after the initial lesion. 2. That if the interval of immunity has been a long one the indurated pseudo-chancre is not followed by secondary symptoms. 3. That if the interval between the appearance of the pseudo-chancre and the original sore is a short one, the onset of secondary symptoms is not influenced in any way by the new sore. 4. That these lesions may arise spontaneously quite apart from fresh intercourse. 5. That if the history be not known it is almost impossible to diagnose the pseudo-chancre from the initial lesion of syphilis. 6. That the predominant secondary symptom in the original syphilitic attack in the cases I have quoted was some affection of the mouth and throat rather than cutaneous eruptions. 7. That the presence of induration in a sore, accompanied it may be by induration of the neighbouring lymphatic glands, does not necessarily imply that the individual has been re-infected with syphilis. 8. That these lesions yield rapidly to mercurial treatment or even spontaneously disappear. 9. That these pseudo-chancres are not syphilitic, though occurring in individuals who are or have been the subjects of syphilis. 10. That, as the case I have quoted under the care of the late Mr. Henry Smith shows, these lesions may eventually terminate in malignant disease. 11. As Mr. Hutchinson has pointed out:[11] "The knowledge of the facts as to the recurring chancres is of very great importance, since without it very serious mistakes may occur, not only as regards treatment, but in reference to social and medico-legal questions."

Frederick-place, Old Jewry, E.C.

ON CONSTIPATION AND DIARRHŒA.[1]

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THE subject of Constipation and Diarrhœa is one that is interesting to every medical man because, I suppose, there are no other ailments for which he is so often consulted. Constipation especially is so exceedingly common in civilised communities that I think we ought hardly to look upon it as a disease. We find it amongst the strongest, the healthiest, and the longest lived of our people, and although they suffer from it and therefore ask for aid from medical men it is probable that we should regard constipation really as the reaction of a healthy organism to unfavourable surroundings. The unfavourable, or unnatural, surroundings may be said to be, too soft food, too little water, or too little exercise. There are no doubt many other conditions which tend to bring about constipation, but these three may, I think, be looked upon as the chief factors in the production of chronic constipation. Primitive communities take food which is not only rather hard and generally imperfectly cooked but leaves a considerable amount of indigestible residue. In our school-days we used to read how Cæsar and his troops carried with them little hand-mills and bags of corn or of wheat. The corn or wheat was put into the hand mill and roughly ground. In this way the grain was imperfectly broken up and so taken by the soldiers. Amongst uncivilised communities at the present day it may be simply pounded. In civilised countries, however, we have mills which not only grind the corn very finely, but separate the outer and more indigestible part of the grain from the starch which constitutes the interior of the grain. We thus get rid, by the perfection of our machinery, of those parts of the grain which would leave in the bowel undissolved residues and which would act thereby as a mechanical stimulus to the peristaltic action of the bowels. Similarly in regard to fruits and vegetables; we are accustomed to take them not in their crude state, but well cooked, and if there are any indigestible parts either in the vegetables or in the fruits these are generally removed.

Soft food, then, is one of the first causes of constipation, and in trying to treat constipation one of the first means to which we have recourse is to bring our patients back to the conditions under which less civilised nations usually live. We advise them to take bread either consisting of whole meal or with a greater or less admixture of bran. We advise them to take vegetables in abundance, either cooked, such as cabbage, spinach, brocoli, Brussels sprouts, cauliflower, carrots, turnips, parsnips, and the like, or we advise them to take vegetables such as tomatoes, celery, and so on, raw as well as cooked. In America it is very common indeed for people to begin or finish their breakfast with a slice or two of raw tomato or a slice or two of melon, and these fruits very often are sufficient to keep the bowels open. In this country we not infrequently recommend patients to take in the morning a raw apple or two, suck an orange or two, or eat a fig on an empty stomach before breakfast, and here also we very frequently find that we get the desired result. One of the most common of the fruits we prescribe is stewed prunes, and frequently these keep the bowels open, or a stewed or roasted apple or two may do so also. Many patients, however, find that even stewed prunes are insufficient to keep the bowels open, and in such cases one may succeed in getting a regular movement by simply taking some senna leaves, tying them in a muslin bag and putting them into the pan beside the prunes to be stewed. This very simple plan has in some cases that I have had under treatment succeeded when the ordinary method of just recommending stewed prunes has proved insufficient.

Fruits also contain, as a rule, salts of vegetable acids and many of them contain sugars, and both these salts and the sugars are of importance as laxatives. In the case of a fig, we find that there are three kinds of laxative properties: there is (1) the mechanical irritation due to the altogether indigestible seeds; (2) the stimulus given by the vegetable salts contained in the fig; and (3) the stimulus given to the bowel by the sugars.

Sugars in themselves are useful laxatives, and golden syrup, honey, or still better, perhaps, the old-fashioned black treacle, are very useful laxatives, and they may be given—at least the syrup and the treacle may be given—along with oatmeal porridge in the morning. Honey, treacle, or syrup may be given spread upon bread or the latter two may be mixed with the bread to form ginger-bread, and in all these ways they prove very useful laxatives. Vegetable jellies taken with bread are less efficient, but vegetable jams are very useful, because in them we find a mechanical stimulus is given by the seeds or by the skins which the jams contain. A very favourite addition to the breakfast table is marmalade, which contains vegetable salts, sugar, and also the hard skin of the orange cut up into small pieces, which are rather indigestible and give a mechanical stimulus to the bowel.

Water, insufficient in *quantity*, or abnormal in quality, is also a cause of constipation. We find that civilised people are very often in the habit as it were of cheating the natural desire for water by taking wine, and many people, especially ladies, are in the habit of taking less water than they like because if they drink more water it will pass through the kidneys and the exigencies of society may prevent them from emptying the bladder as frequently as they would wish, and, therefore, they get into the habit of taking much less water than is advisable. A dryness of the bowel constantly results from this, the fæces become dryer and harder, and so constipation occurs. This constipation may frequently be lessened by simply allowing the patient to drink a large tumblerful of hot water or even of cold water, according to

[10] Lettsomian Lectures, 1886.
[11] Loc. cit., p. 124.

[1] A paper read before the Brixton Medical Society at 125, Kennington-park-road, on Thursday, Jan. 16th, 1896.

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the season of the year, on rising in the morning, and sometimes a similar tumblerful of water taken just before going to bed aids the action of the bowels.

A wrong *quality* of the water is a frequent cause of constipation, and people living on a chalky soil and drinking hard water are very apt to suffer from this trouble. Where this is the case the patient should drink some of the ordinary bottled waters, such as soda water, potash water, or aerated waters generally. Not only should they drink this, but they should have their tea made with these waters instead of with the ordinary chalky water, as the quantity of lime in the water taken as tea is sufficient in some people, if the water be very chalky, to keep up the constipation, which will be relieved if the water taken in the form of tea be free from lime. It is very difficult for patients supplied with hard water to get their food cooked with water free from lime, and the only thing one can do is to advise them if possible to secure soft water for cooking purposes, for they will not use bottled waters on account of the expense.

Another very important point in the cure of constipation is habit, and this habit is also of great importance in regard to the production of constipation. The bowels usually tend to act once in twenty-four hours and generally nearly at the same time in the day. If a person who is accustomed to evacuate the bowels regularly omits to do so in consequence of having to hurry away somewhere or having some engagement which prevents him from going to the closet at the accustomed hour he is apt to break the habit, and it is sometimes much more easy to lose the habit than to regain it. It is very essential that the patient should go to the closet as nearly as possible at the very minute by the clock, and he should, if possible, go after breakfast; for, as Cash has shown, the introduction of food into the stomach, especially after the long fast during the night, tends to cause a peristaltic movement of the intestines, which brings some of the fæcal matter from the sigmoid flexure down into the rectum and tends to cause an evacuation. However, this regular time is in some cases impracticable in the morning on account of the calls of business which make the man leave his house quickly to catch a train to the city, or from other reasons. In such cases the bowels should be evacuated at bedtime or at some hour of the day when regularity can be secured. In cases where the patient suffers from hæmorrhoids or a tendency to prolapse it is much better that the evening should be selected so that the bowels shall be evacuated just before going to bed, because in persons suffering from hæmorrhoids or a tendency to prolapse there is apt to be a feeling of great discomfort consecutive to the movement of the bowels, and if the movement occurs in the morning they suffer from this discomfort the whole of the day. If the bowels are emptied just before retiring to bed they can wash the parts, return the hæmorrhoids or bowel, then go to bed, lie quiet and comfortable, and in the morning all trace of discomfort has passed away.

Exercise has a good deal to do with the movements of the bowels. Deficiency of exercise tends to cause constipation, partly, I believe, because the bowels do not get a mechanical stimulus applied to them by the contraction of the abdominal muscles. So that, as a rule, we advise our patients to take exercise; but a great many people will not take exercise, and I think a number of people cannot do so. In such cases we may supply its place by the use of massage, and massage to the abdomen certainly will counteract the tendency to constipation. In many persons the advantage of massage over ordinary exercise is that in massage the stimulus is applied not merely to the abdominal muscles themselves but really also to the bowels below, and it may be applied in various ways. There is first of all the massage which the patient himself may use. In sitting at stool and trying to elicit an evacuation he may simply with the ball of the left thumb press downward along the course of the descending colon and sigmoid flexure, pressing pretty deeply in when he comes nearly to the pubic arch. This action is useful even during the evacuation. Another action the patient may practise himself is rubbing the bowel gently onwards in the direction of the hands of a watch, and sometimes it is of advantage to use the fingers with a rotatory motion from the right iliac fossa upwards along the course of the ascending colon, across the transverse and then down the descending colon and sigmoid flexure.

There is one class of patients in whom I think exercise is disadvantageous. You will frequently find delicate women, especially those who have got some sort ovarian or uterine irritation, who tell you that the more exercise, particularly walking exercise they take, the more obstinate the constipation becomes, whereas when they lie quiet they are perfectly well. In such cases I believe there is a reflex inhibition of the peristaltic movements of the bowels from the irritated ovaries or uterus, and in some of these patients you may get an evacuation occurring from a remedy which is one of the last, possibly, you would think of employing—viz., opium. My attention was first directed to this by the case of a woman who was under the care of my friend, Dr. Litteljohn. The bowels were obstinate and my friend prescribed half a grain of opium so as to try to lessen the pain which she was suffering from an inflamed ovary. To his astonishment she got after the opium a natural evacuation, which she had not had for a long time before. Following on this I made a somewhat extensive trial amongst my out-patients at St. Bartholomew's Hospital, but the results I got were very uncertain. In some cases it acted, but in others there was no action at all. It is quite possible—indeed, it is probable—that some of the cases were unsuitable for it. In one private case I did not know exactly what dose to give, and I prescribed one minim of the tincture of opium every night. A week afterwards I had a report from the patient's husband to say his wife was no better. I replied "double the quantity." In a few days the report came, "she is rather worse." I then wrote to say "give her half the first dose." Three or four days afterwards I had a letter to say that the last medicine acted well, if anything a little too violently. I have never been able to make up my mind as to whether this result was due to suggestion, like the aperient action of a bread pill, or was actually due to the action of the drug. I am inclined to think it was actually due to the drug because the suggestion had been clearly applied to her mind by the one minim and the two minims and these did no good first of all and later did harm, while the half-minim dose caused an active evacuation of the bowels. At first it seems an absurdity to ascribe this action to the opium, but when one comes to think of the complex nature of the innervation of the intestine where there are at least two different systems of nerves—one which stops movement in the intestine and another which increases movement—one sees that it comes to be simply a question of a shifting of the action of a very delicate balance.

Another point that I wish to mention is the action of the floor of the pelvis in defæcation. In defæcation the contents of the intestine are passed onwards by its peristaltic movement, but this action is aided by the abdominal muscles which tend to press out the contents of the rectum in much the same way as they tend to press out the child in childbirth. But we all know that in childbirth the head of the child is driven not against the opening of the vulva, but behind it, so that the head of the child must be turned forward by the pressure of the perineum, frequently aided by the hand of the accoucheur. In the same way the muscles of the abdominal wall will press the fæcal mass backwards, not directly towards the anus, but behind it, in a line that would almost strike the tip of the coccyx, and if the finger be placed under the tip during the effort of straining this pressure is easily felt. Where the pelvic floor is very lax, as it is in women who have borne many children, you may find that the fæcal masses will accumulate in the rectum and form there a big accumulation, and the floor of the pelvis is so loose that it will not press them forwards so as to evacuate them through the anus. One great hindrance to complete evacuation of the rectum is the position adopted in this country during defæcation—i.e., sitting upon what is practically a chair with an opening in it. In nearly all other countries, and in all uncivilised places, where the bowels are moved in the open air, the position adopted is that of crouching with the knees somewhat apart. This position tends to cause a certain amount of stretching of the floor of the pelvis and to afford support to the fæcal mass as it is driven backwards by the action of the abdominal muscles. In cases where the patient must use the closet, a certain amount of tension is often imparted involuntarily to the pelvic floor by the patient leaning forwards at an acute angle. But this is not so good as the crouching position, and in patients who suffer from a lax condition of the pelvic floor it is advisable to tell them not to use the ordinary seat in the closet at all, but to keep a chamber-pot in the closet and sit over it in the normal crouching attitude. Sometimes great help is afforded by the patient putting the fingers just beside and a little in front

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of the coccyx so as to support the pelvic floor and give a little pressure to the fæcal masses so that they may pass forwards through the anus in very much the same way as the accoucheur would support the head during parturition.

In some cases hydropathic treatment is very useful. The essentials of the hydropathic treatment are simply the application of wet compresses to the abdomen two or three times a day and sitz baths, cold in the summer and the chill taken off in winter. These must be followed or accompanied by exercise and drinking water, so that it is almost impossible to get the full effect of the therapeutic measures in a patient who is being treated at home.

Time would fail me to discuss the question of what medicines given by the mouth are best in constipation, of purgatives, of laxatives, of breakfast-pills, of dinner-pills, &c., and, moreover, they are most fully discussed in text-books and papers innumerable, and I shall, therefore, pass them over and proceed to discuss some points in regard to diarrhœa. I shall also pass over the ordinary

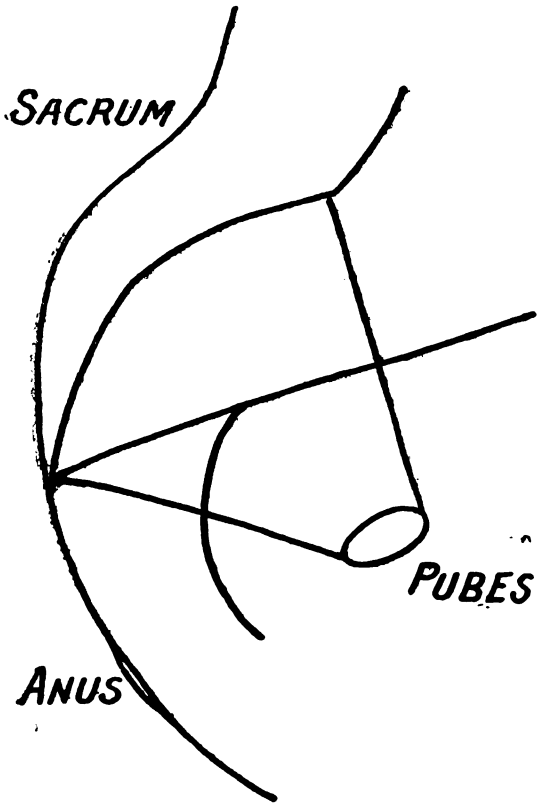

Diagram showing axis of pelvis and direction of pressure by abdominal muscles (after Cazeaux, Traité Théorique et Pratique des Accouchements.)

diarrhœa due to irritation of the intestine by the intestinal contents or by the decomposition of food, &c. I will simply draw attention to one method of stopping diarrhœa which is applied in various ways when the diarrhœa is due to decomposition of the intestinal contents by bacteria. The decomposition may be arrested and the diarrhœa stopped by simply starving the bacteria out. Thus where you find bacilli thriving upon certain diets you put the patient on an entirely different diet, and so get rid of the bacteria which have been living upon other foods. If a patient has been on a flesh diet and that has not succeeded, you put him on a farinaceous diet. Again, you may find that in certain children a farinaceous diet, or even a milk diet, is not successful, and you then put them on a meat diet, raw-meat juice, &c., and in this way starve out the bacteria which were causing decomposition of the milk or farinaceous food, so that when the ordinary food is again resumed the decomposing bacteria have been starved out and no decomposition will occur in the intestine.

I would also draw your attention to the excellent results which follow treatment by an entirely milk diet, particularly in patients coming from India and Afghanistan with chronic diarrhœa, and where every other method is utterly useless. As my friend Sir Joseph Fayrer has shown these cases must be treated just as one would treat a case of typhoid fever—viz., by milk, and nothing else whatever in the way of food. In some cases the patient even lays on flesh and is able to attend to his work, but this is not the general rule, as they usually have to be kept quiet in bed while they are on the milk diet.

I would next draw attention to an obstinate form of diarrhœa met with in connexion with irritability of the sigmoid flexure. It is a form of diarrhœa that is very often known as "morning diarrhœa." The patient has to get up very early in the morning, and perhaps has three to six movements before 11 A.M. After that he is pretty free, and probably after midday he has no action at all until next morning. This form of diarrhœa is sometimes not so severe, and occurs only in the shape of one movement just after breakfast, followed by one or two loose motions within the next hour or so, but both the severe form and the mild are by no means amenable to treatment. We give our patients opium, astringents, and sedatives such as bismuth, until we are tired, and yet by the simple means of regulating the diet results are obtained which cannot be got by ordinary remedies. The remedy is this: Tell them to take no liquid after five o'clock in the afternoon. It would seem that in such cases liquid taken after five or six o'clock tends to accumulate in the stomach or in the bowel, and it acts just in the same way as if the patient were to take a large dose of Carlsbad salts in the morning. In some of these cases dilatation of the stomach is present, but I do not think it is present in all. In all the cases I have met with I have got distinct improvement, and in many complete cure, by this simple regulation of taking no fluid after 5 P.M.

There is another form of diarrhœa the cause of which, I think, is often unobserved, and that is diarrhœa of a chronic irritating character; small motions but numerous and often accompanied with tenesmus, which is due to a prolapse of the sigmoid flexure into the rectum. As you know, the rectum is pretty firmly fixed to the bones of the pelvis, especially to the sacrum, so that although prolapse of the rectum through the anus is common in children, prolapse of the rectum is by no means very common in adults. But prolapse of the sigmoid flexure into the rectum is by no means uncommon in adults, and it sometimes gives rise to constipation, but frequently causes chronic diarrhœa. My attention was drawn to this very markedly in a patient whom I saw some years ago—a tea-planter who had come from Assam. He had suffered from chronic diarrhœa for from six months to a year before I saw him. The whole of his trouble dated from an attack of violent constipation which had lasted many days. To relieve this he took a strong purgative, and from the moment that this acted he had suffered from diarrhœa. All the remedies he had tried had failed. On examination by the bowel I found almost exactly the same condition as you would find in a child with a prolapsed rectum, only in this case the prolapse was as far up the rectum as one could reach with the finger. I found high up in the rectum regular bags of mucous membrane hanging down, and in the middle of these bags one could feel the opening into the sigmoid flexure. This man was treated chiefly by water enemata to keep the contents of the sigmoid flexure soft and by the application of catechu so as to exercise an astringent action upon the rectum. By carefully regulating the diet, so as to avoid hard irritating substances coming down from the sigmoid flexure, by keeping the fæcal masses in the sigmoid flexure quite soft so that there should be no mechanical pressure, and by injecting an astringent lotion (about two ounces of water to a drachm of tincture of catechu) into the bowel after each motion and retaining it as long as possible the patient was completely cured of the diarrhœa in a few months.

There is one other cause of diarrhœa to which I must draw attention and that is diarrhœa from malignant disease. The operation of examining the bowel is a disagreeable one both for the operator and for the patient, and for this reason it is frequently omitted. But in all cases of chronic diarrhœa I think it ought to be done. I have known several cases in which its omission has proved very disadvantageous to the patient. In one case which I have seen a woman had suffered from diarrhœa for two years. All that time she had been under constant treatment, but no examination of the bowel had been made, and I am sorry to say that

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when I did examine the bowel I found malignant disease, which rendered colotomy necessary in about ten days. Another patient came to me for neuralgia of the perineum, and there again I found malignant disense of the rectum. Yet another patient came to me who said she was suffering from a little bilious attack and tendency to constipation. She looked so well, and all her friends said she was so well, that I did not at once make an examination; but later she told me she was passing a little mucus occasionally tinged with blood, and therefore I made an examination and found malignant disease of the rectum. Perhaps I would hardly have laid such stress upon this, but just before I came here to-day I saw a poor woman who had come to me in very much the same condition and not suspecting anything, but on examination I found there was malignant disease, and a colotomy was performed yesterday. In such cases colotomy is only capable of affording temporary relief. Whether, later, surgery will improve so far that the operation which has been done once or twice without much success will be successful one cannot say. I mean the operation of cutting a bit out of the bowel and sewing the two ends together. As a rule this has not been successful, but there is no reason why it should not be successful; and I think that if surgery advances in the next ten years as it has done during the last ten years in all probability it will be successful and that we shall save our patients' lives under circumstances where at present we are forced to say that the case is hopeless.

Stratford-place, W.

GLEANINGS FROM SURGICAL PRACTICE.

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VII.[1]—OCCLUSION OF ARTERIES THE RESULT OF INJURY.

WHEN a surgeon is called to a case of injury to a limb—and for the moment I will assume it to be a lower extremity—over the upper part of which a heavily-weighted cart-wheel has passed, or to which some other crushing force has been applied, he naturally looks to its pulses, and if he finds they are all absent below the seat of injury he as naturally asks himself in what way an artery may be so damaged by a crushing force as to bring about its occlusion temporarily or permanently. If he happens to be well up in his subject he will know that an artery by a local contusing or stretching force may, in rare instances, become obstructed by hæmorrhage into its sheath, the effused blood mechanically so pressing the walls of the vessel together as to close its lumen, and that in military surgery this condition is fully recognised. In the Army Medical Museum, Washington, United States, Specimen 2114 demonstrates its truth. He will, however, also know that by far the most common consequence of a contusing or stretching force when applied to an artery is a more or less complete rupture of its internal or of its internal and middle coats; and when the external coat of the vessel is left intact—a common condition—these ruptured inner coats recurve and, forming an obstruction to the arterial flow, favour the formation of a blood-clot in the same way as in an artery completely divided by traction, or when divided and secured by torsion hæmorrhage is known to be prevented or arrested. If the inner coat or coats of a large artery are but partially torn the obstruction will not be complete and may be only temporary; if they are wholly torn and are healthy they will recurve in a valvular fashion; if they are wholly torn and diseased they will break up irregularly; but under both conditions they will form an obstruction to the flow of blood, help to bring about the formation of a blood-clot at the seat of injury, and so permanently to occlude the vessel, in the same way, as is now so well known, that torsion brings about the same results in a divided artery. If in the case before him the surgeon finds no evidence of a ruptured vessel or that the blood which has been effused is neither in quantity nor from its position competent to act as a compressing medium with sufficient power to cause arterial obstruction; if there are no displaced bones or fragments of bones which are capable of bringing this about, he must come to the conclusion that the serious condition he has to treat is one of obstructed artery from injury of its inner and middle coats as already described. Further thought will also tell him that the danger of the case is similar to that which has to be faced in all other examples of obstructed arteries from whatever cause, and that gangrene of the part which has been deprived of its arterial supply is the chief fear. If fracture or dislocation of a bone is found to complicate the case, its dangers are neither lessened nor altered in character, although the diagnosis of the true condition of the non-pulsating artery may not be clear. Indeed, when with a fracture or dislocation there is evidence, by the absence of pulsation in the main artery of a limb below the seat of fracture, that the arterial blood current is not passing, many questions at once arise, and the surgeon asks, Is it that the vessel is obstructed by partial rupture of its inner coats, as already alluded to, and that the outer coat is still intact? Is it that the artery is torn or divided with or without its associated veins? or is it that the vessels are simply pressed upon by effused blood, arterial or venous? or by displaced bone? When there is much effusion of blood into the tissues, and this effusion is deeply placed beneath a tense fascia, as in the leg, and no pulsation can be felt or bruit heard in the swelling to suggest arterial rupture, it is quite impossible to make out with any clearness the true condition of affairs or to which of the causes mentioned the obstruction may be due. Under these circumstances the treatment of the cases must be expectant, and on looking back upon past experience, and more particularly in the treatment of fractures of the leg, I can recall very many instances of this kind in which this difficulty was present and in which an expectant attitude gave a good result. Indeed, this was the case in by far the larger proportion of cases treated, and consequently the diagnosis of the exact condition of the vessels was not made out. Where the pulsation in the tibial vessels soon returned it is reasonable to believe that the vessels were in themselves intact and were occluded by outside pressure. Where the pulsation slowly returned after the lapse of many weeks the arteries had probably been organically injured and obstructed for a time. When pulsation failed to be restored it was probable that the vessels had been partially if not wholly ruptured and obstructed. Under all circumstances, however, an expectant attitude is the right one to assume in the treatment of these cases.

Before I pass on to illustrate this subject by the quotation of cases I must add that it should not be forgotten that the inner or middle coats of an artery may be so partially torn as not to be followed by the formation of a thrombus, or as a consequence obstruction to its lumen, but that as a result of the tear what is known as a dissecting aneurysm may form by the blood current finding its way between the ruptured coats and so separating them as to give rise to this rare variety of aneurysmal disease. In still rarer cases where obstruction is not complete the force of the blood may so dilate the external coat of the injured artery as to form a sacculated aneurysm.

CASE 3. *Laceration of the inner coat of the aorta, with fracture of the spine and laceration of the jejunum.*—An example of partial rupture of the aorta came under my observation in 1873 in a patient under the care of Mr. Durham. It was in a boy aged fourteen years who was admitted to hospital collapsed and dying with some abdominal injury which had been caused by the passage of a cart-wheel over his abdomen. He died a few hours after his admission. At the necropsy a complete separation of the first lumbar vertebra with its cartilage from the second vertebra was found to exist, and the cartilage had attached to it minute portions of spongy bone where torn from the second vertebra. The upper articular facets of the arch of the second lumbar vertebra were also broken off. The jejunum was found to have been separated from the duodenum and extravasation of fæces had taken place. There was some blood effused behind the peritoneum in front of the spinal fracture, and two slight lacerations of the liver on its anterior edge. At the level of the inferior mesenteric artery the inner surface of the aorta was torn transversely for half an inch across its inner coat. What the effect of this aortic laceration would have been is a problem which cannot now be solved. It may have led to the formation of a dissecting aneurysm in the way described or to the formation of a thrombus, and possibly the tear might have been repaired.

I will now pass on and illustrate this interesting subject

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of the occlusion of arteries by the quotation of cases, and in so doing shall commence with examples drawn from injuries in the upper extremity; for I have before me the notes of four cases of obstructed brachial and one of obstructed axillary arteries. One was the consequence of a crush, but was not complicated with wound or fracture. Another was associated with displacement of the forearm and lower epiphysis of the humerus backwards. Two were complicated with fracture of the humerus, and one with a lacerated wound into the axilla. All five recovered. The first case I shall give will be one of occlusion of the brachial artery the result of a crush.

CASE 4. *Contusion of arm; occlusion of the brachial artery; recovery.*—A man aged thirty-two years was admitted into Guy's Hospital on June 25th, 1875, having had his arm crushed between the buffers of two railway trucks. On examination no bones were found to have been broken, but the whole limb was much swollen and ecchymosed from the hand to the axilla, clearly from effused blood, and there was neither pulsation nor arterial thrill in any of the arteries of the limb. The arm likewise was cold. The expectant treatment was adopted. The arm was wrapped in cotton wool, placed on a splint, and raised slightly. To it gentle pressure was applied by means of a bandage. The swelling gradually subsided. In three weeks pulsation returned in the radial artery; in six weeks the arm was comfortable, but no pulsation ever reappeared in the brachial artery. Whether the brachial artery was torn across or only obstructed in one of the ways previously described must be an open question. I am disposed to take the latter view, although in a case I shall next quote in which the axillary artery was clearly torn across an equally good result ensued.

CASE 5. *Lacerated and obstructed axillary artery in a boy aged eight years; good recovery.*—A boy aged eight years many years ago was brought into Guy's Hospital, under the care of the late Mr. Hilton, with a lacerated wound on the inner side of his arm extending into the axilla which had been caused by his falling from some height on to a spike of an iron railing. He was brought to Guy's Hospital in a collapsed condition with this gaping wound, which I had an opportunity of seeing soon after his admission. The axillary artery had evidently been torn across, for its two separated ends were visible, and the upper pulsated. There was no pulsation in any of the vessels of the arm below the seat of injury. The wound was treated as was then customary and the arm was kept warm with wool and slightly elevated. The artery was not touched. A steady repair ensued and the wound healed in five or six weeks; by that time a pulsation in the wrist was made out. In this case all bleeding was prevented by the laceration of the axillary artery, and I hold that the practice which was adopted was the right one, although every surgeon should before he adopts a like line of treatment satisfy himself that the lacerated end was secure. I have seen a case in which the superficial femoral artery was torn across in a like way associated with a severe fracture of the femur, which was likewise left to nature, and a good recovery ensued. It occurred in the practice of the late Mr. Bransby Cooper.

CASE 6. *Separation of the lower epiphysis of the humerus from the diaphysis and displacement of the epiphysis with the bones of the forearm backwards; occlusion of the brachial artery.*—A boy aged five years was admitted into Guy's Hospital on May 27th, 1878, under my care, having injured his elbow one week previously in falling down stairs. The limb was cold, swollen, and pulseless below the elbow. The forearm with the lower epiphysis of the humerus was displaced backwards, and the anterior edge of the extremity of the diaphysis was pressing seriously upon the brachial artery, which was in front. When the deformity was reduced pulsation did not return in the vessel. The limb was put into a good position and fastened in a splint after having been raised and well wrapped up in cotton-wool; everything went on well. Subsequently, on the seventeenth day after his admission, or the twenty-fourth day after the accident, pulsation returned in the radial artery, but when the child left the hospital in the sixth week no pulsation had returned in the brachial artery below the seat of injury. At that spot the vessel was clearly occluded.

CASE 7. *Compound fracture of the humerus, with occlusion of the brachial artery; good recovery.*—A woman aged forty-three years was run over on Oct. 31st, 1887, and subsequently admitted into Guy's Hospital under my care with a compound fracture of the humerus about its middle third and absence of pulsation in the brachial artery with its branches. The wound was a lacerated one, as the accident was brought about by the passage of a cart-wheel over the limb. The wound was well washed with iodine water, and dressed with iodoform gauze and mercuric wood wool tissue. The arm was put up in splints, which included the forearm, after having been well wrapped in cotton-wool, and a good recovery followed. Fourteen weeks after the accident a feeble pulsation returned in the radial artery, but the brachial vessel was permanently occluded.

CASE 8. *Compound fracture of the humerus into the elbow-joint, with occlusion of the brachial artery; excellent recovery.*—A lad aged sixteen years was admitted into Guy's Hospital under my care on May 29th, 1873, the wheel of a van having passed over his arm above the elbow. The humerus was broken above the condyles, and there were two lacerated wounds into the elbow-joint exposing the inner condyle of the humerus and olecranon process of the ulna. There was no pulsation in any of the arteries below the centre of the brachial. The wound, having been well cleaned, was sealed with lint soaked in the compound tincture of benzoin—as was at that time my general practice—and the arm was put up in splints with the forearm well covered with cotton-wool and slightly raised. Everything went on well and quick union of wounds and bone followed. Every movement of the joint was retained, but pulsation never returned in the brachial artery, although it did in the vessels of the forearm some months later. The inner and middle coats of the brachial artery had been clearly ruptured in this case by the contusing force.

These three cases may be read together, although in Case 6 the obstruction to the brachial artery was probably due to the injury it had sustained by the forward pressure of the lower end of the diaphysis of the humerus, and the other two by the same force which had produced the fracture. In all three it is to be noted that a good recovery took place, and when the cases were under care I was apt to point out that it was more than probable that their well-doing was much influenced by the fact that the amount of blood which supplied the injured parts was somewhat less than it would have been had the vessel been patent; at any rate, it may be stated that in the three cases there was no temperature worth recording and a steady convalescence.

Cases of occlusion of the arteries of the lower extremity will now occupy my attention and it need not be said that such are of a far more serious nature than are those of the upper on account of the arteries being larger. I have five examples before me which I shall briefly quote.

CASE 9. *Contusion and occlusion of the external iliac and common femoral arteries; recovery.*—A man aged twenty-six years was admitted into Guy's Hospital on June 29th, 1875, with severe bruising of his abdomen from the umbilicus downwards to below Poupart's ligament and absence of pulsation in the right femoral and external iliac vessels, with coldness and numbness of the left foot, also with pain in the lumbar region. He had passed his urine without difficulty. It seemed that the day before his admission he had fallen off a pleasure van, and that the two side wheels of the van had passed over the lower part of the abdomen when he was lying on his back. He was treated by slight elevation of the injured limb, which was wrapped in cotton wool and placed in a splint. On the fourth day warmth had returned to the foot and feeble pulsation was felt in the anterior tibial artery. On the seventh day the whole limb was warm, and in five or six weeks the limb was natural, although the pulsation in the tibial arteries was not so strong as it was in the normal leg, and there was no pulsation in the external iliac or common femoral vessels.

CASE 10. *Ruptured popliteal artery; occluded artery.*—A man aged thirty-two years applied to Guy's Hospital on Aug. 5th, 1862, with extreme distension of his left leg up to the popliteal space and much pain. The swelling had come on rapidly when he was at work after a sudden pain and sound of a snap in his knee. He was admitted under the care of Mr. Birkett when I was his assistant. No pulsation was to be felt or heard in the arteries of the leg, but in the swelling the man felt pulsation like that of a clock. The limb was fixed on a splint, wrapped in cotton-wool, and slightly raised. In a few days the swelling began to subside and pain to diminish. On the fourteenth day the sensation of pulsation ceased and the swelling steadily diminished. At the end of three weeks the articular arteries about the knee were clearly enlarging and convalescence was soon re-established. Four months after leaving the hospital he reappeared with a deep abscess in the posterior and lower part of the left thigh.

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When this was opened much broken-down blood escaped with pus; a good recovery followed. There was, however, no pulsation to be felt in the bloodvessels. The abscess was doubtless due to the breaking down of blood which had been effused at the time of the original accident and had not been reabsorbed.

CASE 11. *Fractured pelvis with obstruction of the external or common iliac artery; recovery.*—A man aged fifty-three years came under my care in 1873 after a severe hunting accident he had sustained two weeks previously in a fall from his horse with his horse on him. After the accident he passed much blood from the urethra and had to be relieved by the passage of a catheter. Any movement of the pelvis caused great pain, and this pain passed down his right leg, which was cold and numb. The scrotum was much swollen with the whole of the right groin and the lower part of his abdomen. When I saw him two weeks after the accident blood was still flowing from the urethra, but not from the bladder, and the passage of a catheter was easy. The right lower extremity was cold, pulseless, and swollen. The scrotum was much ecchymosed and the right ilium was evidently fractured from the anterior third of its crest downwards through the brim of the pelvis. No pulsation could be felt in the right external iliac artery as high as could be reached. A catheter was passed and fixed in; a bandage was secured round the pelvis after some strapping had been applied to fix the broken bone, and the right lower extremity was wrapped in cotton wool after it had been rubbed with the hand upwards when slightly elevated. It was then laid upon a splint with its lower end raised. Everything subsequently went on well. All urethral hæmorrhage ceased and swelling of the parts subsided. In six weeks the tibial vessels were felt pulsating and in another three the superficial femoral artery was evidently open. After convalescence was established no pulsation was ever detected in the external iliac or common femoral artery. In 1890, seventeen years after the accident, when the patient was seventy years of age, he married and was in excellent health. He would not admit that his right leg was colder than the left.

CASE 12. *Fracture of the pelvis; occlusion of the external iliac artery; gangrene of the foot and leg; amputation; death.*—A man aged twenty-one years was admitted into Guy's Hospital under my care on Feb. 15th, 1892, after having been knocked down by a piece of falling timber striking him on the right hip. When seen his hip and whole right lower extremity was much bruised, the discolouration including the right side of his pelvis and right iliac fossa. The ilium was fractured through the right pubic portion and the right iliac artery was evidently obstructed from the absence of all arterial pulsation in the vessels of the limb. In spite of careful treatment gangrene ensued and on March 14th, one month after his admission, amputation at the knee-joint was performed. The man, however, died on the 25th, eleven days later, from septicæmia. After death it was found that fracture of the pelvis had extended into the hip-joint. The external iliac artery at a point corresponding to the fracture of the brim of the pelvis was obstructed, the internal and middle coats of the vessel having been ruptured by some over-extension of the artery by the broken bone. The external coat was intact; within the artery, besides the recurved inner coats, there was a firm blood-clot above and below the injured part.

CASE 13.—*Fractured pelvis through the thyroid foramen; occlusion of the iliac artery; rupture of the urethra and partial rupture of the bladder.*—A youth aged twenty years was admitted into Guy's Hospital on July 17th, 1876, under the care of Mr. Forster, after having been crushed between the buffers of two railway carriages. When admitted there was an elastic, non-pulsatile swelling above the right Poupart's ligament, an absence of pulsation in the right femoral artery and its branches, a cold right foot, and a scalding pain down the right knee and leg. There was a wound close to the rectum through which a finger could be passed up to the symphysis and there was a large blood-clot in the rectum, but no wound could be felt in it. No fracture was then made out. The urethra was clearly ruptured and as a catheter could not be passed through the penis the perineum was laid open and the bladder emptied, its contents being like coffee grounds. The patient died thirty-six hours after the accident. At the post-mortem examination a fracture was found to have passed through the right pectineal eminence into the thyroid foramen, and a second through the ramus of the ischium. The symphysis pubis was separated and the coccyx transversely fractured. The urethra was torn across and the peritoneal coat of the bladder ruptured. The right external iliac artery for two inches was much bruised, and in slitting it up a clot was found in its interior. The two inner coats of the vessel had been ruptured and were curled up occluding the vessel. The external coat was intact.

In the last three cases it may reasonably be assumed that the external iliac artery was in each obstructed by the overstretching of its coats upon a broken fragment of the pelvic bones. Indeed, in all cases of fracture of the pelvis the fear of this complication should ever be in the mind of the surgeon who has charge of the case; in Case 11 this fact was at first overlooked, and it was only when the effects of the injury showed themselves that I was consulted. Happily the case did well.

THE TREATMENT OF OCCLUDED ARTERIES.

That the ultimate consequences of an obstruction to a large artery of an extremity will greatly depend upon its treatment is a truism to which every surgeon should be alive, for it should be fully recognised that any want of appreciation of the requirements of a case of this nature is sure to be followed by injurious if not fatal consequences, whereas with due care good results may often be secured to both limb and life. A limb when suddenly deprived of its arterial blood-supply is more liable to become the subject of gangrene than when the process has been of a more gradual nature; primarily, from the sudden deprivation of its tissues of their natural nutriment—the blood: and secondarily from the blood stasis which invariably follows the accident, either as a consequence of the simultaneous injury to the accompanying veins of the injured artery or from the loss of the *vis a tergo* normally supplied by the heart through its arterial system, as well as of all the other forces which favour the venous flow,—the malposition of the affected limb after the accident, and particularly its dependent position, with want of care in other ways in its treatment, having a powerful influence on the result. The object of the surgeon in the treatment of any case of this kind is consequently to encourage in all ways the arterial as well as the venous circulation of the limb, and particularly to guard against anything like blood-stasis in the tissues. With these views he must place the limb—say the lower extremity—upon a splint to keep it quiet, after it has been carefully rubbed upwards and gently kneaded to encourage the flow of venous blood through the muscles and deeper parts, and care must be observed that this splint with the limb upon it is raised sufficiently, but not more than sufficiently, to help the return of venous blood to the heart, but not enough to interfere with the supply of arterial blood through the new arterial channels which have to be enlarged to compensate for the obstruction of the main vessel. The foot should consequently be not raised more than one or two inches higher than the knee, and the knee than the hip. To do more would militate much against the arterial supply becoming sufficient for the nourishment of the limb, and to do less would encourage blood-stasis. The limb from being deprived of its warm arterial blood-supply being cold requires warmth, but if this be supplied suddenly or at a too high degree more harm than good will follow its application, for by excess of warmth blood will be drawn to the part when the power of the tissues to pass it on is lost or almost lost, and the blood-stasis, which is so much to be dreaded, is thereby encouraged. The warmth should consequently be applied to the limb cautiously and not till the venous circulation of the limb has been helped by gentle rubbing upwards and kneading the deeper tissues with the warm hand, below the seat of injury. Subsequently the limb should be swathed in cotton-wool, several layers being used, and the whole be bound together with a flannel bandage, gentle pressure being applied by means of the bandage.

The general treatment of the case should be based upon the same requirements; everything like over stimulating should be avoided and simple nutritious food given. Wine and spirits must be administered with great caution. Should gangrene follow in spite of right treatment, amputation will be called for, but such a measure should not be hastily undertaken; indeed, it should not be performed until some indication is afforded to the surgeon of the extent to which the gangrene is likely to spread; until, in fact, some kind of line of demarcation can be made out, and then the amputation should be undertaken well above this line in healthy tissues.

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In a case of this kind amputation need not, however, be performed so far from the line of demarcation as it is expedient to act in cases of senile gangrene, for in this latter affection the vessels of the limb are known to be diseased, whereas in those now under consideration the vessels in all probability are sound except at the seat of injury. If septic changes take place in the limb surgical interference may be hastened; but if the limb has been rightly treated and well raised it will probably wither up and become dry, whereas if the limb has become swollen and œdematous from blood stasis, from whatever cause, septic changes are sure to show themselves. Under the former circumstances, where the gangrene is of a dry form, delay is to be sanctioned; under the latter, where it is of the moist form, surgical interference will not only be called for at an early period, but have to be carried out under the most unfavourable conditions.

In the treatment of cases of fracture, simple or compound, complicated with obstructed arteries, an expectant attitude should, as a general rule, be observed, for in the majority of cases of this kind the limb is sufficiently well nourished to undergo repair and for good union of the bones to take place. It is in exceptional cases alone that gangrene follows and amputation is called for. Before I conclude this article I propose to quote the brief notes of seven cases, in each of which at some antecedent period a large artery had been obstructed by surgical methods and recovery had followed. The cases came before me for some independent surgical operation and speak for themselves. It is to be regretted that the reports are not as complete as could be wished, but they are worth recording even as they are.

CASE 14. *Ligature of the common carotid artery three years before.*—In 1863 a man came before me with a thecal abscess. He was in good health and had been so since Jan. 3rd, 1860, when the late Mr. le Gros Clarke had ligatured his common carotid artery for a wound into it, the result of a stab, at St. Thomas's Hospital.

CASE 15. *Ligature of the common carotid artery twenty years previously.*—In 1881 a man aged forty-one years was admitted into Guy's Hospital under the care of Dr. Wilks for tetanus, from which he died. Twenty years before—that is, in 1861—he was in the same hospital under Dr. Wilks for a sloughing throat, which was complicated with such arterial hæmorrhage as to call for the application of a ligature to the left common carotid artery by the late Mr. Cooper Forster. He rapidly recovered after the operation and had worked at his trade in good health ever since. At the post-mortem examination made by Dr. C. H. Fagge the left carotid was found to be small but easily dissected out, and retained the appearance of the artery externally. It was occluded by a firmish, delicate coagulum, which blocked the channel from the bifurcation into external and internal to one-third of an inch from its origin at the aorta. Its lower end was channeled for a line or so by a canal which showed when the lower end was inspected a central depression, but it did not go anywhere, although by its appearance it was expected that there had been a restoration of the canal (canalisation). The clot was of a delicate nature, and when the artery was opened and the clot separated from it there was very little coagulum left, a thin end of brownish colour and somewhat delicate consistency remained, which was more like connective tissue than clot. It was worthy of note, too, that the artery-wall looked quite healthy when the clot had been removed from it. It was thrown into longitudinal folds from contraction upon the contents, which insufficiently distended it. The coats still possessed, apparently, the yellow, tough consistency of arterial coat. The internal carotid was blocked in a similar manner to the common carotid, but the plugging was less complete, and Dr. Fagge was disposed to think that there had been some restoration of its circulation through the external carotid. At all events the common carotid had a small free passage into the internal carotid at the bifurcation, and the clot in the internal carotid was of such tenuity that he could not say the artery was quite blocked. A delicate coagulum extended as far as the base of the skull. The internal jugular vein seemed to be very small, not so large as the normal external jugular.

CASE 16.—*Fracture of the thigh in a man who had not completely recovered from a hemiplegic attack six years previously and had had his subclavian artery ligatured twenty-nine years previously for aneurysm.*—In 1855 a man aged sixty-four years was admitted into Guy's Hospital under the care of Mr. Birkett with a fracture of his right femur, which united well. Twenty-nine years previously he had had his subclavian artery tied for axillary aneurysm at St. Thomas's Hospital and was in good health subsequently up to six years before his admission into Guy's Hospital, when he had a fit and became hemiplegic on the right side—the side of the fracture—from which he never completely recovered.

CASE 17. *Death from rupture of an abdominal aneurysm in a man who about six years previously had been cured of a popliteal aneurysm by pressure.*—A man aged thirty-four years came under my care in December, 1880, with an abdominal aneurysm and also a popliteal aneurysm in his right lower extremity. He died suddenly soon after his admission from a rupture of the abdominal tumour. He had been under my care about six years previously for a popliteal aneurysm in his left leg and was cured by means of digital and instrumental pressure. He had been working at his trade up to a few days of his death. At the post-mortem examination much blood was found in the peritoneal cavity, and from the anterior wall of the abdominal aorta, between the renal arteries and involving the mouth of the cœliac axis and the superior mesenteric artery, there was an oval aperture leading into a thin-walled sac which was about the size of an orange; in its upper part this had ruptured. The specimen of the artery was removed for subsequent examination by the then registrar, Mr. Symonds.

CASE 18. *Thoracic aneurysm following the cure of a popliteal aneurysm two years previously by pressure.*—A man aged thirty-five years was admitted in 1881 into Guy's Hospital with an aortic aneurysm from which he died. In 1879—two years before—he had been treated by Mr. Durham for a popliteal aneurysm which was cured by pressure. The preparation, like the last, was taken away to be carefully examined, but the report has not yet, unfortunately, been completed.

CASE 19. *Case of cured aneurysm of a popliteal artery in a man who died nine months later from an aortic aneurysm.*—A man aged forty-three years was admitted in 1869 in a dying condition into Guy's Hospital from an aortic thoracic aneurysm. He had been in the London Hospital in July, 1868, and was there cured of a popliteal aneurysm by pressure. The necropsy was made by the late Dr. Moxon, and he reported that "the femoral artery at the seat of compression was quite healthy." The sac of the old aneurysm was the size of a small walnut and filled with a firmish clot of a reddish-brown colour, easily separable from the sac. The orifice into the sac was not made out, as it was in the line of section of the aneurysm.

CASE 20. *A man aged forty-seven years who nineteen and seventeen years previously had had his femoral arteries ligatured for popliteal aneurysms and had worked ever since as an orange porter.*—A man aged forty-seven years came to Guy's Hospital in December, 1860, for a sprained knee. In 1841, when he was twenty-eight years of age, or nineteen years before this note was taken, Mr. Bransby Cooper applied a ligature to his left femoral artery for popliteal aneurysm and two years later to the right femoral for the like affection. He rapidly recovered after both operations, and returned to his work as an orange porter, which he had followed up to the time of his accident.

THE SURGERY OF EMPYEMA,

WITH DESCRIPTION OF A NEW SELF-RETAINING EMPYEMA TUBE.[1]

BY CORNELIUS A. GRIFFITHS, F.R.C.S. ENG.

I SUPPOSE I may take it for granted that everyone will agree with my saying that when a patient presents the physical signs of fluid in the chest it is the imperative duty of the practitioner in attendance in the first place to find out the nature of that fluid and then to adopt measures for its removal, the particular means used being determined according to the amount and nature of the fluid present. The general physical signs of pleural effusion I need say nothing about. Concerning the differential diagnosis between serous and purulent effusion various statements have been

[1] Abstract of a paper read before the Cardiff Medical Society on Feb. 7th, 1896.

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made with reference to the conduction of breath-sounds through the fluids. In cases of empyema which I have examined I have found that this auscultatory sign is by no means constant. In some cases I have found the breath-sounds well conducted, giving high-pitched tubular breathing, while in others there has been no conduction at all or a condition intermediate, in which faint distant breath-sounds have been heard; so that from my own experience I attach very little importance to the stethoscope in the differential diagnosis of pleural effusions.

As a practical surgeon I am content to leave these diagnostic niceties and resort at once to the simple and only absolutely reliable method of clearing up the diagnosis—by removing a sample of the fluid for examination by means of an exploring needle. For this purpose one should use a needle similar to, but longer and larger in the bore than, the ordinary hypodermic injection needle. I once, several years ago, used an ordinary hypodermic needle for this purpose and have never forgotten the lesson it taught me. I was acting as locum tenens for a friend and I had a young patient with the physical signs of fluid in the chest. I proceeded to explore the chest in order to confirm my diagnosis and see the nature of the fluid. The only available needle for the purpose was an ordinary hypodermic syringe. I failed to get away any of the fluid and was naturally disappointed; but a few days afterwards the child was operated upon and relieved of a good quantity of purulent fluid from the chest. To use the same needle and syringe one time for exploration and another for hypodermic injection is an unjustifiable practice which I think cannot be too strongly condemned. It is unfair to one's patients to give them injections from a syringe which may have recently had foul pus in it, no matter how much one may have tried to clean it, and it is bad surgery to use the small needle.

In order to save carrying about more than one syringe I have adopted a plan which is at once simple and satisfactory. In my pocket hypodermic case I carry a large (exploring) needle which can be attached to the hypodermic syringe, but for purposes of exploration I intervene between needle and syringe a small piece of glass tubing, attached at either end by means of a little rubber tubing to the needle and syringe. The nature of the fluid can be seen when it reaches the glass tube, so none need reach the barrel of the syringe. The whole thing goes into my waistcoat pocket. If fluid is not found at the first puncture the needle point should not be wobbled about in the chest; the depth may be varied, as the pleura may be thickened, or the needle should be withdrawn and reinserted in another place.

The diagnosis of empyema being completed the question of surgical treatment should be at once considered. No good can possibly come of delay, and although we do occasionally meet with patients who have recovered after discharging an empyema through the lung they should be regarded as cases recovered in spite of neglect rather than indications favouring an expectant treatment of empyema. Delay also favours compression, perhaps hopeless collapse of lung, which, by reason of its structure and anatomical relations, is bound to give way and shrink before an increasing collection of pus. A neglected empyema, if it does not discharge through the lung and air passages, may point between the ribs or escape through or by the side of the diaphragm. The front of the chest at the fourth or fifth interspace is said to be the favourite place for an empyema to point. I have seen that part selected, but have also operated on one pointing just below the angle of the scapula. Various other situations are met with, and one case of an empyema discharging at the umbilicus is recorded.

The choice of operation for the relief of empyema lies among the following: (1) aspiration; (2) syphonage; (3) simple incision with insertion of a drainage-tube, and with or without counter incision; and (4) incision with resection of a portion of one or two ribs and drainage. I have had no experience of the first two methods—namely, aspiration and syphonage. I know they have many advocates, but I prefer treating a collection of pus in the pleural cavity on the same general principles that are applied to similar collections in other parts of the body—viz., giving free exit at once to the pus that is present and providing free drainage for what may follow.

A great deal has been said concerning the best place for making the incision; here, again, I prefer following the general surgical rule and make my incision in the most dependent position; and taking into consideration the somewhat barrel-shaped outline of the chest [illegible] the fact that patients generally prefer to lie upon the ba (not upon the affected side as much as is stated), I usual select the eighth or ninth interspace just outside the line the angle of the scapula. Localised empyemata must course be treated upon their own grounds.

Shall we or shall we not resect a portion of rib? is a questi which has given rise to a great deal of controversy. I thin the advantages gained by resection are quite sufficient justify the proceeding. The chest cavity can be explore masses of lymph removed, and better drainage secure I have often seen great difficulty experienced with t drainage-tube after the operation of simple incision wh the tube has been pushed out, as is so frequently the cas or has been withdrawn for cleansing or some other reas The ribs which have fallen together after evacuation of t pus—or the valvular nature of the opening, or, perhap both—afford an obstacle to the reintroduction of t tube, which causes a great amount of unnecessa suffering to the patient and annoyance to the su geon. This is easily avoided by removal of an inc of rib. One of the recent cases upon which I ha operated with resection has helped to convince me of t superiority of this operation over that of simple incisio After removing some rib in the usual sub-periosteal meth and then opening the pleura I introduced my finger an felt a quantity of loose semi-solid matter in the cavity with a pair of forceps, guided by my finger in the chest removed quite a double handful of this coagulated lymp I cannot help thinking that if I had simply incised and p in a tube I should have had considerable trouble by blockag of the tube, and that the patient would have made only tedious recovery. As it was the temperature fell to norma the evening of operation and the patient was about with t wound healed early in the second week. I do not thin much weight attaches to the objections raised again resection; the time need be very little prolonged beyon that occupied in simple incision, and the loss of an inch rib will not be seriously felt. The increased risk of pyæm infection through the cut ends of the rib is, I think imaginary rather than real. Adhesions that may be felt the chest should not be interfered with; their rupture migh be attended by hæmorrhage and perhaps serious injury lung substance, and their presence may help to preve collapse of the lung. I am not in the habit of irrigatin the cavity unless the pus is very flaky; no fluid should forced into the chest. Counter-openings are not necessar and loculated empyemata are better treated by separa incisions rather than by breaking down dividing partitions.

Hitherto I have used for drainage a rubber tube wi a mackintosh guard. I now venture to introduce a ne pattern which Messrs. Down Brothers have made for m from a model which I sent them. The tube is a metal co it has a shield at its outer extremit and at its inner end there are a coup of retaining flanges which are to b opened out when the tube is in sit This is done by simply turning th handles seen upon the face of th shield. These serve the double pu pose of handles and indicators of th position of the flanges, as they pos in the same direction, one flange an one handle being attached to the en of a revolving rod or axle running th length of the tube. The flanges ma be turned through one or two rig angles, as may be desired. No har can happen to the lung by openin and closing the flanges, as they easi revolve between the parallel viscer and parietal pleural surfaces, and the shield is protecte against the tube being driven inwards. The invention wi I hope, prove a useful one. I am indebted to Messrs. Dow Brothers for carefully carrying out my instructions a turning out a neat, well-finished instrument.

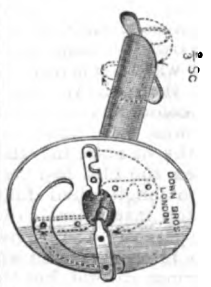

FIG. 1.—Self-retaining Empyema Tube (open).

Cardiff.

SUPERANNUATION GRANT.—Mr. Albert B. Dy M.R.C.S. Eng., has been awarded by the Brentford Board Guardians a superannuation allowance of £128, based upo his salary, supplemented by an additional annuity of £5 on his resigning the medical officership to the Workhouse Infirmary.

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HE FLUID CONTAINED IN OVARIAN CYSTS AS A MEDIUM FOR THE CULTIVATION OF THE GONOCOCCUS AND OTHER MICRO-ORGANISMS.

BY FREDERICK J. McCANN, M.B., C.M. EDIN., M.R.C.P. LOND.,
YSICIAN TO OUT-PATIENTS AT THE SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.

Two years ago it occurred to me that some use might be ade of the fluid contained in ovarian cysts as a medium for e cultivation of micro-organisms. I was specially anxious devise a ready method for the cultivation of the gono-ccus, as the difficulty of growing this organism outside e human body has deterred the usefulness of Neisser's dis-very as a clinical test. After repeated trials I succeeded obtaining a medium of good transparency on which the nococcus was successfully cultivated.

Method of obtaining the fluid.—It is necessary to obtain ecimens of fluids which are fairly clear; at the same time ntamination with blood should not prevent the fluid being ed. Modern antiseptic precautions during abdominal erations render the collecting of the fluid less difficult. ie trocar used to tap the cyst should be sterilised by iling. The first portion of the ovarian fluid being rejected e remainder is collected in tall cylindrical glass jars, known bacteriologists as "blood jars." These glass jars, which e provided with an accurately fitting glass stopper, are st cleansed with a 1 per cent. solution of mercuric chloride llowed by absolute alcohol. The stopper should be smeared th vaseline containing corrosive sublimate to prevent it coming fixed and to exclude atmospheric dust from the r and its contents. The fluid collected in the jars should allowed to stand for twenty-four hours in a cool place—g., an ice safe—when any sediment will have been de-sited at the bottom. It will be well to boil a portion of e fluid in a test-tube in order to determine the proportion of bumin. If the fluid turns solid on boiling it will prove a od medium. As the proportion of albumin in cystic con-nts varies considerably it is specially needful to adopt this ecaution.

Method of preparing the medium—The fluid having been oled as described the supernatant portion is removed by eans of a sterilised pipette and transferred to sterilised test-bes provided with a sterilised cotton-wool stopper. The test-bes are then placed in a slanting position in an incubator, nich should be kept at a temperature of from 66° to 68° C. r four hours. After four hours the fluid is of gelatinous nsistence and good transparency. This method is prefer-le to that of running the temperature up gradually until lidification occurs, as the latter requires very careful tching and the risk of destroying the transparency of the edium is greater. If careful precautions be taken when e fluid is collected preliminary sterilisation will not be cessary. It is well, however, to test the sterility of the edium before use by keeping the tubes in an incubator at °C.

Method of cultivating the gonococcus.—It will be found that e gonococcus grows better when little mounds of pus are aced on the medium instead of streaks or punctures. The oculated test-tubes should be placed in a glass vessel half led with distilled water and provided with a well-fitting ass plate. The object of the distilled water is to moisten e air in the vessel so that the surface of the medium is pt in a similar condition. The glass vessel containing the st-tubes should be placed in an incubator kept at from 30° 34° C. The cultures thus obtained, after twenty-four to nty-eight hours, are very thin, scarcely visible, greyish-llow by reflected light, the surface smooth and moist, the ges diffusing into the surrounding medium which is not uefied. Re-inoculations can be made and the cultures opagated through several generations. The essential fficulty in the cultivation of the gonococcus exists in the pid overgrowth of this organism by other pus organisms. ould such an overgrowth occur the gonococcus may be parated by successive re-inoculations until a pure culture is tained.

Microscopic examination of the culture.—For this purpose a rtion of the culture is removed on the point of a sterilised atinum needle and transferred to the surface of a cover ass, another cover glass is superimposed, and the two pidly separated. After drying the cover glasses may be stained with fuchsin as described in a paper by the author published in the West London Medical Journal.[1] Examination under the microscope shows that gonococci only are present, which can be verified by the use of Gram's method.[2]

The utility of this medium.—In addition plate cultures can be made. To economise the amount of fluid used a mixture with agar agar may be employed as with blood serum. Further experience will show whether the medium prepared as described will prove equally efficacious for the cultivation of other micro-organisms.

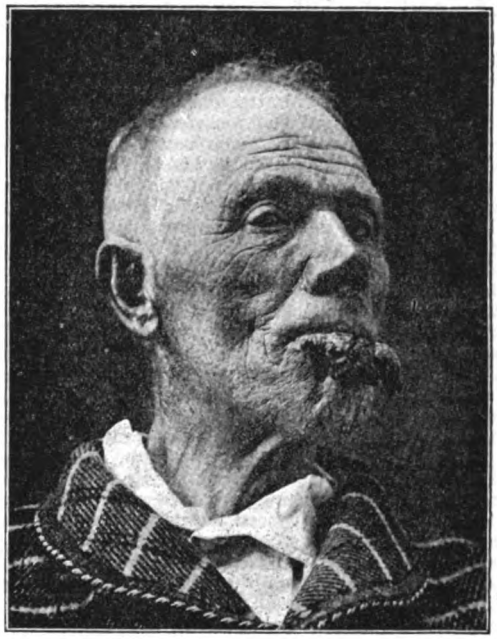
Curzon-street, Mayfair, W.

A CASE OF WART HORN OF THE LIP.

BY H. A. LEDIARD, M.D. EDIN., F.R.C.S. ENG.,
SURGEON TO THE CUMBERLAND INFIRMARY.

GROWTHS known as wart horns are rather matters of curiosity than of special pathological interest, as there is probably not much more to be said of their history or clinical features. The face and head are the commonest sites in which they are found, but I remember having seen one of small size on the shin of an elderly person, and when visiting Mr. Hutchinson's museum in 1894 I saw a recent specimen of an immense wart horn which had been removed from the leg. On referring to Dr. Crocker's Treatise on Diseases of the Skin under the heading of Cornu Cutaneum (p. 361) it is stated that the analysis of some collected cases shows that nearly half the horns occur on the hairy scalp, forehead, or temples, about one-fifth on the rest of the face and especially the nose. No mention is made of the origin of a horn from the lip, and the case I am recording may possibly be of some rarity and worthy of a brief notice. The photograph was taken by Dr. Eves, house surgeon, and from his notes I extracted the following particulars.

A platelayer aged sixty-nine years was admitted into the Cumberland Infirmary on July 24th, 1895. The patient, a



healthy old man, had had a growth on the lower lip for four years. It had caused no pain and commenced as a wart and grew gradually. At times pieces fell off, but there had never been any bleeding. Considerable annoyance, however, was created on account of the offensive smell given off. From the illustration the whole of the lower lip will be seen to be occupied by a large warty excrescence, which at one corner has developed into a large wart horn of considerable bulk. The lip was somewhat everted from the weight of the excrescence, and the origin appeared to be from the mucous surface. There was no naked-eye appearance of epithelioma,

[1] The Diagnosis of Gonorrhœal Inflammations, West London Medical Journal, April, 1896.
[2] Fortschritte der Medecin, 1884, No. 6.

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but since, according to Lebert, epithelioma develops in 12 per cent. the lip was removed with a margin of sound skin around the growth and healed subsequently without trouble. There was no glandular affection and no sign or history of syphilis. I made no section of the lip, as it was preserved for museum purposes. Like most platelayers the patient smoked much.

Carlisle.

CASE OF SEVERE HEAT-STROKE; RECOVERY.

BY J. W. CRAWSHAW, M.B., CH.B. VICT.,
LATE SURGEON, OCEAN STEAM NAVIGATION COMPANY.

IN THE LANCET of April 4th Mr. P. J. Atkey reported a case of severe heat-stroke in which the temperature reached 108·2° F. and the patient recovered without any ill effects. In May, 1894, while acting as surgeon on board the Ocean Steam Navigation Company's s.s. *Pyrrhus* I had a somewhat similar case, which recovered very rapidly. The following account of the case is taken from my entries made at the time in the surgeon's log-book.

On May 28th, 1894, while in the Indian Ocean some 300 miles to the westward of Ceylon an English youth aged seventeen years was taken ill. He had been working nearly the whole day directly exposed to the heat of the sun. He never complained of any illness, but at 4.30 P.M. he was noticed to stagger and fall. Some of the men went to his assistance, found him very ill, and at once sent for me. I found him quite conscious, and he complained of violent headache and pains in the back and limbs. His skin was very hot and dry and his pulse was very rapid, full, and bounding. I placed my thermometer beneath his tongue, but by the time the temperature was taken he was quite comatose. The thermometer registered 108°. The method I adopted to reduce the temperature was very rough and simple, but proved very effective. I had the lad stripped as rapidly as possible and laid on the deck. A large piece of ice was placed to his head and sea water was brought in buckets and dashed over him in an almost continuous stream. After about twenty minutes of this treatment the temperature had fallen to 103° and the lad had recovered consciousness and expressed himself as feeling much better. The douching was discontinued, he was placed in his bunk and given hot tea to drink. A powder consisting of five grains of calomel and twenty grains of antipyrin was given. An hour later I found the patient's temperature had again risen to 105° and he was very drowsy. He became unconscious again and had a violent convulsion. The cold douching was recommenced in the same manner and continued for some time until the temperature fell to 100·4°. He again recovered consciousness and was placed under awnings on the hatch, where he was much cooler than in the forecastle. He felt much better and was able to partake of a little milk food. The temperature afterwards rose to 103°, but no higher. The skin continued hot and dry and a diaphoretic mixture was given. He passed rather a restless night, but on the next morning, the 29th, he felt fairly comfortable. His temperature was 101°. He had micturated very frequently during the night and the skin was still very dry. The bowels had not been moved, so two ounces of mistura sennæ composita were given. At 9 P.M. the temperature was normal. On the 30th he was much better. The temperature was normal the whole day and the skin moist. The bowels were well opened. On the 31st he felt quite well. He had no headache, dizziness, or other unpleasant symptom, and was allowed to resume his work. Throughout the remainder of the voyage he remained perfectly well, but was careful not to expose himself to the sun.

I can quite endorse all that Mr. Atkey says about the good chance these cases have on board ship. The surgeon cannot be far away and ice and water at a suitable temperature are plentiful. Much delay in a case like the above would greatly diminish the prospects of recovery. From the time when the patient was first noticed to be ill to the commencement of the douching ten minutes could not have elapsed, and it was undoubtedly this prompt treatment which saved his life. Dr. Wales of Canton was on board at the time and his experience of these cases was of great assistance to me.

Broadbottom, Cheshire.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et m borum et dissectionum historias, tum aliorum tum proprias colect habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Mor* lib. iv. Proœmium.

LONDON HOSPITAL.

A CASE OF CHRONIC INVERSION OF THE UTERUS; CIRCU SCRIBED SLOUGHING CAUSED BY AVELING'S REPOSITOR; SUBSEQUENT REDUCTION.

(Under the care of Dr. HERMAN.)

THERE appears to have been some uncertainty about th cause of the inversion in this case, and it is not possibl now to say definitely what produced it. The treatment b Aveling's repositor was effectual as it has proved in so man cases recorded in our columns, but in this instance it pro duced a limited slough of the uterus. There are two impor tant points to bear in mind when applying continuous elasti pressure for inversion: the pressure must act in the line o the axis of the inverted uterus and likewise of the axis of the pelvic brim and there must be effective counter pressure. Again, the pressure must be carefully regulated and the apparatus replaced in position as often as the restlessness of the patient makes it necessary. If these precautions are taken the inversion will usually be reduced in a few days, although in one recorded instance reduction was not effected for three weeks. For the notes of this case we are indebted to Dr. G. H. Cowen, resident accoucheur, and Mr. E. C. Davenport, clinical clerk.

The patient, aged thirty-one years, was admitted on Dec. 31st, 1895. She said that she had always enjoyed good health until her last confinement five month ago. On this occasion (the seventh) the child was a large one and was delivered by forceps. Mr. Alexander of Bromley, E., who attended her, stated that he noticed no inversion at the time, although he gave a uterine douche after delivery. He did not see her again until the day before her admission to the hospital. The patient said that she got up on the eighth day after delivery, and while the bowels were acting "the womb came down." She replaced it herself, but lost a good deal of blood. She had no further trouble for three weeks. Then the womb "came down" again. After this she had no inconvenience except a watery discharge until a fortnight before admission, when she had severe floodings. She went to a medical man who tried to get the womb back, but failing to do so advised her to go to the hospital. She had nursed her child until three weeks before admission. On vaginal examination there was found to be a round swelling about the size of a Tangerine orange projecting into the upper part of the vagina. It presented no opening. The sound could not be passed up by its side, nor could the body of the uterus be felt bimanually in its proper place. The urine was alkaline and ammoniacal, with a deposit of pus and phosphates. There was no other sign of disease. On Jan. 6th, 1896, Aveling's repositor was applied. Its pressure caused much pain and made the patient restless, for which reason, probably, it slipped off the fundus. Between the 6th and 20th it was frequently applied, but each time was found to soon slip off without reducing the inversion. On the latter date it was found that there was much greenish, offensive discharge, and on this account the repositor was discontinued and an antiseptic vaginal douche given every six hours. On Feb. 11th the discharge had almost ceased. On examination the inversion was found to be less complete than at first, and a loss of substance could be felt at one part of the fundus. The repositor was reapplied. On the 12th the fundus uteri was in the normal position and there was no discharge. On the 20th the patient was discharged well.

Remarks by Dr. HERMAN.—The uniform success of Aveling's repositor in the treatment of chronic inversion of the uterus makes it important both to strengthen the evidence that this treatment of the rare displacement in question is the right one, and to publish cases which aid sound judgment as to the

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possible ill results of the use of the instrument. Here local sloughing resulted from its pressure; but when the pressure was discontinued and suitable treatment employed the slough was separated, the part brought into a healthy state, and then the instrument was reapplied with success. The cause of the inversion was in this case a mystery, as the patient had not been under medical observation during the time between her delivery and her admission to hospital. Communication with the medical man who attended the patient in labour seemed to make it certain that the inversion was not puerperal. There may have been a fibroid which dragged down the fundus and was spontaneously separated before the patient's admission. But as no fibroid was seen this is only a conjecture.

SHEFFIELD GENERAL INFIRMARY.

A CASE OF EXTENSIVE WOUND OF THE ABDOMEN.

(Under the care of Mr. ARCHIBALD CUFF.)

OF the many painful methods devised by man for self-destruction that of abdominal section is surely one of the most curious; and that it may not always prove an effectual means to an end the following case will show. In the instance of a stab wound of the abdomen a surgeon may have a little hesitation before he decides whether he will operate or not, but with a condition such as is described below there is no question as to the need of surgical interference. The indications are clear and cannot be mistaken. It is necessary to act in these as in all wounds: to arrest hæmorrhage, to cleanse the wound efficiently, &c. But beyond the immediate arrest of any hæmorrhage it may be possible to do little until the patient has somewhat recovered from his shock. This case well illustrates how the various difficulties may be successfully overcome. Extensive injuries such as this are not very common, but we may refer to others of comparatively recent occurrence which somewhat resemble it. Langenbuch[1] had a young man under his care who had been severely wounded in the abdomen by a waggon pole. The exposed intestines were much soiled and bruised; in some places the muscular and serous coats were lacerated. The intestines and peritoneum were carefully cleansed and the wound was closed, the patient making a good recovery. Stimson[2] treated a youth aged eighteen years who had been stabbed below and to the right of the umbilicus. There was a considerable quantity of blood in the peritoneum and three wounds of the intestine, two wounds of the omentum, and one of the mesentery. The patient recovered after operation and suture of the various wounds. Dr. Clark[3] has recorded a recovery after the removal of one-third of the omentum. The abdominal wound was five inches long, and the entire small intestine with some of the omentum and colon protruded. A quantity of shavings was found in the omentum. The patient was quite well three years after the operation. After a large wound such as that encountered in the present case, especially considering the direction of the incision, we must anticipate the eventual formation of an abdominal hernia; this does not, however, alter the fact that the man's life was saved by the skilled treatment of those under whose care he was in the infirmary. For the notes of the case we are indebted to Mr. Archibald Cuff, resident medical officer, under whose care, by the courtesy of Mr. G. H. Shaw, senior surgeon to the institution, the patient was.

A man thirty-three years of age, when attired only in his rather dirty shirt, drew a razor horizontally across his abdomen on the morning of March 15th. The resulting wound, commencing on the left as far out as and about one inch above the anterior iliac spine, and ending on the corresponding spine of the opposite side, completely severed all the abdominal muscles in its entire length, the peritoneum being cut through for the middle five and a half inches. This happened about 9.45 A.M. The man on being found unconscious was sent to the infirmary, arriving about 11 A.M., when the wound was found to gape widely, the recti muscles having retracted considerably; the intestines were almost wholly lying outside the body, in which condition they had been, at any rate, whilst the patient was in the cab which brought him. His condition at this time appeared to be desperate, the collapse being extreme: the breath was taken in sighing gasps at intervals, the pulse was imperceptible at the wrist, and the skin was cold and clammy to the touch. The intestines were protected with large marine sponges wrung out of a 1 in 2000 solution of mercury perchloride and efforts were made to revive the patient. A hypodermic injection of one-twentieth of a grain of strychnine was given, and as it was considered, from the quantity of blood clot lying upon the intestines and in the pelvis and from the general state of the patient, that the hæmorrhage had been severe, infusion of normal saline solution was thought to be indicated. This was quickly done by Mr. Rutherford, and about thirty-six ounces of fluid at a temperature of 108° F. were infused into the patient's system by way of the median basilic vein. The reaction to this treatment was prompt, the pulse becoming full and countable and the respiration, though shallow, more frequent and regular, and the patient showing by his movements that he did not quite appreciate the efforts that were being made. During this time the skin of the abdomen was disinfected to some slight degree by being scrubbed with a 5 per cent. solution of carbolic acid and the wound was surrounded with sterilised towels. The intestines, which up to this point had been protected with flat sponges, were now examined to ascertain if they had sustained any injury, but happily none was found; they and the pelvis, which contained a good deal of blood clot, were then cleansed and swabbed with the perchloride solution and the peritoneum dried as thoroughly as possible. At this stage the severed epigastric arteries began to bleed, and all four ends were secured and tied. The peritoneum was then brought into apposition with fine silk sutures, and after this the various layers of the abdominal wall were brought together with the same material. The greatest difficulty in this part of the proceedings was associated with the endeavour to bring the ends of the recti and their sheaths into apposition, the strain upon the sutures being very great. Finally, silkworm gut was used for the cutaneous sutures. After plentifully sprinkling the wound and its neighbourhood with iodoform the usual dressings were applied. The iodoform was not used from any idea of its antiseptic properties, about which some people are now rather sceptical, but on account of its very useful property as a powder of absorbing discharge and so leaving an arid and inhospitable dwelling-place for any cocci which might come out of the neighbouring hair follicles unscathed when the storm of antiseptics should have passed over. The hopes in this direction were quite fulfilled, for the gut stitches were removed on the tenth day, the skin wound having healed by first intention, and with the exception of a small abscess in connexion with one of the deep stitches in the angle of the wound which developed later all continued to progress favourably. The patient's after-history is briefly as follows. On his removal from the table collapse, though to a lesser degree, was again apparent and was met by a rectal injection of a pint of hot coffee, by the administration of more strychnine, and by brandy given by the mouth. He quickly rallied and the pulse-rate and temperature, which were then 140 and 97°, became more favourable, and at 6 P.M. were 118 and 102° respectively. The patient perspired profusely. From this time he never retrogressed, the temperature falling and remaining at a fairly normal level for the next ten days, when it rose to 100·8° on the occurrence of the small abscess and then gradually fell again. As regards treatment, the bowels were kept open with copious enemata given on the first, second, and fourth days. This was regarded as being very important in order not to allow any stagnating fæces to remain in contact with walls whose peritoneum might be weak in protective properties. Up to late on the first evening only warm water and a little brandy were allowed to be given. After this, milk well diluted, meat juice, ice, brandy, and barley water were frequently given in small quantities. Milk appeared to produce vomiting, and malted milk was substituted with advantage for a few days. This restricted diet at the end of a week was gradually replaced by an ordinary one. The patient was allowed to sit up in bed on the sixteenth day and was up and dressed on the twenty-eighth day.

Remarks by Mr. CUFF.—The case, I venture to think, is interesting on account of its initial severity, for the man, after inflicting a severe wound, was more than an hour without treatment, was brought to the infirmary in a jolting cab, and appeared to be *in extremis* on his arrival. The

[1] Annual of the Universal Medical Sciences, 1894, vol. iii., C 47.
[2] Annals of Surgery, Philadelphia, 1894.
[3] Transactions of the Texas Medical Association, May, 1893. Annual of the Universal Medical Sciences, 1895, vol. iii., C 44.

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peritoneum seems to have been a patient and long-suffering membrane not to have taken exception to all this rough treatment, for at no time was there the slightest evidence of peritonitis. Another point of interest was the success of the two methods of filling and stimulating the vascular system—i.e., by venous infusion and by rectal injection. The effect of both was very marked, and in the case of the first almost immediate, in the second appearing in about ten minutes. I would call attention to what has been insisted upon by Dawburn, McBurney, and others—namely, the importance of having the normal saline solution really hot, as hot as the hand can comfortably bear. The stimulating effect of infusion is then much greater and more lasting than that produced by solutions at 100°, the temperature generally advised.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

The Use of Guaiacum in the Treatment of Chronic Gouty Affections and its Value in Warding off Acute Attacks.

AN ordinary meeting of this society was held on May 26th, Dr. W. HOWSHIP DICKINSON, President, being in the chair.

Sir ALFRED B. GARROD read a paper on the Use of Guaiacum in the Treatment of Chronic Gouty Affections and its Value in Warding off Acute Attacks. He first alluded to a communication to the Royal Medical and Chirurgical Society on Feb. 8th, 1848, entitled "Observations on the Pathological Condition of the Blood and Urine in Gout, Rheumatism, and Bright's Disease," in which he had the privilege of demonstrating the presence of uric acid in the blood and also the relation between uric acid and gout, and many other points; these were referred to as they bore upon the present paper, the chief object of which was to direct the attention of the society to the value of guaiacum in the treatment and prevention of gout. The name guaiacum was given to the resin of a tree called *Guaiacum officinale*, the wood of which was termed lignum vitæ. After speaking of numerous observations carried on for very many years among both hospital and private patients with guaiacum, both in the form of a powder and as ammoniated tincture of guaiacum, Sir A. B. Garrod thought that he had been successful in establishing the following points in regard to the action of guaiacum: 1. Guaiacum was innocuous, and might be taken for an indefinite period of time, and, looked upon as a condiment rather than as a drug, as harmless as ginger or any other condiment. 2. Guaiacum possessed a considerable power, but less than colchicum, in directly relieving patients suffering from gouty inflammation of any part; it might be given whenever there was but little fever. 3. Guaiacum taken in the intervals of gouty attacks had a considerable power of averting their recurrence; in fact, it was a very powerful prophylactic. 4. Guaiacum did not appear to lose its prophylactic power by long-continued use. 5. There were a few persons who could not readily continue the use of guaiacum; for such cases there were other drugs whose action was in some respects similar as prophylactics—perhaps serpentary was one of the most powerful of these. Sir A. B. Garrod gave a short account of serpentary, and mentioned the fact that he had given it successfully in gouty inflammation in the elderly subject; as a prophylactic he had less personal experience, but he doubted not that it was possessed of considerable power. Before attempting to explain the mode of action of guaiacum in the treatment of gout, he gave his view of the origin of uric acid in the animal economy; instead of supposing that it was formed in the system by the metabolism of the nitrogenised tissues, and then thrown out by the kidneys, he was of opinion that it was produced from urea and other nitrogenised bodies in the blood by the direct action of the kidney, and that when uric acid was contained in the blood this arose from the absorption from the kidney structures of the urate of ammonium, depending on the want of sufficient throwing-off powers from these tissues. He was aware that it was from his own discovery of uric acid in the blood that the opposite view of the formation of uric acid arose. To explain the prophylactic action of guaiacum he did not think that it affected the formation of uric acid, but that it acted directly on the kidney itself as a stimulant and enabled it to get rid of any accumulation in the tubules and thus prevented absorption from them into the blood. In confirmation of this view it was found that patients when taking guaiacum often had unusual deposits of urates in their urine. The paper closed with the following remarks: "If the statements contained in this communication had the effect of inducing his medical brethren to direct their attention to the value of guaiacum in the treatment and prevention of gout he felt he should have conferred some benefit on the profession and through them on the public at large."

Dr. NORMAN MOORE said that Sir A. B. Garrod was the first to lay down the definite knowledge which enabled physicians to say for certain post mortem that a given patient had or had not suffered from gout. At St. Bartholomew's Hospital a very large number of cases of gout were met with, possibly because they were close to the Central Meat Market. He had seen at least 100 instances post mortem of persons displaying the features in morbid anatomy which Sir A. B. Garrod had shown to belong to this disease. Colchicum might be given for long periods with advantage and some success in warding off the attacks. Though some of the success might be due to care in diet he did not think it was entirely due to this, because persons who suffered from the most inveterate gout passed through fewer attacks when taking small doses of colchicine over long periods. He asked Sir A. B. Garrod what was the true history of the reputation of guaiacum in former times. At the earlier part of the seventeenth century guaiacum was extolled as the most successful remedy for what we should call tertiary syphilis. He wondered if its reputation was due in part to its effect on sore-throat or perhaps part of the pain that the patients suffered was gouty. Indeed, it was possible that guaiacum was successful in postponing or altogether preventing further attacks of pain which were not really syphilitic, but gouty.

Dr. CALDWELL (New York) held that "poor man's gout" required a different treatment from "rich man's gout," the former requiring stimulants, and he advocated "sweating it out." He asked Sir A. B. Garrod if it were not possible to secure the elimination of the *materies morbi* at the site of its deposit.

Dr. MURRELL said that he could support Sir A. B. Garrod's conclusions as to the efficacy of guaiacum in chronic gout. He had used guaiacum during the last six years at the Westminster Hospital, not only for chronic gout, but for rheumatism, tonsillitis, and chronic bronchitis associated with the gouty taint. The Throat Hospital lozenges he had found useless, because the dose was too small and lozenges were too expensive for out-patients. The taste of the mixture of the British Pharmacopœia was so atrociously nasty that patients declined to take it. The tincture was difficult to dispense because it did not mix with water, and so he made a confection containing ten grains in a drachm of honey, the patient taking one or two drachms three times daily immediately after meals. Though this was efficacious, yet it presented disadvantages, for it acted as a powerful purgative and brought out a rash like that of a copaiba, but not attacking the face; it was accompanied with much itching. The drug sometimes caused burning feelings in the throat with a sensation of constriction, but this was overcome by giving the resin with half an ounce of extract of malt. He had also given it mixed with an equal amount of confection of sulphur. Though he had come to the same conclusion as Sir A. B. Garrod he felt he had been working on different lines, for he had made use of guaiacum resin; he had given it alone instead of in combination with cinchona, iodide of potassium, or colchicum; he had given it also in much larger doses—namely, twenty grains of the resin three times a day, the resin being of about four times the strength of guaiacum itself. He had not given guaiacum in cases of acute gout, but he had given colchicum wine with iodide of potassium three times daily. Recently he had used a liniment consisting of half an ounce each of iodide of potassium, methylated spirit and soap liniment, with oil of cajuput and oil of cloves. A piece of lint steeped in this liniment was applied to the affected joint with good results. He had no doubt as to the efficacy of guaiacum in warding off attacks.

Dr. HAIG said that while he agreed that guaiacum tended to ward off gouty manifestations he did not concur as to the way in which the drug acted. Iodide of potassium provoked diuresis and dilatation of all the bloodvessels with a fall of blood pressure. Lithia and ammonia

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had a similar action, as also had copaiba, tar, cannabis indica, certain salts of calcium, and certain bitters, such as chiretta, gentian, and possibly serpentary. Copaiba contained a large quantity of acid and guaiacum agreed with it in this. He believed that all these drugs diminished the excretion of uric acid and kept the blood clear of it, and he had explained fully elsewhere the method of action of some of those drugs. He was interested in what had been said about the effects noted by Cullen and other physicians of his time because it agreed with his view that these drugs suppressed gout, but did not cure it. He accepted the view that urate of ammonia was not formed from urea in the kidneys, but that the reverse took place. Much of the uric acid met with in disease was not formed in the system, but was introduced with animal food.

Dr. EWART said that he had been in the habit of giving guaiacum in conditions akin to gout, and he had been struck by the effect which it exerted upon the condition of the patient. He thought that the action of guaiacum upon the capillaries was not limited to the kidney, but extended to the whole system and in particular to the capillaries of the muscles; indeed, the effect of guaiacum in relieving painful manifestations located in the muscles was well known. Taking into consideration the bulk of the muscular system it was easy to imagine that any interference, however small, with its metabolism must have an appreciable effect upon the juices, and as to the glandular system guaiacum acted in that direction also, and was a recognised hepatic stimulant. If the drug were used over a long period in doses sufficient to cause a laxative action this would influence the health of gouty persons very materially. He had found tincture of iodine very useful in combination with guaiacum.

The PRESIDENT said that the treatment of rheumatism by guaiacum was a very old practice; it had been used at St. George's Hospital for at least a century, and the method was certainly much more successful than others in use at the early part of this time. The treatment of acute rheumatism by guaiacum had been continued until the last twenty years, and even now it was used for chronic rheumatism. From his own experience he could speak very strongly as to its value in some forms of acute rheumatism as well as in gout. With regard to the relation of uric acid to gout he placed himself in the position of a disbeliever. There was no doubt of its presence, but he preserved doubts as to its being the real cause; was it not what we might call a by-product? During convalescence from scarlet fever when nephritis was present it was not uncommon to find enormous quantities of uric acid passed, but that did not necessarily lead to gout.

Sir A. B. GARROD, in reply, said that with regard to the absolute and necessary connexion between gout and uric acid one never missed finding urate of soda deposited in the tissues after even the slightest attack of gouty inflammation. He admitted the value of guaiacum in acute rheumatism, but many cases formerly treated as acute rheumatism were really instances of acute gout. Though many pains formerly treated as syphilitic were possibly gouty, yet he was convinced also that guaiacum would relieve muscular pains which were not gouty. Though he had frequently prescribed this or that drug in combination with guaiacum he did not commonly give many together. As healthy normal skin could not secrete uric acid, he could not advocate "sweating the disease out." He was convinced that there could be no gouty symptom without the presence of urate of sodium in the blood and this had no relation to the amount thrown out by the kidneys. Guaiacum might act by increasing the amount excreted, causing visible deposit in the urine, to which the patient would call attention.

CLINICAL SOCIETY OF LONDON.

Typhoid Fever with Hyperpyrexia and Cardiac Dilatation.—Chronic Dilatation of the Colon.—Central Sarcoma of the Femur with Early Dissemination.

THE annual general meeting of this society was held on May 22nd, Dr. BUZZARD, President, being in the chair.

Dr. A. H. W. CLEMOW related a case of Typhoid Fever associated with Hyperpyrexia and Acute Cardiac Dilatation in which venesection was performed. The patient, a man aged twenty-five, became ill on Nov. 13th, 1895, and when first seen on the 18th his temperature was 104° F. (although he had been taking antipyretics for two days or more), and fine crepitations were audible at the base of the right lung. On the 19th epistaxis occurred and the following day after a dose of calomel (3 gr.) typhoid stools were passed. He was placed upon an appropriate dietary of milk (two and a half pints per diem) and beef-tea (one and a half pints) and brandy, and ordered cold or tepid sponging at frequent intervals, as the temperature might indicate. During the next four days the temperature ranged between 102° and 104°. Retention of urine occurred during the night of the 25th, and was relieved by a gum elastic catheter on the morning of the 26th, and again at 9 P.M. His condition at the time was otherwise satisfactory; the pulse was 90, the tongue was moist and not excessively furred, and there was no abdominal distension. At 10 P.M. and 11.45 P.M. epistaxis recurred. The temperature at midnight was 103·4°. Two hours later there was a severe rigor, the patient became wildly delirious, and the axillary temperature rose to 106·7°. Vigorous iced sponging reduced this to 103°, and he became quiet, though he continued unconscious. At 7 A.M. his temperature was normal, but at 7.30 there was another rigor with delirium, and the axillary temperature rose to 107°. Iced sponging again lowered the temperature and quieted the delirium. At 9.30 A.M. he was seen in consultation by Sir William Broadbent, who advised the subcutaneous injection of one-third of a grain of morphia. Between 11 and 11.30 A.M. a rapid change for the worse occurred and Dr. Clemow was requested by the nurse to come at once as the patient was sinking rapidly. On his arrival the patient was found to be apparently in "articulo mortis"—the face was deeply cyanosed, the jaw had dropped, conjunctival reflex was absent, and respiration consisted of almost futile inspiratory efforts. Examination of the heart revealed a very considerable distension of the right side of acute onset. Venesection from the left median basilic vein was at once resorted to, eight ounces of blood being removed, and subcutaneous injections of digitalin (gr. $\frac{1}{100}$) and strychnia (gr. $\frac{1}{30}$) and brandy administered. The cyanosis then gradually diminished, the pulse, although very feeble and irregular for a few minutes, became fuller and less rapid, and shortly the respiratory movements improved, air entering the chest more readily. An hour later, and subsequently every three hours for the next twenty-four hours, the injection of digitalin and strychnia were repeated, and were supplemented by enemata of peptonised milk, beef-tea, and brandy. About five o'clock the patient regained consciousness and was able to take some nourishment. The next day considerable hypostatic congestion of the lungs manifested itself, but passed off under appropriate treatment. During the remainder of his illness rigors threatened on two or three occasions, the temperature rising to 103° or 104°, but the patient ultimately made a complete and perfect recovery.—Dr. CHAPMAN remarked that it was worthy of note that not only was venesection successful in reducing the temperature, but that antipyretic remedies had failed to do so.—Dr. F. L. BENHAM said it was doubtful to what degree the venesection had benefited the hyperpyrexia *per se*, or how much the improvement was due to relief given to the pulmonary complication by blood-letting. In one case of rheumatic hyperpyrexia, which after the third day from admission could not be controlled by ordinary antipyretic means such as cold, he employed venesection as a last resource, but with no improvement. The rigors might have indicated advancing pulmonary inflammation.—Dr. SAMUEL WEST remarked that rigors frequently followed hyperpyrexia. The bleeding was a great relief to the over-distended right ventricle and it acted in a mechanical way; the amount of blood let should depend upon the bulk of the patient. It would certainly not, as a rule, reduce pyrexia. There were comparatively few cases in which bleeding was admissible, but in these it was often not performed when it ought to be.—Dr. CLEMOW, in reply, said that he gave the patient no antipyretic remedies beyond cold sponging, which never failed to keep the temperature down. The rigors he regarded as due to the severity of the enteric fever. The venesection was done solely to relieve the over-distension of the right heart. He mentioned the case of a woman who was suffering from uræmia within a few hours of her delivery. She had marked orthopnœa and was very deeply cyanosed. Venesection to the amount of twelve ounces was practised and was followed by rapid and complete relief, delivery being afterwards effected, and the patient recovered.

Dr. ROLLESTON and Mr. HAWARD brought forward a case of Chronic Dilatation of the Colon. A boy aged twelve years had been subject to constipation since six months of age. He

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came from Inverness, and porridge had formed a considerable part of his diet. From time to time he had attacks of vomiting and complete inactivity of the bowels, on one occasion having gone for nine weeks without an evacuation. On admission to St. George's Hospital he was seen to be emaciated, the eyes sunken, and the complexion of a bistre tint. The abdomen was enormously distended, and through the stretched abdominal wall peristaltic contractions of the intestine could be seen. The front and upper part of the abdomen were resonant and no fæcal masses could be felt. Palpation of the abdomen usually gave no pain, but sometimes, on deep pressure, he complained of tenderness, the situation of which varied. The rectum was natural and there was no spasm of the sphincter. During the three months that he was under observation his condition varied, often very suddenly. He would improve for a time, the bowels acting daily and the abdomen becoming soft. Then suddenly constipation and vomiting would come on without manifest cause. These attacks usually subsided in a day or two, but in one of them he died. There was never any obstruction, the bowels acted nearly every day. The treatment was varied, but, with the exception of calomel, nothing seemed to do any material good. At the necropsy great dilation of the colon was found; the ascending colon passed up to the hepatic flexum, from which point the transverse colon descended to the neighbourhood of the cæcum; the descending colon occupied the greater part of the right half and upper portion of the abdomen; it passed out of sight in the left lumbar region, and then joined the dilated sigmoid flexure. No stricture or cause for obstruction could be found anywhere. There were numerous ulcers in the colon, due, presumbly, to distension; the muscular coats were hypertrophied. Cases of dilatation of the colon were divided into acquired and congenital, and reference was made to nine cases, eight of which were fatal. The etiology and pathology of the condition were discussed, and it was shown that neither mechanical causes nor an inflammatory origin were borne out by facts. The high mortality and the unsuccessful results of treatment were pointed out and the danger of massage insisted upon. The question of colotomy or of opening the small intestine was considered, and it was advised that, having regard to the abnormal mobility and change in the position of the bowel, any operation should include as its first step the ascertainment of the anatomical relations of the parts involved.—Dr. HALE WHITE said that he agreed in the correctness of the classification. The acquired form, due to constipation, was common, and as it was well recognised it was not of much importance. Of the congenital form several cases were found scattered through medical literature. For these there was no satisfactory explanation whatever, the constipation being a result rather than a cause. Some of the cases of dilatation of the colon, particularly of the sigmoid, occurred in adults and were not associated with sufficient constipation to account for the dilatation. These cases appeared to him to be comparable to cases of paralytic distension of the stomach; they were equally common in men and women. Treatment by opening the large bowel above the distended part had been practised, so as to allow the fæces to pass, the portion of bowel below being regularly washed out and left to rest.—Mr. BRUCE CLARKE said that besides the case recorded by Dr. Herringham and himself he could mention another instance which he believed to be in the same category. It was that of a man who had obstruction of the large intestine which was thought to be carcinomatous. Colotomy was performed and the patient improved and lived for four years, dying ultimately of a condition unconnected with the bowel.—Dr. ROLLESTON, in reply, said that the case recorded by Osler was the only one which had not proved fatal. As in these cases the colon was so movable it was suggested that exploratory laparotomy should be first done, as otherwise when lumbar colotomy was performed the surgeon might fail to find the bowel.

Mr. G. R. BALDWIN read the notes of a case of Central Sarcoma of the Femur with Early Dissemination. The patient, a man aged thirty-five, was admitted into St. George's Hospital on Sept. 3rd, 1895, with a central sarcoma of the femur. The thigh was amputated and the man discharged on Oct. 2nd. Soon after leaving the hospital he suffered from pain in the right arm, which subsequently became stiff and weak. On Nov. 1st he found on waking that he was paralysed over the lower part of the trunk and lower limbs. He was re-admitted on Nov. 8th, the trunk, the left lower limb, and stump being paralysed and devoid of sensation. He was suffering from incontinence of urine and fæces. The right arm was completely paralysed and the left partially; both upper extremities were without sensation save over the deltoid muscles. He died two days after admission. A post-mortem examination was made and widely disseminated growths were found. Of these the largest was one growing from the seventh cervical vertebra and extending upwards and downwards in front of the lower cervical and upper dorsal vertebræ, the lower cervical nerves being embedded in its substance. Other growths were present in both lungs and in the right kidney. Both primary and secondary growths were mixed-celled in nature. Mr. Baldwin also referred to a second case in which a central sarcoma of the femur became disseminated. Unfortunately, there was no record of the nature of the growth and no post-mortem examination was made.

The business of the annual general meeting was then proceeded with. A satisfactory report from the council was read. The membership now numbered 568. A committee of the society had been appointed to make an index to all the volumes of Transactions which had been issued by the society, of which Dr. A. E. Garrod was secretary.

The committee appointed to investigate the clinical value of the antitoxin of diphtheria hoped to be able to present their report during the coming year, and they added that they felt that the necessity for the present inquiry had not been affected by the publication of reports on the use of antitoxin either in this country or abroad. The financial statement showed a comfortable balance on the right side.

The customary votes of thanks to the retiring officers having been giving, the result of the ballot for the election of officers and council for the year 1896-97 was declared as follows: — President: Thomas Buzzard, M.D. Vice-Presidents: Thomas Barlow, M.D., Frederick Taylor, M.D., Thomas T. Whipham, M.D., William Henry Bennett, F.R.C.S., Rickman John Godlee, M.S., and William J. Walsham, F.R.C.S. Treasurer: William Miller Ord, M.D. Council: W. H. Allchin, M.D., W. P. Herringham, M.D., Constantine Holman, M.D., Patrick Manson, M.D., Sidney Martin, M.D., F. W. Mott, M.D., F. G. Penrose, M.D., Seymour J. Sharkey, M.D., E. Markham Skerritt, M.D., W. Hale White, M.D., Dawson Williams, M.D., W. Bruce Clarke, M.B., A. Pearce Gould, M.S., C. R. B. Keetley, F.R.C.S., C. B. Lockwood, F.R.C.S., Rushton Parker, B.S., Bilton Pollard, F.R.C.S., A. Q. Silcock, F.R.C.S., M.S., W. G. Spencer, M.S., and J. Bland Sutton, F.R.C.S. Honorary Secretaries: G. H. Makins, F.R.C.S., and J. Kingston Fowler, M.D. Trustees: Christopher Heath, P.R.C.S., William Miller Ord, M.D., and J. Burdon Sanderson, M.D.

BRITISH GYNÆCOLOGICAL SOCIETY.

Exhibition of Specimens.—The Treatment of Carcinoma and other Diseases by Animal Extracts.

A MEETING of this society was held on **May 14th**, Dr. C. H. F. ROUTH, Vice-President, being in the chair.

Dr. F. F. SCHACHT showed a specimen of Unruptured Tubal Gestation containing a Fœtus of about six weeks' development.—Dr. HEYWOOD SMITH and Dr. J. A. MANSELL MOULLIN made some observations, and the specimen was referred to a sub-committee to be reported upon.

Mr. F. BOWREMAN JESSETT showed a specimen of Multilocular Cyst of the Omentum. It was uncertain whether the cyst was originally omental or whether it was a vagrant ovarian cyst which had formed a secondary attachment to the omentum. The specimen was referred to a sub-committee.

Dr. ROBERT BELL (Glasgow) read a paper upon the Treatment of Carcinoma of the Uterus, Certain Forms of Ovarian Disease, and Fibroids of the Uterus by means of Thyroid, Parotid, and Mammary Gland Therapeutics. Judging from the beneficial effects which thyroid extract exerts upon the epithelium of the skin in psoriasis, Dr. Bell was led to infer that epithelioma of the cervix uteri might be due to the absence of some obscure catalytic action of this gland, and that thyroid extract might consequently be useful in the treatment of epithelioma of the cervix and of other unhealthy conditions of mucous surfaces. In his experience metrorrhagia was frequently associated with unhealthy conditions of the thyroid gland. He regarded lesions of the

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cervix uteri, such as lacerations and hypertrophy due to endometritis, as the predisposing cause of malignant disease, and from his experiments he concluded that the exciting cause existed in an abnormal condition of the thyroid gland. It would further appear that the parotid gland exerted a powerful influence upon the ovaries; and though not able to judge whether ovarian disease was super-induced by any lack of influence of the parotid he was able to vouch for the fact that ovarian disease could be brought under subjection by the administration of parotid glands of healthy young sheep, calves, and pigs. Again, he regarded it as beyond dispute that fibroids of the uterus, as well as hyperplasia and flaccidity of the organ, could be beneficially affected by the employment of mammary glands of healthy animals. He had also ascertained that ovarian disease was beneficially influenced by the administration of mammary gland. He then gave the history of three cases of epithelioma of the cervix treated by thyroid extract, two cases of uterine fibroids and two of menorrhagia treated by mammary palatinoids, and four cases of ovarian disease treated by parotid palatinoids, all treated within the last six months, except the first case of epithelioma, which dated from last summer.—Mr. BOWREMAN JESSETT thought the comparison of epithelioma with psoriasis and myxœdema had no rational basis. He noted that in all the cases of epithelioma curetting was done, followed by the application of such strong caustics as chromic acid and chloride of zinc, and he was inclined to attribute the improvement to the use of the caustic. The results would be more convincing if no local measures had been adopted. As regards fibroids, it was well known that they were apt to get smaller under the influence of rest and the menopause. Dr. Bell's cases were too recent for the deductions to be regarded as conclusive. The cases of ovarian disease were also treated locally by means of iodised phenol and ichthyol tampons, and these means alone were generally found sufficient. No doubt, however, many would give these new methods a trial.—Dr. LEITH NAPIER said he had no experience of this treatment, but he had recently read a paper by a Dr. Jouin who, in one case, was treating a patient for obesity by means of thyroid extract. She happened to have a fibroid, and at the end of twelve months he discovered that it had shrunk from two inches above the umbilicus to one inch above the pubes. This led him to try it in other cases. The second, a soft fibroid, was benefited; the third, a hard fibroid, was not. Three other cases were too recent to draw conclusions from. The recent views of the pathology of soft fibroids regarded them as associated with morbid glandular action, so it was quite possible that thyroid extract might exert an influence over them.—Dr. HEYWOOD SMITH observed that Dr. Bell did not tell them what was the condition of the cervix in the first case at the time of the last examination, but in all cases there seemed to have been an amelioration of symptoms in a much shorter time than they were accustomed to. It would be useful to know whether any of the cases were treated by animal extracts alone and what led Dr. Bell to decide which extract to employ in any given case. In view of the results recorded in the paper he thought they should give the method a trial.—After some remarks by the CHAIRMAN and by Dr. MACAN, Dr. BELL replied. He thought Mr. Jessett was under a misapprehension in thinking that he compared epithelioma to psoriasis. It was rather that in view of the action of the thyroid extract on the epithelium in psoriasis he thought it might also have a good effect in epithelioma. He used mammary extract for fibroids because the mamma and uterus were in close physiological sympathy; whilst the physiological relation between the parotid gland and the ovaries, as shown by the frequent metastases between the two, led him to give parotid extract in ovarian disease. He felt sure that those who tried the method would be satisfied with the results.

PATHOLOGICAL SOCIETY OF MANCHESTER.

Exhibition of Specimens.—Arseniuretted Hydrogen Poisoning.

A MEETING of this society was held on May 13th, Dr. H. R. HUTTON, President, being in the chair.

Dr. PETER THOMPSON showed specimens of Hydatid Cysts affecting the liver and transverse mesocolon. The liver was the seat of extensive growths, there being five distinct tumours in various stages of activity. Two had suppurated, two had died and had been converted into inert masses, whilst the fifth cyst was in the active growing stage. The tumour found in the transverse mesocolon was about the size of a small orange. It was easily felt through the abdominal walls and was freely movable to all parts of the abdominal cavity. It was quite hard and solid and on section the interior showed a large number of opaque membranes, the walls of shrunken daughter cysts with putty-like material between them. It was a typical example of a dead hydatid cyst which had been converted into an atheromatous mass. Hooklets were found in all the tumours.

Dr. ARNOLD W. W. LEA showed an Anencephalic Fœtus in which the whole of the medullary canal had remained open. The fœtus was a female weighing 2 lb. 12 oz., stillborn. The limbs and muscles were well developed. The face looked almost directly upwards, the neck being extremely short, as is usual in these cases. The vault of the skull was absent. The base was prominent and covered by a fine membrane adherent to it and continuous with the skin at the sides of the head. This membrane was also continued along the spinal column as far as the sacrum, and formed a band two and a half inches wide, extending from the angles of the ribs on each side. It was united laterally to the skin of the back. The vault of the skull ceased at the supra-orbital ridge; posterior to this, and attached to the base of the skull, were two solid masses apparently representing the cerebral hemispheres. On reflecting this membrane numerous nerves, cranial and spinal, were seen to pass from its under surface towards the foramina. The eyes and external ears were well formed. The base of the skull was very convex, and showed at each side of the basi-sphenoid a bony plate representing the wings of the sphenoid or the ex-occipitals. There were numerous foramina in the base of the skull. The laminæ and spinous processes of all the vertebræ were absent and no trace of the spinal cord could be detected. All the other organs of the fœtus were normal and well developed. This condition of the nerve centres appears to be the result of intra-uterine hydrocephalus occurring before the fourth week. As a consequence of this the ventricles and the central canal of the spinal cord become much dilated and ruptured, the fluid escaping. The cranial and spinal nerves are, however, developed from the nervous tissue remaining on the ventral aspect. The membrane then in these cases would consist of the pia mater and arachnoid, containing also a small amount of nervous tissue, and from this the nerves are developed. Cases of anencephalus are not very uncommon. It is, however, very rare to find the whole of the spinal canal remaining open, with consequent non-development of the laminæ and spinous processes of the vertebræ.—Dr. ARNOLD LEA also showed a Fœtus with Solitary Cystic Kidney, absence of Ureters, Imperforate Anus, Double Talipes Equino Varus, and Genu Recurvatum on the Right Side. The fœtus was a male, stillborn, weighing 3 lb. 12 oz. On dissection the heart and lungs were found to be normal. On opening the abdomen the most striking object was a large cystic organ occupying the right lumbar region and extending into the cavity of the pelvis, which it filled up on the right side. In position this structure corresponded to a kidney. There was, however, no ureter. On section numerous cysts, some very large, were seen scattered through it. There was no renal pelvis. Microscopically the solid part of the mass was mainly composed of fibrous tissue, with very numerous and large vessels and capillaries. The cysts were lined by cubical epithelium, the nuclei staining well and the cell substance being granular. Each cyst was surrounded by a capsule of fibrous tissue containing numerous round cells, some of which were pigmented. Hæmorrhage had occurred into some of the cysts. There were also groups of epithelial cells scattered through the structure, some of which resembled renal tubules. No glomeruli were observed. On the left side there was total absence of kidney and ureter. The urachus was wide, the bladder very small and empty, and the urethra patent. The suprarenals were large and well formed. The liver and spleen were normal. The stomach, small intestine, and greater part of the large intestine were normal. The sigmoid flexure passed down on the right side of the pelvis and ended by fusing with the base of the bladder, into which the end of the gut opened by a valvular opening admitting a probe. There was no anal depression. The vasa deferentia and testes were well developed, the latter being undescended. The origin of the cystic kidney of infants has been ascribed to intra-uterine inflammation occluding the papillæ. In this case, however, it appeared to be due to a developmental condition. The ureter and renal pelvis, which normally arise as

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a protrusion from the lower end of the Woolfian duct, had failed to develop. The organ described above represents an embryonic kidney, development having been arrested at an early period. On the left side the portion of the Woolfian body which should develop into the kidney had entirely disappeared. The connexion of the allantois with the hind gut had remained patent and there had been no involution of the epiblast to form the anal end of the gut.

Dr. HUTTON showed the heart of a dog (an English setter ten years old) from the wall of the right ventricle of which a fibro-cystic tumour, an inch in diameter, grew. The wall of the right ventricle was thickened and the cavity dilated. The animal had been thin and feeble for about a year and had had three attacks of syncope in the last month and died in the third attack.

Dr. DIXON MANN and Dr. J. GRAY CLEGG described the post-mortem appearances of Two Cases of Poisoning by Arseniuretted Hydrogen and showed specimens. There were five cases in all, three terminating favourably. They occurred in a manufactory where for trade purposes it was necessary to dissolve a considerable quantity of zinc in hydrochloric acid. The hydrochloric acid used at the time of the poisoning was found afterwards to contain an excessive amount of arsenic as impurity to the extent of 0·309 per cent. of metallic arsenic. The zinc also contained arsenic in small amount. The symptoms were, briefly, pain in the back, vomiting, melæna, hæmoglobinuria, and jaundice. The post-mortem appearances were as follows: a broad, dark-blue line on the gums, ante-mortem clots in the heart and great vessels, œdema and congestion of the lungs, general bluish tinge of the omentum, hyperæmia of, and petechiæ in, the mucous membrane of the stomach and intestines, congestion of the spleen, slight enlargement of the liver, great swelling, and congestion of the kidneys. On section the substance was found to be dark-red and the pyramids showed blue-black patches in their central parts. The bladder was contracted, in one case empty, and in the other contained about a drachm of fluid tinged red, in which was found kidney epithelium, fatty casts, albumin, and a trace of bile pigment. In Case 1 arsenic was found to be present in the liver, kidneys, bile, urine, blood, and in the fluid from the pericardium and the pleuræ. In the liver only was the amount sufficient to enable a quantitative estimation to be made; it equalled 0·002 gramme As_2O_3 for the entire viscus. In Case 2 As was found in the kidneys, spleen, and liver, in which it equalled 0·0016 gramme As_2O_3. The microscopical preparations exhibited the following characters:—Liver: The cells were swollen and cloudy, but the nuclei stained; there was no appreciable bile staining and no deposit of iron. Spleen: There were extensive congestion and slight fatty changes with failure to stain in patches. Kidney: The glomeruli were swollen, epithelium of the tubules was swollen and cloudy, and the nuclei did not stain; the bloodvessels were markedly distended; and there were granular matter and blood in the tubules. Osmic acid preparations showed fatty granules in the cells of all the three organs.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Acute Perforative Appendicitis.—Exhibition of Cases and Specimens.

A MEETING of this society was held on May 1st, Mr. MAYO ROBSON, President, being in the chair.

Mr. MOYNIHAN read the notes of a case of Acute Perforative Appendicitis in which recovery followed abdominal section. A boy aged thirteen years had suffered for three and a half days from acute appendicitis, perforation occurring towards the end of the third day. The abdomen was opened by a median incision, and the peritoneal cavity, which was found to contain offensive pus, was thoroughly cleaned and drained. By a separate incision the abscess cavity over the appendix was opened and cleansed and drained. A prolonged convalescence eventuated in complete recovery. The chief points raised for discussion were the following: 1. The question of early operation in ordinary cases of appendicitis. Mr. Moynihan quoted Dr. Ryerson Fowler, who remarks: "As soon as the diagnosis of progressive appendicitis is assured the abdomen should be opened and the appendix removed." It was urged that early operation was attended by little or no risk and that its statistical results would be found to justify the procedure. 2. The administration of opium during the first forty-eight hours. This was strongly deprecated. The first twenty-four or forty-eight hours are those in which the symptoms are gradually asserting their claim to the surgeon's attention, and their relative value is wholly impaired by the effect of opium or morphia. 3. The advisability or otherwise of peritoneal lavage was discussed, and Mr. Moynihan gave it as his firmly established opinion that the method added very considerably to the dangers of the operation and in most cases was unnecessary. The peritoneum could be as thoroughly cleansed by careful sponging with tampons of iodoform gauze. Drainage by means of strips of gauze in place of, or in addition to, drainage by glass tube was advocated. 4. The importance of the removal of the appendix in all cases of abscess. It was pointed out that in not a few recorded cases a second attack of acute inflammation had occurred in an appendix not removed during operation and that in one case at least a fatal termination had resulted. It was suggested, as a guide to treatment, that some ready rule should be adopted, such as "if at the end of a certain well-defined period a case of appendicitis is either stationary or progressive operative procedures should, without any further delay, be adopted." It was mentioned that the American surgeons would constitute twenty-four hours as the duration of this period. This was, perhaps, a little early, but it emphasised the importance of early operative procedures—an importance that could hardly be too strongly insisted upon. — Mr. BROWN objected to the early use of opium because it concealed the danger. He thought washing of the peritoneum was of great value and that there were other more important factors in the production of shock.—Dr. CHURTON thought that a large number of these patients got well without operation and could recall many cases where a peritonitis had receded after rather rapid extension.—The PRESIDENT mentioned three cases in which he had operated with success. — Mr. LITTLEWOOD thought that perforation occurring during the first attack was much more serious than when occurring in later attacks. He did not believe it possible in many cases to absolutely cleanse the peritoneum, and thought it of importance to use boiled normal saline solution for intra-abdominal lavage rather than boric acid or plain water.—Dr. GRIFFITH drew attention to the anatomical arrangement of the peritoneum around the appendix and its bearing on the mode of bursting of an abscess within or without the peritoneal cavity.—Mr. MOYNIHAN replied.

The following cases, pathological specimens, &c., were shown:—

Mr. W. H. BROWN: (1) Patent Urachus closed by operation; (2) Enterectomy after Gangrene of Umbilical Hernia (specimen and patient); (3) Extensive Keloids; (4) Recurrent Fibroid after more than twenty removals; and (5) Talipes Equino-varus treated by Phelps's method.

Dr. CHADWICK: Case of Ataxic Paraplegia.

Dr. WARDROP GRIFFITH: (1) Case of Congenital Weakness of Inter-ossei Muscles; and (2) dissections to show the "Undefended Area" of the Cardiac Septum.

Dr. MANTLE: (1) Two adult patients with Muscular Atrophy; (2) Aneurysm of the Arch of the Aorta cured by rest and the application of an icebag; and (3) Cerebral and Spinal Hæmorrhage.

Dr. CHURTON: (1) Splenic Leucocythæmia; (2) Œdema without Albuminuria; and (3) Sarcoma of the Corpora Quadrigemina and Pineal Body.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—The Treatment of Inoperable Cases of Cancer.

THE ninth meeting of this society was held on May 20th, Dr. ARGYLL ROBERTSON, President, being in the chair.

Mr. JOSEPH BELL showed a patient after a Gunshot Wound of the Forearm. The bullet from a rook rifle had passed obliquely through the lower end of the radius, shattering the bone. Portions of bone and of the bullet were removed. The patient made an excellent recovery. The movements at the wrist-joint were perfect. Roentgen photographs were exhibited exemplifying the condition of the radius after the wound had healed.

Dr. NORMAN WALKER showed a Powder for Photography

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by Flash-light. The powder consisted of powdered magnesium and chlorate of potash on gun-cotton. It was efficacious and cheap, and by its use photographs could be taken irrespectively of the weather.

Dr. GILES also showed an Apparatus for Producing Flash-light.

Dr. GEORGE T. BEATSON read a paper on the Treatment of Inoperable Cases of Cancer. He remarked on the number of inoperable cases of cancer of the breast which he had seen in the practice of the Glasgow Cancer Hospital, and from which he had deduced a line of treatment which was opposed to the parasitic theory of cancer. The first case was that of a patient thirty-three years of age suffering from advanced cancer of the breast. After a confinement she noticed a lump in her breast. She sought advice at the Royal Infirmary, where the breast and axillary glands were removed. The wound healed well, but in three months the cicatrix broke down, discharged, and there was considerable hardness and thickening around the ulcer which formed. She was dismissed from treatment at the Royal Infirmary as in too advanced a stage of the disease for operation, the disease having returned in the whole scar. When first seen by Dr. Beatson there was a large cicatrix extending from the axilla forwards to the anterior mammary region. The whole cicatrix was a mass of recurrent carcinoma. She had the pale, cachectic appearance of a patient with advanced carcinoma. The diagnosis of cancer was confirmed by removing a portion of the tumour and examining it microscopically. The specimen was shown under the microscope and was of a typically cancerous nature. No operation was possible. The question arose, Could the disease be attacked in any other way? To discuss this Dr. Beatson glanced at the present knowledge of cancer. All were agreed that carcinoma was of the nature of an epithelial growth, that this growth spread locally and by infection through the lymphatic system, that there was no known means of arresting the growth, that cells known as cancer cells developed, that the younger the patient was the more rapid the fatal result, and that the best treatment was removal with the knife. All were agreed upon those points. All were not agreed on the local origin or not of the disease. Some thought it arose from local irritation, others from blood dyscrasia, and a third school held that in addition to the dyscrasia a local irritation was necessary. As regards "cancer bodies," some thought them specific of the disease and parasitic in nature and others described them as degenerated leucocytes or other cells. Dr. Beatson then went at considerable length into the influence of the ovaries on lactation, and the influence which removal of the ovaries had upon the mammary function in the lower animals. Was cancer of the mamma due, he asked, to an error in the function of the ovaries? When working at the Glasgow Cancer Hospital he tried the influence of thyroid extract in carcinoma of the breast. In the case described thyroid tabloids had been administered, but with no effect. As a possible method of benefiting the patient the removal of the ovaries and tubes was proposed. The operation and its effects being explained to the patient and her husband it was performed with their full consent. She made a good recovery from the operation. No local measures were taken with the breast save ordinary aseptic dressings. The thyroid tabloids were continued. A marked change in the cancer took place. The tumour became smaller and flatter and there was marked diminution in the surrounding thickening. The nodules in the axilla also diminished. The local improvement continued and four months afterwards the mammary tumour was noted to be greatly diminished in size and of a yellowish colour. All the tissues were more movable and the surrounding tissues more healthy. Six months after the operation all evidence of carcinoma had disappeared. She was now shown to the society in a healthy condition. A cicatrix extended from the mammary region to the axilla and there was absolutely no evidence of cancer either in the cicatrix or axillary glands. The second case was one of cancer of the breast in an advanced stage, which seemed to date from an injury to the breast. On admission the patient was noticed to be a cachectic, emaciated woman with a large tumour in the right breast adherent to the skin in the centre, but not fixed below. The nipple was retracted and there were large fixed glands in the axilla and extending in the neck as high as the lobe of the ear. There were no secondary deposits in other organs. No operative procedure was practicable. A microscopic section and cast of tumour were shown. She was admitted to the Cancer Hospital and during a month's residence the tumour spread rapidly. The tubes and ovaries were then removed. She made a good recovery from the operation. The breast tumour became less vascular. She felt better and the pain diminished, so that she was able to sleep at night without hypnotics. Thyroid tabloids were begun. Two months after operation, as the tumour and glands were diminishing, a nodule was removed for microscopic examination. The specimen, a carcinoma undergoing fatty degeneration, was shown under the microscope. The tumour did not diminish so rapidly as in the first case, but still the diminution was marked. Casts were shown exemplifying the condition before operation and some months afterwards. The third case was that of an unmarried woman with a large ulcerating tumour of the breast, but no glandular infiltration. A section of the tumour was examined and found to be cancerous, not tuberculous. As she had passed the menopause thyroid tabloids were given without removal of the ovaries. During the three months they had been taken no improvement was noticeable. The ulcerating tumour had spread. The thyroid tabloids had done no good, and it might be as well, Dr. Beatson thought, to remove the ovaries. He considered some pathological conditions in the ovaries the exciting cause of cancer of the mamma and female generative organs. He did not believe in the parasitic theory. He thought the ovaries in the female and the testicle in the male must be looked to for the cause of cancer. He thought that cancer cells could be ultimately shown to be germinal epithelial cells (ova). Epithelial cells became converted into germinal epithelial cells as found in the ovary, the conversion being due to some influence in the ovary. In the male the testicle seemed to have the same influence over proliferation as the ovary had in the female; this was exemplified in the horning of stags. He urged that removal of the ovary or testicle had an inhibiting influence on the proliferation of epithelial cells, and that removal of the ovaries in young nursing mothers had great influence on the development of carcinoma where local operation had failed. He did not urge the removal of the ovaries in early cases, but in *inoperable* cases. The views were problematical, but he urged the theory in the interests of those who were sufferers. The patients exemplifying the paper were shown.—Professor A. R. SIMPSON remarked that it was a well-known fact that disappearance of the ovarian function gave rise to the deposit of fat. He found from his own experience and from statistics that where both ovaries were removed patients died in an unusually large proportion from carcinoma. In Dr. Beatson's case the thyroid extract might have had some influence. The ovarian influence on the mamma seemed to be not only nervous but chemical as well.—Professor CHIENE thought that as a practical surgeon looking at the first case one would be justified in inoperable cases of carcinoma of the mamma in removing the ovaries and giving thyroid tabloids.—Mr. JOSEPH BELL said that the first case shown was one of the most remarkable he had ever seen in his life. The case was cured, and he thought all similar cases should have a like chance at the hands of surgeons. He had, however, seen a good many cases like No. 2, in which with the shrinkage of the whole woman a shrinkage in the tumour and glands took place.—Mr. STILES congratulated Dr. Beatson on the clear, modest, and cautious manner in which he had stated his case. The facts after seeing the first case and the specimen could not be disputed. He agreed in not regarding cancer bodies as parasites. In slowly growing tumours of the mamma the death-rate of the cells was almost as great as the birth-rate, and in rapidly growing tumours the opposite was the condition. He thought that removal of the ovaries might check the birth-rate. In the first case the patient was a young woman, and the ovaries had great influence on the mammary gland, and removal checked the birth-rate of the cells. He did not think that removal of the testicle could have much influence on the growth of cancer.—Dr. WALKER, Dr. JAMES RITCHIE, and Dr. LUNDIE took part in the discussion.

EDINBURGH OBSTETRICAL SOCIETY.

Exhibition of Specimens.—Some Modifications of Midwifery Forceps.—Criminal Abortion in the Punjab.—Technique of the Dilatation of the Perineum in Labour.—Teratogenesis: an Inquiry into the Causes of Monstrosities (Part II.: Theories of the Past: Physical Causes).

A MEETING of this society was held on May 13th,

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Professor SIMPSON, in the absence of the President, being in the chair.

Surgeon-Captain CHARLES H. BEDFORD sent some Abortifacients used in India for exhibition: the roots and twigs of Plumbago rosea, "Lal Chitra," which externally and internally act as an irritant, and are used to procure abortion (rarely for homicidal poisoning); the Fruit of Terminalia bellirica, which acts as a narcotico-irritant poison; Markingnuts; drupes of Semecarpus anacardium; "Bhilawa" juice, which is applied to the cervix-uteri as an abortifacient; and also abortion sticks, "battis," from the Punjab; the sticks are dressed with cotton-wool which is smeared with an irritant paste of nutmeg, arsenic, juice of Calotropis gigantea, jequirity seeds, carbonate of sodium, aloes, &c., and then passed into the cervix uteri.

Dr. J. W. BALLANTYNE showed an Anencephalic Fœtus; there had been scarcely any liquor amnii present.

Dr. G. OWEN C. MACKNESS read a paper on Some Modifications of Midwifery Forceps. He said that the handles in an ordinary pair of forceps served as a means of introduction of the blades and also afforded a grip while traction was being effected. In the axis-traction forceps the handles served, as before, for the introduction of the blades, and they also acted as indicators for the axis of traction. These handles were not now used for traction, and they therefore seemed unnecessarily long and heavy for the purposes which they required to fulfil. He had had forceps constructed where these handles were reduced from six to three inches; he had used them in many cases and found that they were more easily applied with the patient in a confined space or where there was no skilled assistance to get and maintain her in a suitable position. They were lighter and less cumbersome, and in occipito-posterior cases during rotation the handles were much less liable to jam against the thigh. The centre of gravity of the forceps was brought nearer to the blades and therefore nearer to the point where the power was applied. He had also altered the plate attached to the traction handle for the reception of the buttons on the ends of the traction rods. By cutting away the bridge which separated the apertures for the insertion of the buttons more space was allowed for their rapid removal, and the difficulty in their disconnexion, when the blades were widely separated by an unusually large head, was thus overcome. There was no binding connexion between the traction rods. These were made separable from the blades, but the end of the rod and the slit in the blade for its reception were so formed that it was impossible for them to slip out when the forceps were in use. The fixation screw was made very strong and was placed at the end of the application handles. The instrument was made entirely of metal, and the handles were roughened to prevent slipping during their use.—Professor SIMPSON preferred the full length for the application handle so as to effect more easily the manipulation of the blades on the head and their locking afterwards. He was favourable to the placing of the fixation screw at the extremity of the handles and commended the forceps as a step towards simplicity.—Dr. FORDYCE and Dr. MCVAIL took part in the discussion.

Surgeon-Captain CHARLES H. BEDFORD sent a paper on Criminal Abortion in the Punjab, which was read by Dr. J. W. BALLANTYNE. The cases occurred during twelve months previously to November, 1894; the facts detailed were derived from the official reports of the local medical officers and police, these including the post-mortem examinations and the symptoms noted during the treatment of the cases. Surgeon-Captain Bedford also included his chemical and special examination of the articles and viscera sent to him. Twenty-six cases were referred to him during the year indicated and death had occurred in all. These probably only represented a very small fraction of the fatal cases of criminal abortion occurring in the Punjab and an infinitely smaller proportion of the non-fatal cases. They occured mostly among the unmarried; widows debarred by the social customs of the country from re-marrying were the principal offenders. The production of abortion was principally in the hands of native nurses and midwives and male native quacks, who used methods in use in India for probably hundreds of years. The administration of substances by the mouth for the purpose in view was less common than by local means. The paper explained the Indian law on the subject and compared it with the English. The general means employed in India were emetics, purgatives, irritants, ecbolics, &c. The local means generally consisted in the introduction into the os of some medicated twig or bougie or by the application of irritant substances in the form of a paste to the os uteri either by the finger or on cotton-wool. Death might occur from sepsis after the abortion had been induced or by peritonitis from injury to, or even perforation of, the uterus. The substances employed as abortifacients in these cases were various: nutmeg and arsenic were employed in four cases; opium in two cases; crude carbonate of sodium, black pepper, mercury, croton and aloes, alum and saffron, each one; and portions of twigs or "battis" were found in four cases. These were pieces of wood a few inches in length, dressed at one extremity with cotton-wool (just as a uterine sound would be), and this end was smeared over with a paste of pounded nutmeg or with arsenic. Other substances were used for this purpose—jequirity, madar juice, croton seeds, quicklime, &c. At other times these substances were applied on pledgets of cotton-wool and placed by the finger on the os uteri and left there. Occasionally the "batti" was extracted after a time, more cotton-wool applied, re-charged and again inserted; this was repeated until the os was dilated, when the membranes were ruptured. Or three or four "battis" might be inserted alongside one another. Out of the twenty-four cases four occurred at the third month, eight at the fourth, five at the fifth, and one at the sixth month. Post-mortem examination revealed in one case a portion of the twig penetrating the isthmus uteri, in another the cotton-wool was found in a wound of the uterine wall, in another a twig was found *in utero*, and a pledget of wool smeared with arsenic was found in the cavity of the cervix in another. Septicæmia and peritonitis were the causes of death in ten cases, two died from opium poisoning and one from aconite and opium. Abortion had occurred in twenty out of the twenty-six cases before death.

Dr. G. COROMOLAS (Calamata, Greece) sent a paper on the Technique of the Dilatation of the Perineum in Labour, communicated by Dr. J. W. BALLANTYNE. The woman being placed in bed on her back or left side with the legs as in natural labour, the vagina and external parts were thoroughly washed and rendered aseptic. The hands of the accoucheur were also carefully prepared and smeared with an ointment of vaseline with 6 per cent. of cocaine and antipyrin. The perineum, vagina, and os uteri were also anointed with this. The accoucheur then passed four fingers of one hand within the vaginal orifice and made some semilunar movements, first at one side and then at the other, so as to dilate the perineum. After having made three or four powerful movements he introduced the fingers of the other hand and repeated the same procedure. When the requisite degree of dilatation was achieved he then passed the fingers fully into the vagina until the index, middle, and ring fingers touched the os uteri; the same movements were again carried out, the perineum being then pushed outwards by the palmar surface of the hand. This was persevered with until he felt the presenting part pressing upon the dorsal surface of the fingers. By this proceeding the perineum and labia were guarded against rupture and labour was hastened. The use of the analgesic ointment allowed of delivery without severe pain.

Dr. J. W. BALLANTYNE read a paper on Teratogenesis: an Inquiry into the Causes of Monstrosities (Part 2: Theories of the Past: Physical Causes). The early Greek philosophers looked for purely physical causes of monstrosities; these they found in disturbances of the natural phenomena of reproduction. Their views upon reproduction varied; some regarded the semen as the sole or principal factor and the woman was only a temporary abode for the fœtus. Others were of opinion that the menses supplied the material in generation and that the semen was of comparatively little importance; others, again, believed that both were necessary. The menstrual blood seemed sometimes to have been called the female semen, and the sex of the fœtus was supposed to be due to the greater strength of one or other seed. Another notion was that boys were generated in the right testicle and girls in the left, or the sex depended on the side of the uterus which received the deposition of the semen. Another belief which influenced their views of monstrosities was the supposed fertility of animals of different kinds with one another or even with man. Monstrosities were considered by some to be due to abundance or defects of the semen, from slowness of movement, from division of it into several parts, or from aberration of movement. The menses were believed by some to play an important part in the generation of monsters. This was largely due to Hebrew legislation regarding coitus during or immediately after the flow, as an infant conceived at that time was regarded as certain to be either an epileptic, a

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cretin, a drunkard, or insane. In classic mythology Vulcan was begotten by Jupiter when Juno was menstruating. Pliny and writers in the Middle Ages attributed maleficent powers to the menses as regards vegetables, metals, glass, trees, and even animals, so it was not to be wondered at that writers found in it one of the causes of deformed births. The theory that monstrosities were due to human and animal intercourse held some ground even down to the Middle Ages, so that if a woman gave birth to a fœtus in any way resembling an animal she ran very considerable risk of being burnt alive with her offspring and the animal supposed to be implicated. Such a fate befel a woman in Copenhagen in 1683 as a result of the birth of an anencephalic fœtus. Suspicion also fell upon an animal that brought forth a fœtus in any way resembling the human type, as a hydrocephalic foal or calf, and Albertus Magnus saved a shepherd's life by announcing that such an event was due to stellar influence. It was not till the beginning of the eighteenth century that a strong protest was made against the belief in the hybridity theory of teratogenesis.

Reviews and Notices of Books.

Occasional Papers on Medical Subjects, 1855–1896. By W. HOWSHIP DICKINSON, M.D. Cantab., F.R.C.P. Lond., Hon. Fellow of Caius College, Cambridge; Consulting Physician to St. George's Hospital and to the Hospital for Sick Children, Great Ormond-street; President of the Royal Medical and Chirurgical Society; Corresponding Member of the Academy of Medicine of New York. London, New York, and Bombay: Longmans, Green and Co. 1896.

THERE are two main points from which improvements in medicine in this century start and to which nearly all that distinguishes modern medicine so creditably can be traced; the first is the work of Richard Bright on the kidney, dating back to 1827, and the other the work of Pasteur adopted and applied and developed in this country by Lister. From these two pieces of work respectively date the chief researches of physicians and surgeons which have revolutionised our conception of the structural basis of disease and of its causes. Amongst English physicians who have worked hard and appreciatively on the lines of Bright is the author of the work which we have much pleasure in commending to our readers—not the less so since our own pages have been the medium through which the profession made the acquaintance of not a few of his papers. It is characteristic of Dr. Dickinson not only to have the keenest sense of what constitutes the clinical evidence of disease, with a refined eye for its minutest features, but to have the industry to follow his fatal cases to the post-mortem room and to exact from them the fullest information, accepting most candidly whatever they have to tell either in support of his previous diagnosis or otherwise. The Occasional Papers are the result of this double study of disease at the bedside and post mortem. Two other qualities of the author go to make the papers, already full of instruction, also very readable. The first is—shall we say?—a slightly pugnacious mental element giving enjoyment by the demolition of a theory which does not seem to him tenable, whether it be the embolic theory of chorea or the usually accepted theory of the so-called presystolic murmur. The second is a singularly clear and good style of writing, founded on the best English classics, a style which has placed Dr. Dickinson's works in the front of our medical literature.

The papers cover a large number of subjects which are of interest to all practitioners. The whole constitute a volume of 247 pages, to which there is a useful index. We need not enumerate all the papers—eighteen in number—but the mention of the following will suffice to show that they touch at once the deepest questions in pathology and such as are of daily interest in medical practice on the Action of Digitalis on the Uterus; Three Cases of Angina Pectoris depending upon Occlusion of the Mouths of the Coronary Arteries; on the Enlargement of the Viscera which occurs in Rickets; on the Pathology of Chorea; on Chorea with reference to its Supposed Origin in Embolism; on Cirrhosis of the Liver in Childhood; on Hereditary Albuminuria; on the Morbid Effects of Alcohol as shown in Persons who trade in Liquor; on Albuminuric Ulceration of the Bowels; on the Cardio-vascular Changes of Renal Disease, with some Observations on the Larger Arteries; on the Practice of Medicine at St. George's Hospital Forty Years Ago; on the Presystolic Murmur falsely so-called; and on Alkalies in Rheumatism. The last paper is a very important deliverance on the respective use of alkalies and salicylates in acute rheumatism based on forty years' experience. It seems to show conclusively that the alkalies used freely, as described, protect the heart as no other treatment does, though Dr. Dickinson associates with them the salicylates. The paper on Alcohol is a grave indictment against the free use of that substance. The article on Medical Practice Forty Years Ago shows vividly how recently the practice of medicine, even in the hands of such philosophers as Dr. Thomas Young, consisted of methods which we should be glad to forget.

Journal of Anatomy and Physiology, Normal and Pathological, Human and Comparative. Conducted by Sir GEORGE M. HUMPHRY, Sir WM. TURNER, and Professor J. MCKENDRICK. Vol. XXX. Part 3. April, 1896. London: Charles Griffin and Co. Price 6*s*.

THE present part contains sixteen articles, which are as follows: 1. Arthur Robinson, M.D.: Formation and Structure of the Optic Nerve and its relation to the Optic Stalk, with one plate, an article which we notice on another page. 2. E. W. Carlier, M.D.: On the Pancreas of the Hedgehog during Hybernation, a gland which he found to, his surprise to be in a moderately active state. He describes the microscopical characters of the gland at considerable length. 3. Keith Campbell, M.B.: An Accessory Segment in the Pulmonary Valve, with an engraving. 4. Studies in the Peritoneum, its Arrangement in Animals, by Byron Robinson, M.D., of Chicago. In this paper the author gives the results of his examination of a considerable number of animals, such as the cat, dog, ferret, polecat, badger, otter, pig, and rabbit. 5. J. H. Sequeira, M.D.: A Case of Ectopia Vesicæ, with Patent Vitelline Duct. 6. Edred M. Corner, B.Sc.: Some Structures in the Elbow-joint. 7. The same author on the Temporal Fossa. In both papers a very careful description is given of the structures forming the joint. 8. Mr. Corner also describes the processes of the Occipital and Mastoid Regions of the Skull, especially commenting on the processes named in some works of anatomy the "paramastoid" and "paroccipital," both of which he considers to have been frequently present. 9. E. Barclay Smith, M.D.: On the Astragalo-calcaneo-navicular Joint, giving a very exact account of the bones and the ligaments of this joint. 10. David Hepburn, M.D.: Observations on the External Appearance and Visceral Anatomy of the Grey Seal (Halichoerus Grypus.) 11. Johnson Symington, M.D., Professor of Anatomy at Queen's College, Belfast: On the Homology of the Dumb-bell-shaped Bone in the Ornithorhynchus, in which the different views are discussed of this peculiar bone. 12. What is Sibson's Muscle? (Scalenus Pleuralis) by Professer Edward Fawcett, M.B. 13. Hereditary Polydactylism, by Gregg Wilson, M.A., in which the disposition of the bones of the hand is given by the Roentgen ray process. In addition to the above items there are a Report on Recent Teratological Literature by B. C. A. Windle, M.D., and the Proceedings of the Anatomical Society of Great Britain and Ireland.

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Domestic and Sanitary Drainage and Plumbing. By WILLIAM R. MAGUIRE, Associate of the Institution of Civil Engineers of Ireland; Registered Teacher of Plumbing, City and Guilds of London Institute; and Registered Master Plumber, Worshipful Plumbers' Company, London, &c. Second Edition. London: Kegan Paul, Trench, Trübner and Co., Limited. 1896. Price 12*s.*

THE second edition of a book, unless it shows some very marked improvement over the first, does not usually call for more than a passing notice, but the subject with which this volume deals is so very important to the health of the public that a brief *résumé* of its contents may not be out of place. It is not necessary at the present day to dwell upon the connexior between plumbing and health, or rather bad plumbing and bad health, but with regard to this subject there is reason to believe that the general public do not show that amount of interest which for their own welfare they should do. The book consists of a series of lectures, delivered at the Central Technical Institute at South Kensington under the auspices of the City and Guilds of London Institute for the Advancement of Technical Education acting in conjunction with the Worshipful Company of Plumbers, which were primarily delivered for plumbers and engineers, but all who live in a dwelling of any description will peruse the book with advantage. The author fully appreciates the need of workmen thoroughly understanding the scientific principles upon which their work is based. In one of the early chapters he says:—

"Popular education in physics ..... has been so neglected that very few otherwise well-educated people are prepared to explain, or even to understand, the causes of the most simple practical phenomena occurring daily within their observation ..... the world is looking for plumbers and for technical teachers of plumbing who make it their aim to know their business thoroughly. Knowledge of the forces of nature is more essential for plumbers than for the artisans of many other trades."

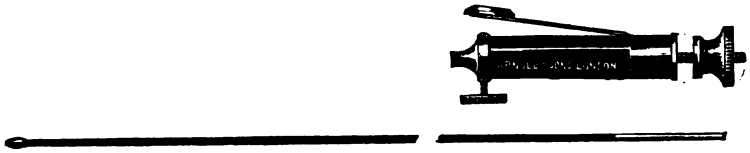
These words give some idea of the position the lecturer takes up and the exposition of energy and matter which follows is succinct but practical. Hydrostatics, hydraulics, and aerometry are treated in an elementary but thoroughly practical manner, and heat receives considerable attention. Sewage Disposal, Sewerage and Drainage, and Water Supply from the plumber's point of view are the heads of chapters which show the writer to be a practical man. The chapter on Sanitary Appliances is a valuable one inasmuch as without dogmatising on the advantages of any one particular maker's wares it shows the construction of the various types of apparatus—in many instances giving sectional drawings clearly showing their action—and describes in detail the qualities which all sanitary appliances should possess. Some thirty pages are devoted to the important question of hot water supply, and the cause and prevention of domestic boiler explosions are lucidly discussed. The book, which is well illustrated, should be read not only by plumbers and those engaged in the building of houses but also by every owner or occupier of a house who wishes to understand some of those details which govern the healthy construction of his habitation.

New Inventions.

SOME NEW RHINOLOGICAL AND OTOLOGICAL APPLIANCES.

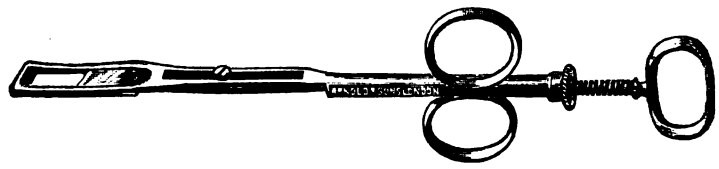
I DESIRE to draw attention to a few appliances which will be found of use in the treatment of certain nose and ear affections. My former rheophore, made of gum elastic with steel wire and silver knob, had the disadvantage that it could not be passed into the Eustachian tube. The one I now show (Fig. 1) can be readily passed through the Eustachian catheter, and is then easily connected with the lever contact handle by the small screw shown in the illustration. It has been perfectly made for me by Messrs. Arnold and Sons.

FIG. 1.—RHEOPHORE.



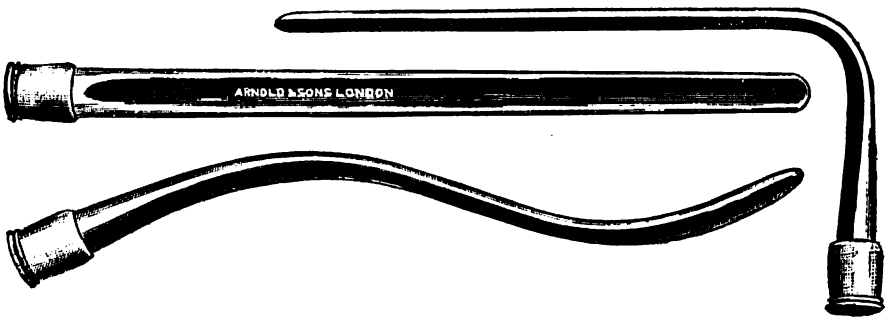
The turbinotome (Fig. 2) will be found useful for removal of portions of the inferior and middle turbinals when such a procedure is required. There is a strong spring in the handle which increases considerably the driving force of the blade, the cutting edge of which is crescentic in shape to prevent jamming. It also is made to my design by Messrs. Arnold and Sons.

FIG. 2.—TURBINOTOME.



The bougies which are shown in Fig. 3 are modifications of Mackenzie's and Stoker's. They have the advantage of being perfectly pliable, can be bent into, and retained at, any angle, or even twisted on their own axis. This has been achieved, at my suggestion, by Messrs. Arnold and Sons, who have made these bougies for me, six sizes being contained in a small flat box. They are most useful both for diagnostic purposes and as nasal dilators. The pliability is obtained by a thin layer of lead, which is covered by gum elastic.

FIG. 3.—BOUGIES.



Harley-street, W. H. MACNAUGHTON-JONES.

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THE LANCET.

LONDON: SATURDAY, MAY 30, 1896.

THE General Medical Council will meet on Tuesday next at two o'clock in its new chamber, which is not quite so ample as the old one, but it is well ventilated and lighted and promises also a decided improvement in regard to acoustic qualities. The Council will find itself without a President, for the term for which Sir RICHARD QUAIN was appointed President expired on Tuesday, the 26th inst. He still continues to be, as he has been since the year 1863, a representative of the Crown, with an almost unparalleled experience of the proceedings and the business of the Council. It is not improbable that the Council will be glad to have Sir RICHARD QUAIN in the chair as long as he is willing to occupy it. Though well entitled to a less arduous seat, the Council may do worse for the present than ask him to retain the office which he has filled so well. There will be two new members in the Council well qualified to give weight to its deliberations—the one Sir WILLIAM ROBERTS, in the place of Dr. WILKS, as representative of the University of London; the other, Dr. W. THOMSON, direct representative for Ireland, in place of the late Dr. KIDD.

It is difficult in the absence of the programme of business to forecast with accuracy the subjects to which the Council will devote most of its time. But even so, it is not impossible to anticipate some of the chief questions with which it will have to deal. As on most occasions, these arise out of previous proceedings of the Council in relegating to the Executive Committee or some of the special committees of the Council subjects for consideration and report. A resolution of the Council in November, proposed by Dr. GLOVER, required the Executive Committee to consider the subject of the disciplinary functions of the qualifying medical authorities and of the General Medical Council, and to report to the Council at its approaching meeting on the best means of further defining and confirming these functions and bringing them into harmonious and efficient coöperation. The saving in time and funds to the General Medical Council will be immense if the qualifying authorities will do their duty, and the profession will be disappointed if some practical suggestions are not forthcoming for making all bodies which confer diplomas or degrees primarily responsible for the professional conduct of their diplomates. The Executive Committee has already gathered a large amount of information on the subject and has relegated to a sub-committee the power to take legal advice on the question, with the view of extending, where necessary, disciplinary powers to the medical authorities. This may require an application to Government for legislation, but the Council would be well supported by the profession in any such application, and it would be the more likely to be heard inasmuch as it has used its own penal powers with almost excessive moderation and been slow to ask for more. A subject of great interest will be raised by a motion of which Mr. TEALE gave notice six months ago regarding "the present system of accumulated examinations and the enormous increase in the number of rejections resulting from it." The full text of his resolution will be found in another column. No one who knows Mr. TEALE will think that he would be a party to any lowering of the standard of medical education or efficiency, but the examining system is assuming prodigious proportions which do not necessarily involve any increased efficiency in those who pass. Mr. TEALE draws a distinction between what a man should know and what he should "know about," and we may be certain that if he would restrict the area of examination he would not restrict its thoroughness.

The General Medical Council will have to revert to a consideration of its duties in regard to the Apothecaries' Hall of Ireland under circumstances of the most delicate character. By its past action—taken certainly in good faith and for very weighty reasons—it has involved the Privy Council in a question foreign to its tastes and in which it is entirely inexperienced. The Privy Council has suggested to the General Medical Council through its legal representatives that the latter body might see its way to appoint examiners, not only surgical but medical. The question is not an easy one and in all probability there will be considerable discussion thereon. Much, too, may depend on the way in which the Apothecaries' Hall prepares its new application. In any case the General Medical Council is associated with the Privy Council for the first time in its history, and it will be interesting to see how the two bodies coöperate for the settlement of a question — not great, perhaps, but delicate — in the politics of a profession which has hitherto been so well governed from within as to make the interference of the Privy Council unnecessary. No one who watched the proceedings of the Privy Council could fail to see that their lordships were reluctant to interfere and were in no way anxious to violate the domestic government of the profession.

The General Medical Council has so clearly and fully expressed its views on legislation for regulating the practice of midwives or midwifery-nurses that it may not feel itself called upon at the present meeting to spend more time over it. But a report may be expected from a committee on midwifery diplomas—that is, on documents issued by the Rotunda Lying-in Hospital and the Coombe Lying-in Hospital purporting to be diplomas and to be recognised by the Local Government Board as qualifications in midwifery. This assumption of the right of "qualifying in midwifery" on the strength of six months' training, and in the face of the Act of 1886, by hospital officials, unrecognised in the schedule of the Medical Acts is a very serious matter on which the Council should be very explicit. The Education Committee will have to report on the Recommendation of the Council on the subject of Practical Teaching in midwifery raised by a petition from the council of the British Medical Association. This recommendation has often been discussed, and is regarded by many critics as being altogether inadequate and unworthy of the Council. If it emerges again unscathed from the Education Committee it will be a greater wonder than ever. A revised list of

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preliminary examinations held in the United Kingdom will be proposed by the Education Committee, and the Examination Committee will report on the consolidation of the recommendations of the Council respecting examinations in relation to the amendments adopted at the last meeting of the Council. The Report of the Pharmacopœia Committee may be expected to announce the progress of the preparations for a new edition of the Pharmacopœia, conceived in a more imperial spirit than its predecessors and with a little more adaptation to medical uses, but not otherwise greatly altered.

These are the subjects to a consideration of which the Council is committed, and which may well occupy the time which it ordinarily spends over its summer meetings. Besides these it may be assumed that there are various charges of professional misconduct to be investigated which will occupy a day or two of the time of the Council. It was reported in the newspapers that the Alliance of Medical Aid Associations had resolved to appeal to the General Medical Council as complainants against their medical officers. It remains to be seen whether bodies which in the opinion of the profession have done so much to degrade the public estimate of medical service will have the courage to seek redress from the General Medical Council. It is scarcely likely that the Council which resisted the appeal of the profession will be moved by that of the associations. It may nevertheless have the opportunity through its President of saying a word in season to the representatives of the associations on their duties to the medical profession.

PROHIBITIVE legislation with regard to liquor is one of the most difficult problems in the whole range of practical politics. The question is indeed so difficult and so much embittered by controversy that there is the more need for spreading knowledge regarding it and for endeavouring to the utmost of our ability to profit by the experience which is being gradually accumulated in various parts of the world regarding the best means of grappling with what is universally admitted to be a great evil. Temperance reformers are not always well informed and are too apt to assume that their pet panacea would manifestly accomplish all the wished-for objects and soon afford us the spectacle of a transformed world. More cautious thinkers admit the evil but question the efficacy of most of the suggested remedies and are shy of committing themselves to schemes which might remove or palliate some of the evils of the existing system at the expense of calling into existence perhaps even greater evils. The question is eminently one for calm and judicial consideration, and in no other field of reform is it more imperative that we should profit to the utmost of our power by the successes or failures of other nations and countries. Mr. LECKY points out very justly that "the increasing sensitiveness of public opinion to questions of drink is very far from implying that the evil itself is an increasing one. There is strong reason to believe that the exact opposite is the case. A hundred years ago drunkenness was rather the rule than the exception among the upper classes; but with changed habits, and under the stress of public opinion, it has in this section of society almost disappeared. There are, no doubt, still some dissipated circles where it may be found, and most physicians can point to cases among the upper classes of secret drinking, which is, perhaps, usually of the nature of a disease; yet it is probable that many of my readers may have moved widely and constantly through good society, mingling with men of various tastes, habits, and professions, without having ever seen at a dinner-table a case of positive drunkenness." We entirely endorse this view, but we are not confident that any similar change for the better has taken place in the lower ranks of society. Mr. LECKY believes that there has, and we can only hope that it is so. We will not follow the distinguished historian through his very just but somewhat obvious remarks that much drunkenness is due to miserable homes, bad cookery, impure or deficient water-supply, unhealthy conditions of labour, adulterations, want of innocent and wholesome amusements, and so on. On these points much might be said, but the conclusions which the facts suggest are, on the whole, self-evident. We prefer at present to devote the space at our disposal to an endeavour to sum up the valuable facts detailed by Mr. LECKY regarding the various prohibitive or repressive measures attempted in various countries in relation to the liquor traffic.

Scotland led the way in these islands by a Sunday closing measure passed in 1854, Ireland followed with a similar measure in 1877, and Wales in 1882. Similar legislation has already been adopted in nearly all the colonies. It is in the United States, however, that the most determined efforts have been made to grapple with the drink-evil. Prohibition was adopted in the State of Maine in 1851, extended in its operations in 1877, and made part of the State Constitution in 1884. Other States have followed this example, but the fate of prohibition in America has been a curious and instructive one. "At the close of 1894 there were seven States in which the manufacture and sale of spirituous and malt beverages were forbidden, though the citizens of those States may obtain them for their own private use from other States. Nine or ten other States had tried prohibition and abandoned it, and they include some of the most important and populous States of the Union, amongst others New York, Massachusetts, Ohio, Illinois, and Rhode Island." It would appear that prohibition has achieved a certain amount of success in thinly populated territories—although even in these it has been the occasion of extensive smuggling and illegality—but that it has been almost a complete failure among the large centres of population. More success would seem to have attended the system of making the licences expensive and legalising some degree of local option. Canada has followed somewhat similar lines of policy. The Scott Act of 1878 provided that "on the petition of a quarter of the electors of any town or city a direct vote should be taken on the question whether it should be placed under the provisions of the Act. If a bare majority of the voters desired it, the question was decided for three years. In that case all public-house licences lapsed at the end of the year without compensation to the owners, and the ordinary manufacture and sale of intoxicating liquors as a beverage was absolutely prohibited." This system proved a failure in practice, and as a general rule the

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former licensing system has been resumed. In New Zealand a somewhat stringent system of local option is in force. In most of the other Australasian colonies "the principle of local option, limiting the number of licences in a given district, generally prevails, though with considerable variations of detail and with considerable degrees of stringency." In Scandinavian countries the well-known Gothenburg system has been extensively adopted. By this scheme the sale of spirits and wines is granted as a monopoly to a company composed of leading citizens, who bind themselves by charter not to derive any profit from the sale of these liquors, the company being also empowered to sell malt liquors, coffee, tea, soda- and seltzer-water, cigars, and food at the ordinary scale of profits. The results of the general adoption of the Gothenburg system in Sweden and Norway have been very striking. Intemperance has been immensely reduced, "the consumption of spirits has shrunk to a mere fraction of the former amount," beer has largely replaced spirits, to the great benefit of the community. In Switzerland, where drunkenness had assumed alarming proportions, drastic measures were adopted in the year 1887. A law was passed prohibiting private distilling, and the State became the one wholesale spirit merchant. It was enacted that one-fourth of the spirits sold should be distilled in Switzerland, that the profits of the monopoly should be distributed among the different cantons, and that at least one-tenth of the surplus revenue should be employed in some way calculated to counteract the evil effects of alcohol. Considerable success has attended this measure and the consumption of spirits has been reduced 20 to 25 per cent.

We shall leave the above facts to speak for themselves. They seem to point emphatically to two or three conclusions. They show that the drink-evil is a real one, and that many countries have been compelled to face it. They show that the policy of prohibition has been, on the whole, a decided failure. They show that great success has attended prudent measures of regulation and repression. The logical deduction would seem to be that we must in this country prepare ourselves for some developments of legislation with regard to liquor, and that while we should view with great suspicion all extreme, tyrannical, and confiscatory schemes, we should lend a patient and attentive hearing to any moderate and well-considered measure of reform.

No words of greater weight than those we recently quoted from Mr. LECKY'S work on "Democracy and Liberty"[1] are needed to advocate the right of medical men to a place in the House of Lords as a reward for the services which they render to their country; but there is another argument which may be put forth, not resting on the claim of medical men to be rewarded in common with members of other professions for their services by admission to the Peerage, but founded on the advantages which might accrue to the country if the medical profession were represented in the Upper Chamber. Surely it is an anomaly that, while the highest legislative body in the land numbers among its members men learned in the law and in the making of laws, there should be none who possess by special study a knowledge of a subject with which an important part of those laws deal, the subject of public health. We say "an important part" advisedly, for on the health of a nation depends in a great measure its wealth, and the wealth of a nation, all other things being equal, is a criterion of its power. Not only is it an anomaly, therefore, but to a country like England a reproach, that among those who possess the right to veto measures brought in by the Lower House dealing with matters on which the whole stability of the country must ultimately depend there should be no member who can boast of a practical knowledge of medicine, knowledge upon which the great work of sanitary reform—"the noblest achievement of our age," as Mr. LECKY says—is based.

In days gone by, when little or no attention was given by our legislators to sanitation, there may have been some excuse, although no justification, for the omission of medical men from the House of Lords; but in the present day, when the importance of laws relating to public health is becoming more and more recognised, the filling of such a gap would be in keeping with the progress of the age and materially assist the work of sanitary reform. Endeavours have been made to educate the people in the laws of hygiene, and their representatives in the Commons can be trusted to a certain extent to see that the national health is looked after. But the House of Lords is not an elected body, and, therefore, whatever may be the wishes of the people they have no power to place representatives in the Upper House. To rightly deal with matters on which the health of the public depends involves a knowledge only to be gained by the study of medicine, and though it is true that there are in the House of Lords men of high scientific attainments who, by reason of their special knowledge, are able to take a scientific view of health questions, such details as can only be rightly understood by a medical man have practically to be left to the care of those who by necessity must have only a theoretical knowledge of such matters. In certain cases expert advice is absolutely necessary, and special committees are appointed to deal with special questions before they are dealt with by the Legislature, but how much time and how much expense might be saved to the nation if the legislative body in the first instance were partly composed of those whose training gave them the right to deal with the subject practically? A distinguished member of the House of Lords has himself seen the desirability of the creation of medical peers. Lord REAY, commenting at a recent dinner on the absence of the medical profession from the Upper Chamber, said: "We should be all the better for expert advice in the House of Lords," and no truer remark could have been made: the country would indeed be undoubtedly "all the better" if the roll of the peerage contained the names of men learned in medicine as well as of men learned in law.

This being so it would have afforded us the greatest satisfaction and pleasure—and in saying this we can claim to represent the feeling of the whole of the medical profession—if the recent list of peers among the Birthday Honours had included the name of one whose services to the nation and to humanity, in the introduction

[1] THE LANCET, May 2nd, 1896.

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of antiseptic surgery, have received universal recognition. Such services are indeed beyond reward, but the admission of the President of the Royal Society, the recipient of numerous honorary distinctions from universities and learned societies, both English and foreign, would add lustre to the peerage. It is from amongst such men that the Second Estate of the Realm should be reinforced if, as it should, it is to contain the real nobility of our land. It is equally a matter of surprise and regret that this occasion should have passed without other leaders in medicine, science, and literature receiving that recognition from the Head of the State which is so freely accorded to the politician.

Annotations.

"Ne quid nimis."

THE CHURCH ANTI-VIVISECTION LEAGUE AND HOSPITAL SUNDAY.

WE have received the following, which we print exactly as it stands:—

158, Lancaster-road, W., May 7th, 1896.

DEAR SIR,—Our Committee feels that the approach of Hospital Sunday makes it desirable to bring before you the great influence the Clergy have in their power to exert towards the diminution of Vivisection by stipulating as a condition of assisting the Mansion House Fund by their offertories that they shall only be given to those hospitals which have no vivisectional laboratories attached to them. The Committee is aware that the Mansion House Committee may very likely refuse compliance with this condition at first, but if made by many of the Clergy it must ere long succumb to the force of public opinion, and the Clergy will find this change heartily welcomed by many members of their congregations who now scruple to contribute on Hospital Sunday. So long as the Clergy contribute to the support of those Hospitals which have laboratories attached to them they are directly supporting and subsidising vivisection, and they are alienating from the Church an increasing number of their people. Great and solemn, therefore, is the responsibility of the Metropolitan Clergy in this matter. If there are any Clergy who doubt the urgency of the case the Committee of the Church Antivivisection League will be glad to supply them with full information and proof of the assertions contained in this letter.

Signed by order of the Executive Committee,
E. A. SABEL, Hon. Assist. Secretary.

We have no idea who the members of the Church Anti-vivisection League may be, whether laymen or clerics, or what the standing of the latter may be, and we are not now going to argue the question from the scientific point, but in view of the statement that an increasing number of people are being alienated from the Church by the support given to vivisection by the clergy we would ask the Church Anti-vivisection League for proof of this alienation. Also, can the League point to any definite condemnation of vivisection by any branch of the Church? It may be argued that neither has the Church approved of it, and she has not in so many words; but with regard to the relation of animals to man various divines have spoken clearly. St. Thomas Aquinas: Summa, Q LXVI., Artic 1. As to whether man has a right of dominion over animals, &c.: "Per rationem et voluntatem potest uti rebus exterioribus ad suam utilitatem, quasi propter se factis, semper enim imperfectiora sunt propter perfectiora." St. Augustine, writing of animals, says: "Justissima ordinatione Creatoris et vita et mors eorum nostris usibus subditur." To come down to later times the Rev. Stephen Hales was not only a cleric but a vivisector and a most accomplished physiologist. We should say that these authorities would weigh more with the metropolitan clergy than the manifesto of the Church Anti-vivisection League, and to this body we wish to point out that no portion of the Hospital Sunday Fund is devoted to any medical school, so that we fail to see how by contributing for the relief of the sick and needy the clergy subsidise vivisection. Useless cruelty, of course, is to be avoided as being irrational. In saying this we know that our opponents will say, "Exactly—all reason and no heart." But we use the word irrational in its philosophical sense. No one deprecates cruelty more than we do. Ludwig, perhaps the greatest physiologist and most persistent vivisector that ever lived, was noted for his humanity and love of animals. We would commend to the notice of the Church Anti-vivisection League a sermon preached at St. Peter's, Vere-street, on Oct. 25th, 1871, by the then incumbent, the Rev. J. C. Coghlan, and a very admirable paper which originally appeared in the *Irish Ecclesiastical Record*, "Vivisection and Theology," by Mgr. J. S. Vaughan.

"THE OPTICIAN v. THE OPHTHALMIC SURGEON."

WE are glad to find that our remarks on "The Optician v. the Ophthalmic Surgeon," in a recent number of THE LANCET,[1] have been taken in good part by a well-known optician, whose letter we print, and who appears to coincide with the views we expressed. It is precisely because (to use the words of our correspondent) the advances of our knowledge during the last few years have "lifted the whole matter into the professional sphere" that it behoves opticians to be chary of prescribing glasses, however competent they may be to determine the precise lens, or combination of lenses, required. Even in this respect there are limitations to their powers, for the optician would not be justified in employing atropine, without the use of which in many cases the appropriate glasses cannot be ascertained. Ophthalmic surgeons have reason to be grateful to the opticians for the beauty and perfection of the lenses they supply, and for many useful suggestions they have made in regard to mounting, and we are sure that in the long run those opticians will thrive best who will devote their energies to the perfecting of their apparatus and the development of the resources of their art. Though they may be thoroughly competent to deal with the physical aspect of the question, additional and special medical knowledge is required to determine whether it is advisable to *adopt* these very measures which, from a physical point of view, leave nothing to be desired.

PROPOSAL TO REDUCE NOTIFICATION FEES.

THE medical profession, to an extent probably in excess of any other, performs voluntary work for the public good, and from time to time the profession receives in return from that section of the public, for which in large part it labours gratuitously, indications of the want of appreciation in which its professional services are held. Whether there is any relation of cause and effect between this gratuitous labour and this want of proper appreciation is a question we cannot now stay to discuss, but we wish to draw attention to the recently expressed views of certain district councillors in reference to notification fees. The rural district council of Halesowen have had, they tell us, under their very serious consideration the large amounts paid by them to medical practitioners for notification under the Infectious Diseases (Notification) Act, 1889. As a result of their deliberations they are of opinion that a smaller fee than 2*s*. 6*d*. would sufficiently remunerate the practitioners who are not medical officers of any public body or institution for their trouble, and they also think that there is need for only one uniform fee for notification. In few words, the Halesowen district councillors consider the sum of 1*s*. an adequate recompense to any medical man for notifying a case of infectious disease to the local sanitary authority, and they are apparently endeavouring to convert other sanitary authorities to their way of thinking, in the hope of inducing the Local Government Board to take measures for bringing a Bill before Parliament to amend the Notification Act in the sense referred to.

[1] THE LANCET, May 9th, 1896.

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We imagine, however, that the Local Government Board have far too great an appreciation of the value of the notification of infectious diseases and of the services rendered by medical men to the State in this respect to risk the breaking up of the system of notification by encountering the hostility of the whole profession, and we may further assure the councillors that the medical profession will if necessary take steps to prevent any further reduction in notification fees. If the rural councillors who propose the alteration have no idea of the amount of money which has to be expended on the education of a medical man before he can properly diagnose cases of infectious disease, and of the responsibility and strained relationships which notification often entails, we are sorry for the rural district over which these rural councillors preside.

THE EPILEPTIC COLONY AT CHALFONT: LAYING THE FOUNDATION-STONE OF A HOME FOR WOMEN.

ON Tuesday last, May 26th, the foundation-stone of a Home for Women was laid with full Masonic honours by Lord Addington, Provincial Grand Master of Buckinghamshire, assisted by the Provincial Grand Officers. About 200 visitors journeyed from London and drove through very picturesque country from Chorley Wood Station. About eighty Freemasons were present, including many medical men, and their Masonic garb added picturesqueness to the interesting ceremony. Among others present were Mr. Passmore Edwards, Archdeacon Sinclair, Dr. Buzzard, Dr. Ferrier, Dr. Shuttleworth, Dr. Fletcher Beach, Dr. Aldren Turner, Dr. Colman, Dr. Morton, Dr. James Taylor, Dr. Page May, and Mr. George Cowell. At the close of the ceremony an interesting and eloquent account of the aims and intentions of the National Society for the Employment of Epileptics was given by Mr. Micholls, chairman of the Executive Committee. It appears that there are at present thirty-six male colonists, who carry on chiefly market gardening, carpentering, and shoemaking. The remarkable generosity of Mr. Passmore Edwards (who erected the first permanent home for men) has again been shown in his undertaking the cost of this new Women's Home, which will accommodate twenty female colonists whom it is proposed to employ mainly in the laundry, at needlework, and in the dairy. We understand that Mr. Edwards also intends to add a Home for Epileptic Children. The remarkable progress made by the colony in less than two years from its inception indicates clearly how great a need there must have been for such an establishment and that there is a great future in store for it, for it not only gives shelter and protection to a class of sufferers whose lot is often miserable in the extreme, but, by providing them with useful productive occupation under favourable circumstances, prevents, or at least retards, the dulling of the faculties, which is frequently the saddest accompaniment of the disease. Those who were present in the autumn of 1894, a few months after the colony was opened, could not fail to have been struck with the difference in the expression of the faces. Almost all showed to the skilled observer indications of their terrible malady, but there was an alertness and a look of independence about many of them which was wanting before, whilst their appearance suggested that physically they were in better health than many of the visitors. We were informed that there has been no case of serious illness among the colonists apart from the immediate results of their fits, a striking tribute to the healthiness of the site selected by the committee. It was stated by Dr. Buzzard that the medical staff were fully satisfied with the beneficial effect that residence at the colony had had on the epileptic attacks. The work, however, cannot be carried on without considerable expenditure. The labour of the colonists requires much supervision from non-epileptic skilled workmen, and supervision is also required for protecting the colonists when attacked by fits and for maintaining order and discipline. It is certain that the erection of the new Home for Women in the neighbourhood of the men's home will necessitate increased watchfulness and probably a larger staff, proportionally, than is at present adequate. Dr. Buzzard mentioned the necessity of providing also for a resident medical officer—a need recognised by the Committee in their last report, and he strongly appealed for funds to enable a suitable residence to be erected. No one who has had practical experience of institutions of this kind will question the urgency of this proposal, which becomes doubly necessary now that the committee have decided to admit women as well as men to the same colony. Lord Addington, in responding to a vote of thanks, intimated his intention of specially helping towards the establishment of a residence for a medical officer, and when next we have occasion to refer to the colony it is to be hoped that others will also have lent a hand and that this most necessary addition may have been made. Subscriptions are urgently required both for further equipment and for current expenses and should be sent to the secretary, Mr. Gaskell, National Society for the Employment of Epileptics, 12, Buckingham-street, Strand.

IMPLYING REGISTRATION.

WE have submitted the recent decisions in the cases of Reg. *v.* Frickhart and Reg. *v.* Bridgewater for his opinion to a legal friend well acquainted with our own profession. He writes as follows:—In these two cases the courts have held that the mere use of an unregistered foreign diploma in connexion with medical practice does not constitute such a "wilful and false" pretending to be registered as to bring the user within the fortieth section of the Medical Act of 1858. The case of Reg. *v.* Bridgewater (heard by a Divisional Court on the 19th inst.) does not present any special features beyond the fact that Mr. Bridgewater used, in addition to the letters M.D., the explanatory letters U.S.A. That the law upon this point is not in a perfectly satisfactory position may be taken to be proved by the observation of Mr. Justice Collins who remarked in deciding this case that the law was "in a fog." The difficulty is that of determining what amounts to a representation that the practitioner is registered. When the statement made is absolutely false or fraudulently misleading the Courts will convict, but when the statement actually made is true, and the only thing that misleads is the very natural inference that a medical qualification actually held is registered, the Courts have manifested great reluctance to press the law against individuals. This feeling is a very natural one and one of which account should be taken by those who are responsible for putting the law in motion. There is a tendency both within the medical profession and outside it to look upon the offence of falsely pretending to the possession of medical qualifications as an encroachment upon the privileges of qualified men, and this, although it is true enough, is not a very instructive view of the position. The status of a registered medical practitioner is, in a sense, a privileged one, but the privilege is not conferred for the benefit of the privileged class but for the benefit of the general public. If ignorant or unskilful persons are permitted to practise on the public the public must suffer, and it is for the protection of the public against this form of suffering that the Register is published and protected by penalties against falsification. It is, therefore, a very inadequate view of the statute to look upon it merely as the charter of the medical profession. It is this only because it is much more; the protection of the public is its end and the protection of the profession a means

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to that end. This line of reflection suggests the expediency of shaping charges of the kind referred to as far as possible in such a way as to bring into strong relief the public mischief which results from any relaxation of the rules regarding registration or the placing of any obstacle in the way of a thorough and efficient working out of the registration scheme. It is, no doubt, possible to show by argument that in this matter the interests of the medical profession and the interests of the public are indistinguishable and that what injures the one injures the other. Hence the wisdom, at any rate until the law has emerged by successive decisions out of the "fog" and taken shape in clearly defined rules, of submitting to the courts only such instances of encroachment upon the sphere of medical practice as affect in a way too plain for discussion the public interests which it is the object of Medical Acts to protect.

THE HEATH SCHOLARSHIP.

BY the will of the late George Yeoman Heath, Professor of Surgery in the University of Durham and President of the Durham College of Medicine, a sum of £200 is awarded every second year for a surgical essay. The trustees of the scholarship have announced that the second award will be given to the writer of the best essay on "Congenital Deformities, their Pathology and Treatment." All graduates in medicine or in surgery of the University of Durham are eligible to compete for this scholarship, and the essay which must be type-written or printed, should be delivered to the trustees not later than March 31st, 1898. The essay, together with any specimens, drawings, casts, microscopical preparations, or other means of illustration accompanying it, will become the property of the College, though by permission, the essay may be printed for general circulation by the Heath scholar. This is one of the most valuable surgical prizes in the kingdom, and the competition should be keen.

THE ROYAL INFIRMARY OF NEWCASTLE.

THE prominence and activity of Dr. Philipson in Newcastle and its school of medicine—a part of the University of Durham—give exceptional interest to the fact of his resignation on the score of age. The rule of the infirmary requires resignation at sixty years of age—a time of life when a physician is now often at his best, with the advantages alike of youth and age. The post held for twenty-eight years so honourably by Dr. Philipson is naturally one of the prizes coveted by aspirants to professional fame in the city of Newcastle, which has long been noted for men of strength in the profession. The committee have the responsibility of the succession. They will have no excuse for not making a fit appointment. It is understood that Dr. George Redmayne Murray and Dr. Thomas Beattie are candidates for the post. The election will be watched with more than local interest.

PAIN IN CASES OF TUMOUR OF THE SPINAL CORD.

PAIN has generally been looked upon as one of the most constant symptoms accompanying tumours of the spinal cord. In the March number of the *Journal of Nervous and Mental Diseases* Dr. Pearce Bailey reports two cases which were remarkable by reason of the absence of pain which characterised their progress, and while they do not permit any general rule to be formulated with reference to this point they are interesting as a valuable contribution to the symptomatology of an important class of cases. The first was that of a woman sixty-five years of age who died from nephritis and pneumonia and in whom a tumour was discovered involving the dorsal region of the cord between the seventh and eighth roots. This tumour had given rise to no symptoms, either motor or sensory, and was, indeed, accidentally discovered in the course of a systematic examination. Its character was that of a psammoma. The second case was also that of a female patient, twenty-nine years of age. She had had between 1889 and 1893 several operations for "tumour," but the nature and situation of these could not be discovered. Ever since 1889 she had been troubled with recurring attacks of paralysis and numbness affecting all four extremities. She made a good recovery from several of these, but she was readmitted to the hospital in 1895 with the history of the sudden onset of the state of paralysis in which she was when admitted. There was in all four extremities extensor paralysis with flexor contracture—a condition, indeed, suggesting peripheral neuritis; but the knee-jerks were active, and there were cystitis and incontinence of urine. She denied ever having been subject to severe pains. The patient died with lung symptoms and suppression of urine, and at the necropsy a large quadrilateral mass was found on the ventral surface of the dura mater in the cervical region, involving the first four cervical roots. The dura mater itself was only slightly thickened. The tumour was apparently a degenerated gumma, and there were considerable changes in the neighbouring vessels and ascending and descending degenerations in the cord itself. The writer refers, in conclusion, to a case reported in *Brain* by Dr. Michell Clarke, also of spinal tumour without pain, and he is of opinion that the presence or absence of pain, and also the degree of its intensity, may have some relation to the slowness or rapidity of growth of the tumour.

"RETURN" CASES OF SCARLET FEVER.

THIS interesting subject seems at irregular intervals to attract the attention of the public and to call for some comments in our columns; but we are glad to see that the lay press is now approaching the matter in a fair spirit of inquiry and that the occurrence of so-called "return" cases is not at once followed by indiscriminate charges of neglect against the hospital authorities. The most recent group of cases which are explicable on a thesis of infection being conveyed by discharged patients from a fever hospital is reported from Richmond, and there certainly appears to have been a very remarkable chronological sequence in some of the cases. A patient, after eleven weeks' isolation in hospital, was discharged presumably free from infection, but five days later a sister was attacked by the same disease and three days after this—i.e., eight days after the first patient's discharge—three other children were attacked. All these patients were isolated for eleven weeks, but within a week of their return home the mother of the family was attacked. It is very strange that this series of cases should occur in the same family, and it would certainly appear probable that some of them were connected with the return of patients from the hospital. We are not in possession of all the facts necessary to form a judgment on the merits of this little outbreak, but if the laundryman in whose house the cases occurred, and who has doubtless suffered much hardship in connexion with the outbreak, considers, as apparently he does, that he has cause of complaint against the hospital authorities, it will perhaps be better that inquiry should be made as to whether all practicable precautions are taken at the hospital in question, and whether proper disinfection of the house was performed after the removal of each case or group of cases—in other words, that the question should be investigated from both sides. It would seem improbable that the whole series of cases is to be explained by carelessness on the part of the hospital authorities, as after the occurrence of the first "return" case the authorities would have been especially careful as to disinfection, &c. It is interesting in connexion

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with this outbreak to reflect as to what would have been the position of the laundryman had none of the cases been isolated. In the first instance, it might have been necessary to suspend business operations during the presence of a case or cases of infectious disease on the premises, and having regard to the fact that apparently the majority of the cases, and certainly the mother, were exposed to the disease on more than one occasion, it does not seem probable that had there been no hospital isolation all the family would have taken the disease almost simultaneously. While therefore we sympathise in every way with the laundryman, it appears to us that his position might have been much worse had there been no isolation hospital in existence. One of the main objects of isolation hospitals is to enable the business of an establishment to be carried on after the removal of a case of infectious disease to hospital and the completion of disinfection of the premises.

THE GENERAL MEDICAL COUNCIL.

AT the forthcoming meeting of the General Medical Council Mr. Pridgin Teale intends to bring forward the following motion: "That the present system of accumulated examinations and the enormous increase in the number of rejections resulting from it are not only unjust to the student but damaging to medical education; therefore, that the time has arrived when the General Medical Council should consider: (*a*) how far examinations and the occasions of rejections can be reduced in number, and (*b*) how far, whilst maintaining effective examinations in those subjects which it is essential that every medical man should 'know' and 'retain the knowledge of,' it is possible to withdraw from the sphere of public examination several other subjects which it is desirable that every medical man should 'know about,' but with the details of which he need not permanently burden his mind, the 'bird's-eye-survey' of such subjects being ensured by compulsory short courses of lectures with class examinations certified by the teacher."

THE LIVERPOOL LADIES' CHARITY AND LYING-IN HOSPITAL.

THE angry controversy which has been raging between the board of management of this charity and the late medical staff can if persisted in only end in the complete extinction of the institution. The medical profession in Liverpool is unanimous in its condemnation of the harsh and unjust treatment meted out to the late staff by the board. The attitude of the board towards the staff has not only been offensive but totally unworthy of a body posing as competent to manage the affairs of a public charity. If strong language has been used in the local press by the friends and sympathisers of the late staff, it is, under the circumstances, justifiable. When such epithets as "brutal," "inhuman," and other like phrases have been freely applied to members of our profession for not lending themselves to the views of these gentlemen small blame attaches to the friends of the late staff for hitting out from the shoulder. The board of management consists nominally of ten members, but practically of only four or five. All the letters received by the medical staff purporting to come from the board of management are alleged to have been written by the president and in some instances to have come from him alone and not from the board. The other governing body is the committee of ladies, who are mostly the wives of the members of the board of management; the form of confidence reposed by them in the late staff is instanced by their appreciation of charges of neglect of duty occasionally preferred by the staff against the midwives of the charity; these charges resulted usually in judgment being given in favour of the midwife, in direct opposition to the report of the medical officer who may have made the accusation. A climax of feminine interference was reached by the expression of opinions "on the pattern of an instrument selected by the staff and criticising their professional actions." We are strongly of opinion that, as the medical staff have resigned, the president and one or two other members of the board who have associated themselves with his course of action should also resign. A meeting of the subscribers to the charity should then be held, when means could surely be found whereby the government of the charity could be reconstituted on a satisfactory and proper basis.

NEWSPAPER THERAPEUTICS IN AUSTRALIA.

WE regret to see in the *Argus* columns of letters by Dr. Gresswell, Mr. Moloney, Mr. Duncan Turner, Dr. Louis Henry, and other well-known Australian physicians discussing the use of the cold bath in typhoid fever. Dr. Gresswell treats his audience, which is the public, to arguments based on albuminous infiltration and fatty degeneration. Surely it is most unseemly that such practitioners should set the bad example of discussing important questions in therapeutics in the newspapers. We shall not pursue this note of censure further than to remind them that they are, no doubt thoughtlessly, violating the best traditions of the profession.

POST-MORTEM INSTRUMENTS IN PUBLIC MORTUARIES.

THE St. James's (Piccadilly) Vestry have passed unanimously the following recommendation of their Public Health Committee:—"That the necessary instruments for complete post-mortem examination be provided for use in the mortuary, Dufours-place, by the vestry, the same being required in the interest of progress, apart from the tribute to the medical profession, the committee believing that it is desirable to expedite and perfect any measures bearing upon the spread of science as affecting the public weal, the detection of crime, &c. The instruments used for this purpose are cumbrous and are not, as a rule, possessed in their completeness by medical men, who are only on rare occasions called upon to assist the authorities in medico-legal investigations." We hope that the other vestries which have not yet supplied these essentials for post-mortem examinations will follow this enlightened example.

PERSISTENT RECALCITRANCY.

THE maintenance towards a matter of any attitude which has been shown by repeated experience to be wrong is, to say the least, sheer folly. When the matter is one which seriously affects the health of the community such action becomes almost criminal. Such, we take it, is the attitude of boards of guardians towards the Vaccination Act, which leads them persistently to refuse to accept the dictum of the facts which are ever coming before them in the shape of data from one and another centre of small-pox activity to show that the one unique specific against the inception of the disease in a fatal form, and oftentimes, as proved by comparative data, against attack in any form, is vaccination in infancy, and, better still, this operation supplemented by revaccination in later years. The plain facts, as shown by recent data from Gloucester and other places, were laid before the Hackney board of guardians by one of their number early this month, and much discussion followed the motion to rescind a resolution passed in 1889 to withhold action under the Vaccination Acts pending the sitting of the Royal Commission on Vaccination. The old points of resort to compulsion and interference with the liberty of the subject were among those brought up against the motion, the fact being ignored

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that education has now to be enforced, and is in its way eminently an interference with liberty of conscience. The law of vaccination is by no means an isolated example of the requirement of enforcement of a beneficent measure to ensure its general success. With nearly 30,000 unvaccinated children in the union of Hackney the postponement of action in relation to defaulters may at any moment find the district visited by small-pox. When the inaction of a public body in opposition to the law of the land endangers the health of the community it seems high time that body was relieved of the power of inaction and the duty unfulfilled handed over to those who will faithfully carry it out. The anomaly of a sanitary body doing its best to stamp out disease which the recalcitrancy of another local body has fostered is one that should cease. And in this connexion the State has a duty which needs to be acted upon. When State and local authorities are alike inactive the anti-vaccinationist flourishes and the seeds of future epidemics of small-pox are sown broadcast. Perhaps the Vaccination Commission may report some day and tend to hasten the coming in of better things all round.

SANITARY AUTHORITIES AND THE VACCINATION ACTS.

THE desire on the part of sanitary bodies to have in their hands the administration of the Vaccination Acts seems to be growing. We notice that it is now stated that the Lewisham district board of works are about to apply to the Court of Queen's Bench for a writ of mandamus to compel the Lewisham board of guardians to enforce the Acts. This, we take it, is but another way of expresssing the view that the duty would be better entrusted to the board of works themselves. We trust that in many more quarters there may rise up the demand on the part of health bodies for the better administration of the Acts now that we may be exposed next winter to a general small-pox epidemic. It is a distinctly healthy sign that our local sanitary guardians are growing keenly alive to the absurdity of themselves using every effort for the extinction of small-pox, and spending the ratepayers' money on isolation hospitals and the like, while the Poor-law guardians are quietly sitting by and allowing people to disregard the law, with resulting suffering, death, and expense.

ACTION FOR MALPRAXIS AGAINST AN UNREGISTERED "DENTIST."

AN action (to which allusion was made last week in our Birmingham correspondent's letter) has recently been tried at the Birmingham county court in which a labourer sought to recover damages for unskilful treatment from a druggist who was not a registered dentist. The facts of the case are briefly these. The plaintiff in June of last year went to a branch establishment belonging to the defendant to have a tooth extracted. He was seen by an assistant, whose name, also, does not appear on the Dentists' Register, and who made a fruitless endeavour to remove the tooth, and then suggested that the plaintiff should go to a proper dentist to get the remaining portion of the stump extracted. As far as can be gathered from the report the face and neck were swollen at the time of the operation. On the following day a medical man was called in and he stated that the bone had been splintered by the attempt to remove the tooth. After being five weeks under the care of the medical man the plaintiff went to Queen's Hospital, where some necrosed bone was removed, the patient not being able to resume his work until April 15th of this year. For the defence a dentist was called, who stated that he had known the assistant for four or five years and considered him a competent operator. In reviewing the facts of the case it would be difficult to say whether the necrosis was the result of the operation or the condition calling for extraction of the tooth, and, still further, it would be difficult to say whether the operation was performed skilfully or unskilfully. The point, however, which must not be overlooked is that there was no evidence beyond that of the dentist called for the defence that the assistant in question possessed the necessary skill. He was not registered, and admitted in his evidence that he had not been apprenticed to a dentist, so that we may certainly question whether he possessed the requisite knowledge. The case is one of those which help to point out the fact that better legislation is required to guard the public against unqualified practitioners whose knowledge is generally but slight and whose skill can usually be gauged at about the same standard.

FEVER AT MIDDLESBROUGH.

THE experience of Middlesbrough in the matter of fatal fever during the last twelve months has not been a happy one, judging by the successive returns of the Registrar-General issued in that period. Up to the close of last year the deaths from fever showed increasing prevalence, and the months that have since elapsed demonstrate a further increase, the first three months of the present year having seen a score of deaths from fever in the borough. In the face of these facts the action of the town council at its first meeting in the current year attains a special significance. The question of the transmission of the annual reports of the medical officer of health to the Local Government Board was raised, and it was asserted that such transmission would probably end in the council having to carry out the recommendations of its health adviser. The council had some time ago even gone so far as to refuse to accept repayment of a portion of the health officer's salary in order to avoid the need of sending up to the Whitehall authorities the annual productions of the medical officer. The requirements of death registration are, however, inexorable, and the facts which they bring to light in the case of Middlesbrough are the more likely to appeal to headquarters by reason of the wilful withholding of local reports. "Where ignorance is bliss 'tis folly to be wise" is not, we trust, likely to be the maxim of the central authority, and many a searching inquiry of a helpful nature has been set going by circumstances far less provocative of State intervention.

ACCIDENTS AND INEXPERIENCE.

THE very sad boating disaster which cost the lives of three persons last Saturday on Lake Windermere cannot fail to excite in every mind the keenest regret. It is further noteworthy as being typical of a class of accidents which is absolutely inseparable from almost any form of athletic recreation so long as obedience to the calls of caution and experience is not accepted as the governing principle. Whether it be the management of a sailing boat—and much more if this be a racing cutter—the climbing of a peak, a long swim, a ride on a horse or a bicycle, a row on the river, or a physical effort whatsoever or wheresoever, requiring skill in him who makes it, this rule holds. The novice must be content with learning; if he is not, no authority or act of law which does not also forbid his exertions can save him from getting into trouble. We do not ignore the duty of warning which belongs to professional instructors. The Alpine guide, the boat owner, and a hundred other experts must share this responsibility, but still another factor is required for the safe attainment of success—one who will listen to advice. We trust that a reasonable caution will still be in time for any who shall seek healthy recreation in various forms of sport this summer. At the inquest, which was held on May 25th, the jury, after returning a verdict of "Accidental death," recommended the local authority to prohibit the letting of

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yachts unaccompanied by a boatman accustomed to the lake under penalty of forfeiture of the licence, and also an official inspection of yachts let out for hire in order to make sure that they were fitted with efficient water-tight compartments.

MEDICAL CERTIFICATES AND BOARD SCHOOLS.

THE example of the London School Board has infected one of its near neighbours. Alfred Barnes, of Church-street, West Ham, was summoned before Mr. Baggallay because his child did not attend school. He handed in a duly signed medical certificate stating that the child was unfit to attend school. The School Board authorities of West Ham refused to accept this as the nature of the disease was not stated. More than this, the School Board officer advised Mr. Barnes to change his medical man. Now, apart from the rudeness of the Board in refusing to accept a document which it has no right to demand, we contend that, in addition, it has no right to know what is the matter with any child. That is a confidential matter between the medical man and the patient or the patient's guardians, and we consider Mr. R. Brinsley Hunt, the medical attendant, was perfectly right in refusing to state on the certificate the nature of the disease. We do not expect courtesy or anything else except a constantly increasing rate from a School Board, but we do from a magistrate. Mr. Baggallay is reported as saying that "Dr. Hunt was very foolish and the School Board officer very wise. In respect to the remark of the officer to Mr. Barnes, if he (Mr. Baggallay) had been the School Board officer he would have said the same thing," which we can well believe after reading the rest of Mr. Baggallay's dicta. The summons was withdrawn, and thus another School Board has "incurred the odium of unsuccessful legal proceedings." Mr. Hunt is to be congratulated, and we hope his example will be studiously followed.

EASTBOURNE AND THE VACCINATION ACTS.

AT length, after some years of neglect of duty, the Eastbourne board of guardians have resolved to put the Vaccination Acts into force. This decision was reached at the meeting of the board on the 22nd inst., after a division upon a motion brought forward by Miss Brodie Hall and seconded by the Rev. E. E. Crake. Miss Brodie Hall referred to the "terrible object lesson" with which Gloucester had furnished them and pointed out that small-pox might invade any town, however well equipped in other respects, if the inhabitants were deprived of the protection afforded by vaccination. Mr. Crake protested against the indifference to this crucial question hitherto displayed by the board, and especially referred to the serious danger to the schools and colleges of Eastbourne which would be caused by an outbreak of small-pox in the town. It came out in the discussion that the vaccination officers had received instructions to enforce the Acts in accordance with a resolution passed on May 25th, 1893; but why these instructions had not been carried out did not transpire. One speaker (Mr. Luck) averred that the reason for the delay in the issue of the report of the Royal Commission was "because the evidence was dead against the vaccinationists." Dr. Adams said that "if they were to take six vaccinated children of six months old and six children of the same age who had not been vaccinated, the anti-vaccinationists would not dare to expose the unvaccinated to the infection of small-pox." Referring to remarks by Mr. Luck, Dr. Adams said that the medical profession was in favour of vaccination because they knew it was the best protection from small-pox that they could give to their children. The resolution to enforce the Acts was carried by thirteen to eight. The attitude hitherto assumed by Eastbourne on this question has always seemed to us a remarkable thing; for if small-pox were to invade the town and spread amongst the unvaccinated children, as it has done at Gloucester (where the proportion of the unvaccinated was no higher than at Eastbourne), this charming seaside resort would receive a blow to its prosperity from which it would take years to recover.

FORMATION AND STRUCTURE OF THE OPTIC NERVE.

IN an article contained in the April number of the *Journal of Anatomy and Physiology* Dr. Arthur Robinson of Owens College gives an interesting account of the formation and structure of the optic nerve derived from his researches on the embryos of man, the rat, cat, ferret, sheep, and rabbit. He accepts the view that the fibres of the optic nerve do not, as some have thought, arise from the epithelial cells which constitute the primary outgrowth from the brain, but holds that they spring chiefly from the cells of the retina which shoot up towards the brain but in part from the brain growing down to the retina. The optic stalk itself is composed essentially of protoplasmic substance which develops into retiform sustentacular tissue and becomes converted into the optic nerve by the passage of nerve fibres through its walls, the fibres being protected and supported by the external limiting membrane of the stalk. The specimens examined by Dr. Robinson showed that at their first appearance the nerve fibres are found in the stalk only in its retinal portion, and even in the later stages they are most abundant near the retina. When the invasion of the stalk by the nerve fibres first occurs they are limited to the ventral wall, and it is only when the canal of the stalk undergoes obliteration that the fibres are found in the dorsal wall of this process. He draws the conclusion from his researches that the retina is a portion of the brain wall specially situated and modified to the proper performance of its function; and inasmuch as it is an outgrowth of the ventral part of the lateral wall of the thalamencephalon the retina may be looked upon as a modified basal ganglion and the optic nerves are association bundles bringing it into relationship with other parts of the brain.

THE ILLNESS OF SIR J. RUSSELL REYNOLDS.

WE regret to learn on going to press that no improvement has taken place in Sir J. Russell Reynolds's serious condition.

A NURSING EXHIBITION will be opened at 2.30 P.M. on Monday, June 1st, in St. Martin's Town-hall, Charing Cross. The exhibition will remain open till Saturday, June 13th, during which period, in addition to the exhibits relating to the care of the sick and injured, there will be various attractions for visitors in the way of music, Roentgen ray demonstrations, &c.

THE Colonial Office is informed by telegram from the Governor of Hong-Kong that 76 fresh cases of bubonic plague occurred in the colony in the week ending May 26th, and that the number of deaths from the plague in the same period was 68.

THE Metropolitan Counties Branch of the British Medical Association will hold a conversazione in the Natural History Museum, South Kensington, on Thursday evening, June 18th.

THE new buildings of the Croydon Borough Hospital, Waddon, will be opened on Saturday, June 6th.

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THOMAS WAKLEY,

THE FOUNDER OF "THE LANCET."

A BIOGRAPHY.[1]

CHAPTER XXI.

The Adjourned First Meeting of the Members.—Its Action.—A Metrical Squib.—The Refutation by the College of the Charges brought against it.

THE Members of the Royal College of Surgeons of England re-assembled on March 4th, 1826, when Mr. William Lawrence again took the chair.

The business of the meeting was to receive a report from the committee which had been appointed at the previous meeting to prepare the petition to the House of Commons. Mr. Tyrrell, the chairman of that committee, said that, although they had received no instructions to that effect from the Members, they had approached the Council of the College asking them to join in the application to Parliament. These gentlemen having contemptuously refused, he proposed that the opinion of counsel should be taken as to the best mode of applying to the Legislature.

Wakley again made a forcible speech, in which he pleaded for action, the necessity for drastic reform being urgent. He read a long amendment to Mr. Tyrrell's motion, but that gentleman was ready to accept Wakley's suggestions, and with the leave of the meeting, altered his original resolution so that it read as follows:—

"That the committee be at liberty generally to take such steps as they think fit to remedy the abuses now existing in the Royal College of Surgeons; and that they shall call a general meeting of the members whenever they shall think it advisable."

Wakley seconded the resolution, which was carried unanimously. A subscription was then opened to defray the expenses of any step the committee might desire to take.

This, the first general meeting of the College, was to lead to important developments. The various steps that were taken by the reformers and the methods employed by the College authorities to arrest the progress of the movement will all be found chronicled in THE LANCET, and need not be here described more fully. Wakley's share in the movement is quite clear. He summoned the first general meeting by advertisement which he inserted himself. He persuaded Mr. William Lawrence, a member of the staff of THE LANCET as well as a hospital-surgeon, to take the chair at the meeting, knowing that in this way he would arouse the proper spirit of instructed reform and not merely turbulent clamour for nothing in particular. It was Wakley's speaking at the meetings which led to definite steps being taken. Had it not been for his vigorous words of contempt at the passing of mere condemnatory resolutions, the meetings would have been content with effecting that much; but they followed in his lead, and found themselves promptly committed to an appeal to the Government for reddress.

Mr. Abernethy, who was the mouth-piece of the Council in their very natural refusal to join the Members in the agitation for a new charter, was made the subject of several humorous attacks in THE LANCET, otherwise Wakley used his paper impartially. He printed the opinions of the reformers whom he represented, and whom he really led, but he gave equal space to any reply that came from the College. Mr. Abernethy was not put forward for the College because the great surgeon was the most reactionary Tory on the Council. He was nothing of the kind, and often his written or spoken words showed that he sympathised with many of the complaints that were made by the general body of the corporation against the existing management of the College. But Mr. Abernethy was a masterful man and an intellectual aristocrat. He did not approve of any opposition to a system of government for which he was partly responsible, while he belonged to a picked body of surgeons and sincerely believed that persons not so selectly situated possessed a lower order of intelligence and could not, consequently, expect to be entrusted with the conduct of their own affairs. His colleagues chose him as their spokesman because of his great public reputation and pronounced taste for fighting. Popular with the students and the best surgeon at the great hospital of St. Bartholomew he had an enormous public fame for honesty and bluff wit and a great scientific reputation, as the person upon whom the mantle of John Hunter had seemed to fall. The following verses on him from Wakley's pen did not constitute a fair attack as they misinterpret Mr. Abernethy's attitude, but they are worth printing as no mean display of metrical skill. Doggrel they are, but they say what they mean:—

JOHN ABERNETHY, LOQUITUR.

We have decreed that there shall be in England but one station
At which young men shall 'grind to pass' and have our approbation.

With Scotland 'tis a different thing, you all know I am Scotch, sirs,
And for my clan I do not mind to shuffle, cheat, and botch, sirs.

In Scotland then raw lads may find three schools to one elsewhere, sirs,
And those who deem this law unjust may scout if they dare, sirs.

* * * * *

Ye stupid fools and blundering churls, who want our leave to practice,
Behold, I take the pains to tell what our new-fangled act is.

* * * * *

Moreover, 'tis our royal will, our most imperial pleasure,
As well to fill our classes out, as swell our bags with treasure,

That knowledge henceforth be unsound, to reason quite contrary,
Unless obtained sometime about the month of January;

No one shall dare to think or say that any man can truly
Acquire the art of lopping limbs within three months of July.

* * * * *

So fare ye well, confound ye all—may every ill infest ye,
If ye shall dare to make a stir or say we have oppress'd ye.

The verses, which are extracted from a long "poem," are unfair, but it must not be supposed that their injustice to their subject, had the significance of a deliberate libel. No one believed in the accuracy of that sort of attack; the quality of exact truth was not expected. The metrical squib was a survival of eighteenth-century habit. If you were taking a side in a row you wrote verses lampooning your opponent. He replied with a pamphlet. You hit back with an open letter. Possibly a duel ensued. More often someone of the school of Gillray interposed and limned you both ridiculously, the net result being that the audience laughed and the champions laughed.

The occasion of these verses was the presentation by Mr. Abernethy of the refutation by the College of the charges brought against them. This document is appended. It is long, but it is the categorical answer of the governing body to all the charges of gross mismanagement that had been brought against them, and it would be unjust to alter it by a syllable.

"ROYAL COLLEGE OF SURGEONS, IN LONDON.

"*Observations in Refutation of Charges, publicly made by certain Members of the College, against its legally constituted Authorities.*

"It is asserted that the College has not performed those duties for which it was incorporated.

"That this assertion is unfounded, will be acknowledged by all reflecting and unprejudiced persons, who compare the present state of surgery throughout the country, with that, which existed when the College received its charter in 1800; for it appears that the increased respectability of the profession may be principally attributed to the acts and regulations

[1] Chapters I., II., III., IV., V., VI., VII., VIII., IX., X., XI., XII. XIII., XIV., XV., XVI., XVII., XVIII., XIX., and XX. were published in THE LANCET, Jan. 4th, 11th, 18th, and 25th, Feb. 1st, 8th, 15th, 22nd, and 29th, March 7th, 14th, 21st, and 28th, April 4th, 11th, 18th, and 25th, May 2nd, 16th, and 23rd respectively.

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of the College. This advancement may be mainly ascribed to the more extended education which has been progressively required of the candidates for its diploma; to the zeal and talents of its professors, in displaying and communicating by public lectures, a scientific knowledge of the subjects connected with the healing art; and to the labour and time devoted to the explanation of the contents of its Museum; by which a strong desire for increase of knowledge has been excited.

"The inquiry into the professional education and attainments of candidates, has been rendered more strict in proportion to the general increase of knowledge.

"During one period of the late war, when the applicants for examination were unexpectedly and unprecedentedly numerous, in consequence of the demands of the public service, many candidates were necessarily examined at the same court; but since the peace, not more candidates have been admitted to examination at any court, than could be examined in an ample and satisfactory manner; and for some time past, each candidate for the diploma, has been separately examined in the presence and hearing of the whole court; which is now the established practice.

"The examiners have so frequently referred candidates to a continuance of their studies, as to induce students in general to think seriously of their examination, and to prepare themselves for it, by a proportionate degree of diligence.

"Had inquiry been made, it would have appeared, that the examiners have not any pecuniary interest in the admission of candidates as members; and it cannot be improper to mention, that the remuneration received by the examiners is a very inadequate recompense for the time and labour bestowed upon the execution of their arduous and important duties.

"There is no profession into which dishonest and dishonourable persons have not at times gained admission; but the council are not aware of a single instance of an empiric having been admitted as a member; and not until lately, has it been understood, that the College possesses the power of removing any member who has been guilty of disgraceful conduct.

"It has been made a subject of complaint, that certificates of summer courses of lectures are not received by the court of examiners. That certificates are not indiscriminately received from every anatomical teacher, and that certificates of attendance on provincial hospitals are not admitted by the court; and such regulations have been censured as unjust bye-laws of the College.

"The council have in the first instance, to correct this error. There are no bye-laws on these subjects; these are regulations of the court of examiners. The council have been assured by the court of examiners, that so many certificates of attendance on lectures had been presented to them, purporting to be signed by teachers wholly unknown to them, as to render it imperative to define the certificates which in their judgment, it would be proper with a view to the public good, and respectability of the profession, to acknowledge and to receive.

"The council believe, that not any persons except the court of examiners are able to judge correctly on this subject; and while they wish to correct the erroneous supposition of the regulations in question being bye-laws of the College, they cannot but give credit to the court of examiners for the most pure and conscientious motives; and for an earnest desire to promote the dignity of the profession; and necessarily the welfare of the community; in the legitimate exercise of their discretion on these subjects.

"The court of examiners, anxious that students should attend instructions capable of giving them enlarged and scientific views of their profession, knew not how they could obtain from distant places, any evidence of the teacher having, himself, received a liberal professional education, but by the means which they have adopted; yet, notwithstanding such regulations, it cannot be doubted that any member of the College, possessing in an eminent degree the requisite qualifications for becoming a teacher of anatomy, physiology, and pathology; which are united in the recognized schools; would so distinguish himself, as to justify the admission of his certificates. The regulations of the College must always change with the circumstances of the times.

"The subject of attendance on provincial hospitals, had repeatedly engaged the consideration of the court of examiners; but with every respect for, and the highest opinion of, the medical officers belonging to most of these excellent establishments, the council would witness with regret the indiscriminate admission of such certificates.

"The court of examiners, have under certain conditions, recognized attendance on the practice of some of those hospitals; and the council are of opinion, that it would injure the cause of chirurgical science, where the court of examiners to be controlled in the exercise of their discretion on this subject.

"In reference to the complaint of the Museum not being more freely and frequently opened to the public, and of the want of a catalogue; answers to such accusations are contained in the triennial reports from the Board of Curators to the council, in the last of which is the following summary of proceedings, with respect to the catalogue.

"'The following recital of facts will show the council how solicitous the curators have always been that the collection should be properly explained.

'When the Hunterian Collection was received by this College, it was accompanied by two catalogues; one, explanatory of the preparations in the gallery; the other, of the morbid preparations. These had been compiled by Mr. C. Clift, under the direction of Sir Everard Home, from old catalogues, formed under the superintendance of Mr. Hunter; as is proved by his hand-writing in many parts of them. The transcript must have appeared to the curators, and must be allowed, by every one, to contain a very excellent and perfect account of Mr. Hunter's views and opinions in the formation of his collection; though it must also appear very deficient in the explanation of the individual preparations.

'No one, however, supposed, until within a short time, that Mr. Hunter left any other writings of importance explanatory of his Collection, than the before mentioned two catalogues.

'On the completion of the Museum, and the admission of visitors, the want of a descriptive catalogue was soon felt and expressed; and the Board of Curators, in the year 1813, prepared a printed syllabus to gratify scientific inquirers.

'The Curators also consulted Dr. Shaw, who, at the instance of the Board, prepared a third catalogue of objects in the department of natural history.

'A descriptive catalogue of the preparations, which was earnestly desired by the Trustees, has ever been a desideratum of great interest and consideration to the Board of Curators, as may be seen by its minutes.

'The Board regarded Sir Everard Home, as executor of Mr. Hunter, to be the person most proper, and best qualified to undertake the task of preparing the catalogue, which he repeatedly engaged to do.

'At length, in 1816, it was proposed, that all the Curators should become joint labourers in this great work, when Sir Everard Home declared, that it was his special duty, and that he would admit of no participation in its performance. The result of his labours was the production of a synopsis, which, doubtless, the members of the Council have perused.

'When in 1817 Sir Everard Home became a Trustee, he resigned the office of Curator; and the Board, anxious for the completion of a descriptive catalogue of the contents of the Museum, resolved to engage the Conservator in preparing one under their own superintendance.

'In order to allow him more time for this undertaking, the Board appointed his son to be assistant in his ordinary duties. They directed that the specimens of monstrosity should be removed from the closet in which they were arranged, that it might be appropriated, during the necessary time, to the receipt of books, papers, and other things subservient to the preparation of the catalogue.

'The Board decided, that the contents of the galleries should be arranged in two divisions, each containing subdivisions, which sub-divisions should also contain series and sub-series.

'The Board further appointed Sir William Blizard, Mr. Cline, and Mr. Abernethy, to be a sub-committee for the special purpose of superintending the formation of the catalogue; to report to the Board from time to time the progress made in it, with such observations relating thereto, as they should consider proper; which sub-committee has presented to the Board the description of the first subdivision of the gallery, comprehending seventeen series, containing 261 preparations, which was approved by the Board, and also by the Trustees.

'When, however, the Conservator began his task of preparing the catalogue, he expressed the wish to obtain some of Mr. Hunter's manuscripts, and thus did the Board of Curators learn for the first time the extent and nature of the

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manuscripts left by Mr. Hunter, with relation to his collection.

'The Curators, on applying to Sir Everard Home, were informed by him, that he had burned all Mr. Hunter's manuscripts, in consequence of a promise made to Mr. Hunter to that effect.

'Amongst these manuscripts were ten volumes in folio, viz., nine on the anatomy of animals, and one on vegetables. That Mr. Hunter considered these books to be valuable, and not otherwise than creditable to himself, may be inferred by three of them being placed on the table beside him, when his portrait was painted by Sir Joshua Reynolds.

'It is said, that Sir Everard Home has even burned Mr. Hunter's manuscript lectures, which he read to his class. But the Curators cannot believe that Mr. Hunter could intend that these works should be burned as unimportant manuscripts. It must, therefore, always remain a subject of deep regret, that Sir Everard Home should have felt himself bound by his promise to Mr. Hunter, to have carried destruction to the extent to which he is said to have done; yet Sir Everard Home has not felt the same obligation to destroy all the writings on morbid anatomy; for the Curators have obtained, through the interposition of the Trustees, two folio volumes, and two solanders of cases and dissections explanatory of a considerable number of the morbid preparations.

'These books contain a careful record of the symptoms and effects of disease during life, and the alterations of structure produced, as ascertained by examination after death. They are highly creditable to Mr. Hunter, as expressing that thirst for knowledge, which led him constantly to seek it by means which we know to be the most certain, but also the most tedious, laborious, disgusting, and unostentatious.'

"The want of a catalogue, as explained in that report, is, in the opinion of the Council, a most satisfactory reason why the Museum has not hitherto been more freely opened to the profession, and why it cannot be for some time, admitting the completion of that catalogue, to be of such paramount importance as the Council deem it to be.

"It may be further observed, that the study of comparative anatomy had been formerly so little prosecuted in this country, that, though many persons were consulted, none could aid in giving a description of the individual preparations in the Hunterian Collection. The Conservator has, however, for a considerable time, been engaged in such researches and inquiries, as have enabled him, not only to give an exact account of each preparation, but also to explain Mr. Hunter's intentions in the formation of his Collection; and the more the time of the Conservator shall be occupied in explaining the contents of the Museum to visitors, the longer necessarily must the completion of the catalogue be retarded.

"With respect to the Library, its formation has been the act of the College, and is intended to aid the professional inquiries of its members, for which purpose it will, when in a proper state, be opened.

"It may be added, that of the numerous applications made by members, for permission to refer to publications therein, every one has been most readily complied with; and the same may be observed of applications to examine and to make drawings from preparations in the Museum.

"With regard to the supposed indignity offered to the members at large, by their being admitted to the theatre by a door at the back of the building, the Council, aware that any want of respect to its members would be a failure of respect to the institution itself, did not imagine that umbrage would be taken by such an arrangement; at the same time they regret that the present construction of the building precludes the practicability of an alteration.

"It is proper to observe, that no official complaint or remonstrance on this subject has ever been made to the Council. Some years since, indeed, it was mentioned to the board of curators; upon which the members, during one course of lectures, were admitted to their seats from Lincoln's Inn-Fields, through the Museum; the dust occasioned thereby, was found to be injurious to the collection, in consequence of which, the present arrangement was adopted; certainly with a view to the comfort and convenience of the members, and for the preservation of the preparations. When the theatre was built, the great influx of persons into the profession, which has since taken place could not have been anticipated; and it was then thought that the building would be more than adequate to the accommodation of all who would attend.

"It is represented, that the constitution of the College has been the cause of the alleged injuries and grievances.

"The evident object of this representation, is the subversion of the present government of the College, and the substitution of elections to offices of control and responsibility, by members, who for the most part exercise the professions of apothecaries and accoucheurs. There can be little doubt, that in the event of such an innovation, the Institution would soon cease to be a College of Surgeons or of Surgery, and a system of continual intrigue and cabal amongst the profession in general would be introduced.

"The constituted authorities of the College are conscious that they have uniformly exerted themselves to increase the scientific knowledge and respectability of the profession; and that they have never been influenced by the unworthy motives imputed to them; had any of the members of the College expressed dissatisfaction at their proceedings, they would have willingly explained the reasons of their conduct, as well as their future intentions, and have altered whatever could have been shown to be wrong; but when meetings have been convened to subvert the Charter of the College, 'under the sanction of which," it is said, "injustice and tyranny have been perpetrated"—when, at these meetings, the most dishonourable motives have been attributed to the members of the Council, they feel it due to themselves to offer this brief, and they trust satisfactory, explanation of their conduct.

By order of the Council.
(Signed) EDMUND BELFOUR, Secretary."
"Lincoln's-Inn Fields, 26th day of April, 1826."

THE REPRESENTATION OF MEDICINE AT THE NATIONAL PORTRAIT GALLERY.

OF all the learned professions medicine is the happiest in having no history, or, rather, in not entering the history of political and national strife. The lawyer and the clergyman have time and again been the heroes of one party or other, and artists with brush or pen have won notoriety by a somewhat unholy alliance with the factions of the moment. The medical man has no concern with the inflicting of wounds, corporal or mental; his only task is to heal and prevent them. His enemies are disease and dirt, and victories over the common foe bring no such glory as is won by crushing the particular opponent of the moment. Nevertheless, the National Portrait Gallery contains not a few pictures of the famous physicians of the past, which bring to mind more clearly than before the personality of bygone leaders. Up in the topmost floor hangs the portrait of the coryphæus of the line, Sir William Butts, the physician of Henry VIII., and a very early Member of the Royal College of Physicians of London. The catalogue claims him as one of its founders, but that is hardly accurate, for he was not admitted until a year after its commencement. The humorous and pawky face that the scholar of Holbein painted from his master's original betrays clearly enough the Norfolk ancestry, and makes it possible to understand how he retained the favour of his somewhat irritable patient even though he dared to plead for statesmen out of favour. The portrait is interesting as that of the one physician whom Shakespeare names all through the plays, and he is characteristically pleading for Cranmer and calling the King's attention to the strangest sight:

> "The high promotion of his Grace of Canterbury,
> Who holds his state at doors, 'mongst pursuivants,
> Pages, and footboys."

It would be unfair to think of him as a fly in amber, but it is not unnatural to wonder why he should have been introduced into the play merely to speak three sentences and to hear from his master: "Butts, there's knavery."

The portrait of Harvey is perhaps the most interesting of all, though unfortunately hung so that the light is reflected from the glass and partially dazzles the view of the picture behind whatever efforts be made to find a satisfactory position. There are written very plainly on the face the irritability and nervousness which made his life unhappy and added sting to the neglect or contempt with which his discoveries were received. Aubrey is fully borne out in his description of his contemporary as, "like all the rest of his brothers, very cholerique, and in his younger days apt to draw out his dagger upon every slight occasion." "His

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little eie, round, very black, full of spirit," still looks out from the canvas; but the hair, once "black as a raven," is here quite white, though the animation of the general expression has bated not at all. Like his predecessor Butts, he is one of the glories of Caius College, Cambridge, or, as it used to be, Gonville Hall.

Oxford can claim no genuine physician in the gallery, though Hunter was on the books of St. Mary's Hall for ten months. She has to fall back upon a fine painting by Van Dyck of one of the irregular army that hangs upon the wings of the medical forces. Sir Kenelm Digby was a very early experimentalist and of the keenest, but unfortunately he had the "infirmity," as a lady friend of his gently phrased it, of lying magnificently about his work. His famous "powder of sympathy," which "infallibly cured" all green wounds if first applied to the offending weapon, has a certain flavour recalling Count Mattei and coloured electricity, although powdered blue vitriol may, after all, have had some antiseptic and escharotic value. At the same time, he was keenly interested in medicine and a most fervent believer therein. Upon the whole, Oxford has more reason to feel proud of him as sea-captain than as physician, but as Radcliffe does not appear in the gallery the best must be made of Sir Kenelm Digby, and excuses found for his imagination in the huge forehead, which curiously recalls the face of Shakespeare, though wholly lacking in the balance of mouth and chin.

The eighteenth century is much more prolific of great names, though sometimes it may fairly be asked whether the intention of the trustees has been successfully accomplished. Their rule, as Earl Stanhope declared, was to admit "not a single portrait as to which a man of good education passing round would be under the necessity of asking, 'Who is he?'" Even a medical man of good education may be pardoned for a difficulty in recalling the chief facts in the lives of Saunders and Allen, and how much more a layman? Sir Charles Bell, bearer of a name long famous in medicine, whose work on nerves is claimed by many, and also by himself, to rank his name upon the same scroll as Harvey, stands up in most orthodox lecturing position, smiling with the thought that his "Anatomy of Expression" has been sent, by desire, to the Nabob of Arcot, bound in all the glory of red morocco and satin. What use the Nabob made of the work cannot be known, but if it interested him he was not unlikely to test its assertions by vivisection on a large scale without the aid of anæsthetics. No doubt the large red book beneath his hand is a pleasant reminiscence of his world-wide celebrity, but he should have held his Bridgewater Treatise on the Mechanism of the Hand in the other to complete the memorial. Side by side stand the two great London men, Hunter and Edward Jenner. The first portrait is copied by the brush of Jackson from the famous Reynolds in the Royal College of Surgeons of England and is too well-known to need description, especially the local colour delicately insinuated by "an anatomical preparation in a bottle, and the feet and ankles of a human skeleton." This local colour is secured for Jenner by a drawing of a cow encircled by the medical serpent with its tail in its mouth. Northcote was not a Morland at animals, for the beast is like nothing so much as the wretched horses which appear on Bank Holidays and attract the attention of the officers of the Society for the Prevention of Cruelty to Animals. Jenner is supported by his Quaker disciple Dimsdale, who combined the professions of inoculator-in-chief to the Russian Imperial family and Hertfordshire banker. His treatment was not least memorable for the gigantic fee of £12,000 and the pension of £500 which were bestowed by the grateful Czar. His miniature presents a face more than usually attractive, the pink cheeks harmonising well with the prosperity that naturally attaches to the idea of a Quaker banker.

Sir Hans Sloane, the proud possessor of a Dutch name, Scottish ancestry, and Irish birth, completed his cosmopolitan character with a foreign education before he settled in London. His portrait exhibits a man who was obviously successful. As he sits upon the chair of the President of the Royal Society, with the gilt mace supporting him upon the right, his dignity secured by an enormous Louis Quatorze wig, he fully looks the part of the impressive chairman. It must be confessed that his contributions to medical knowledge were not of the most valuable, but as long as the British Museum and London itself exist Sir Hans Sloane need not fear to be forgotten.

Richard Mead, though a Stepney man by birth, was also educated abroad at Leyden and Padua. He has won a right to a place here as fully as to his monument in Westminster Abbey. The portrait of the Court physician, to which office Mead soon attained, was naturally done by the Court painter, Allan Ramsay, and was very successful. Richard Mead himself, whose house, by-the-bye, stood in Great Ormond-street where is now the Hospital for Sick Children, and in whose hall till a few years ago out-patients used to wait, was a most excellent classical scholar and an enthusiastic collector of antiquities. This knowledge he employed in his endeavour to prove from the old medals and authorities that the status of the medical profession in the ancient world was much higher than is generally thought, and that its members were, as a class, wealthy and highly respected. The wealth he proved, but as to the respect paid it is to be feared that the honours of the contest remain with his opponent, the famous Conyers Middleton. There never was a physician in whom friends believed more fully, and one follower declared that he had saved the life of Queen Caroline when all the other medical men were poisoning her with their prescriptions. His neighbour and junior, Parsons, who occupied Red Lion-square, hardly deserves a place in the gallery, but perhaps he has arrived there chiefly because he "was cheerful and decent in his conversation," a character so rare in the eighteenth century that it may be held to excuse his presence. Of the picture all that need be said is that it bears out the reputation.

Curiously enough, the remaining three, who were all contemporaries, are more famous for their literary than for their scientific performances. Erasmus Darwin, John Wolcot (better known as Peter Pindar), and John Allen are the writers of works which are at least more remarkable than their surgical or medical skill. True that more men probably have read the Anti-Jacobin parody, the "Loves of the Triangles," than the original "Loves of the Plants," but we may still claim the latter as the honour of the profession. Darwin, like his greater grandson, was a product of Cambridge scientific training, and though the combination of science and poetry has not, since the days of Lucretius, been generally satisfactory, there can be no question of his right to a place among the prominent men of his day. Wolcot was a man of very different type. First a physician, then an ordained clergyman, and finally a professional satirist, he played many parts, though it was only in the last that he won success. His miniature, painted on ivory by Lethbridge, is more typical a portrait than the larger face, but in both are finely developed the cynical nose and mouth, which betray his mental attitude and explain the terror he inspired into that favourite object of his jibes, the farmer king. He has at least the honour of rendering the story of the monarch's puzzle over the dumplings and the pastry a historic commonplace, and he gives a picture of George III. which, if not exactly fair, is at least lifelike. He spared his professional brethren as little as his king, and not even the dignity of the President of the Royal Society saved Sir Joseph Banks from most unprofessional ridicule. Dr. John Allen, if less brilliant, was at least more attractive. He will be remembered best as the resident physician of Holland House, where he had to endure the caprices of his charming but unmannered hostess Lady Holland, who treated him in public almost as a servant. Everyone remembers the remark quoted in the "Life and Letters of Lord Macaulay": "Mr. Allen, there is not enough turtle to go round; you must have gravy soup or none." His portrait is a very attractive Landseer and presents an ideal Mr. Pickwick, with a bland benevolence that ought to have been sufficient to disarm all impoliteness. His fame as a comparative anatomist has been somewhat dimmed, and it may be that he will be best remembered by his history of "The Rise and Growth of the Royal Prerogative in England," which treated the subject in the most strictly orthodox Whig manner, as was to be expected from such a companionship.

It is harder to discuss the portraits of this century, which time has not yet ranked in order of importance. Amongst these is Guthrie, the daring and brilliant surgeon whose name will always be associated with the Peninsular War. In the Arctic room, again, which always has its group of spectators bearing witness to the curious fascination of the North Pole for the strain of Viking blood within us, is the portrait of Walker, the surgeon of the *Fox* which made the last sad discoveries of the Franklin expedition. Not far from the Watts portrait of Sir Andrew Clark is a fine full-length portrait of Sir Richard Owen, who, in his long life, had seen

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greater developments in his profession than any of his predecessors.

One thing at least our profession may claim. Not one of its members hangs there as an awful example. For a chamber of horrors the law has an excellent candidate in Jeffreys and perhaps in Impey, the Church could spare Dodds, and literature might conveniently hang Godwin and Churchill in a rogues' gallery. As for the politicians, there are few who would obtain a unanimous vote of confidence, but the medical men's portraits, even including Peter Pindar's, are of gentlemen.

THE EFFECT OF BORAX ON THE CURDLING OF MILK.

BY F. J. ALLEN, M.A., M.D. CANTAB.,
PROFESSOR OF PHYSIOLOGY IN MASON COLLEGE, BIRMINGHAM.

ONE of the effects of adding borax to milk is to render it incapable of curdling, but the curdling property is restored on the addition of a small quantity of calcium chloride. I have frequently observed this condition in commercial samples of milk. Having made a number of laboratory experiments for the purpose of ascertaining the quantity of borax necessary to prevent curdling, I find as a result: (1) that milk containing one-tenth of its volume of cold saturated solution of borax is incapable of curdling with rennet (this is equivalent to about 36 grains borax to 1 pint milk)—smaller quantities of borax delay the curdling more or less; (2) that the addition of calcium chloride either before or after the rennet restores the normal curdling power; and (3) that boric acid added to milk does not delay curdling with rennet, but rather hastens it. The effect of boric acid seemed to indicate that the loss of curdling property in presence of borax was not due to the boric portion of the salt, but rather to its soda. I therefore tried the effect of adding sodium bicarbonate to milk. The results were as follows:—1. Curdling with rennet is prevented by adding to the milk one-sixth of its volume of a 5 per cent. solution of sodium bicarbonate. Smaller quantities retard curdling. 2. The addition of calcium chloride restores the curdling property apparently more quickly than in the case when borax has been used. From these experiments it appears that the prevention of curdling may be due to the removal of the lime salts from the field of action, but is more probably due to the formation of a soluble compound of the casein and alkali, which is decomposed by calcium chloride in excess. If borax removes calcium from the field of action it follows that not merely the curdling function will suffer, but also many other functions of the body in which calcium is needed. And even if the alkali of the borax is the only restrainer of curdling it is not desirable to neutralise the gastric juice by its use. Moreover, the presence of borax may prevent the normal production of acids by fermentation and thereby further hinder digestion.

Birmingham.

THE INTERNATIONAL CONGRESS OF DERMATOLOGY.

THE programme of the Third International Congress of Dermatology, to be held in the Examination Hall of the Royal Colleges of Physicians and Surgeons, Victoria Embankment, from Aug. 4th to Aug. 8th, has just been issued, and some interesting discussions are promised.

Mr. Jonathan Hutchinson, the President of the Congress, will be supported by the following Vice-Presidents: Dr. Wilks, President of the Royal College of Physicians of London; Mr. Christopher Heath, President of the Royal College of Surgeons of England; Dr. Walter G. Smith, President of the Royal College of Physicians of Ireland; Sir W. Thornley Stoker, President of the Royal College of Surgeons in Ireland; Dr. W. T. Gairdner, President of the Royal College of Physicians of Edinburgh; Dr. J. Struthers, President of the Royal College of Surgeons of Edinburgh; Sir J. Nicholas Dick, K.C.B., Director-General of the Medical Department of the Navy; Sir W. A. Mackinnon, K.C.B., late Director-General of the Medical Department of the Army; Sir William H. Broadbent, Bart.; Sir Joseph Lister, Bart., President of the Royal Society; Sir James Paget, Bart.; Sir Richard Quain, Bart.; Sir J. Russell Reynolds, Bart.; Sir Dyce Duckworth, Sir William MacCormac, Sir Douglas Maclagan, Sir Edward Sieveking, Dr. McCall Anderson, Dr. Mitchell Bruce, Dr. John Cavafy, Mr. Alfred Cooper, Dr. G. F. Duffey, Dr. J. F. Goodhart, Dr. Hughlings Jackson, Dr. Allan Jamieson, Dr. Robert Liveing, Dr. Payne, Dr. Douglas Powell, Dr. Pye-Smith, Dr. Hermann Weber; also Dr. Besnier, Professor Fournier, and Dr. Hallopeau, of Paris; Professor Leloir of Lille; Professor Lewin, Professor Köbner, and Professor Lassar of Berlin; Professor Neisser of Breslau; Dr. Unna of Hamburg; Dr. Veiel of Cannstadt; Professor Kaposi, Professor Neumann, Professor Lang, and Dr. Hans von Hebra of Vienna; Professor Schwimmer of Budapest; Professor Pick and Professor Janovsky of Prague; Professor Jarisch of Gratz; Professor Petersen and Professor Tarnovski of St. Petersburg; Professor Pospelow of Moscow; Professor de Amicis of Naples; Professor Pellizari of Florence; Professor Campana of Rome; Professor Boeck of Christiania; Dr. Welander of Stockholm; Professor Haslund of Copenhagen; Professor Castelo and Professor Olavide of Madrid; Professor Petrini de Galatz and Professor Kalindero of Bucharest; Zambaco Pacha; Professor Joannu of Athens; Dr. Duhring of Philadelphia; Dr. White of Boston; Dr. Nevins Hyde of Chicago; Dr. Bulkley, Dr. Keyes, and Dr. Fox, of New York; Dr. F. Shepherd of Montreal; and Dr. Graham of Toronto.

On the first day of the meeting after the preliminary business of the Congress has been dealt with Mr. Jonathan Hutchinson will deliver the presidential address, and the subject of Prurigo will be discussed by Dr. Besnier of Paris, Professor Kaposi of Vienna, Dr. J. C. White of Boston, and Dr. Payne of London. On Wednesday, Aug. 5th, the subjects for discussion will be the Etiology and Varieties of Keratosis and Syphilitic Re-infection; on Thursday, Aug. 6th, the Connexion of Tuberculosis with Diseases of the Skin other than Lupus Vulgaris, the Duration of the Period of Contagion of Syphilis, and Ringworm and the Trichophytons; and on Friday, Aug. 7th, the Nature and Relation of the Erythema Multiforme Group and Malignant Syphilis. Clinical demonstrations of cases will be given on Aug. 5th, 6th, and 7th, and various papers will be read during the progress of the Congress. Saturday, Aug. 8th, will be devoted to the clinical demonstration of cases, to be followed by papers.

Full information regarding the Congress can be obtained from the Secretary-General, Dr. J. J. Pringle, 23, Lower Seymour-street, London, W.

CHOLERA IN EGYPT.

THE manifestations of epidemic cholera which have appeared this year in Egypt have commenced earlier than in the epidemic of 1883 in that country, which began first of all at Damietta about the middle of June and lasted to September, and gave rise to a total mortality of over 25,000. Damietta, Alexandria, Chibin-el-Kon, and Cairo were the places most affected on that occasion. At the time of that outbreak there was no special activity of the disease in Arabia. There must always be some doubt as to the exact place and date of origin of an outbreak, but some sporadic cases of the disease seem to have appeared on the present occasion in Alexandria in March last. In the following month there were almost daily cases of cholera, and by the first three weeks of April these amounted altogether to 45 with 42 deaths. A few cases occurred in Cairo soon after the appearance of the disease in Alexandria. The disease has very slowly but steadily increased in Cairo. This outbreak in Egypt gave rise to a considerable exodus of the well-to-do classes, many of whom, it is understood, went to Marseilles. Two cases occurred in the 14th Soudanese Battalion at Tourah, where there is a large convict establishment. The disease has hitherto been very severe and fatal, some 80 or 90 per cent. of those attacked having died. On May 20th there were several fatal cases at Alexandria, at Cairo—in the old and new parts of the city—and some at Tourah-camp and other places. On the 22nd and 23rd there were 45 deaths from cholera at Alexandria and 75 at Cairo—mostly in old Cairo—and 8 at other places. On the 24th

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there were 13 cholera deaths at Alexandria, 45 at Cairo, 15 at Tourah town, prison, and camp, and 9 deaths at other places. The total number of cases in Egypt at the present time is 115.

It does not appear that any cases have occurred among the British troops. Should it, unfortunately, happen that any of these are attacked the barracks will no doubt be forthwith evacuated and the troops moved out and encamped. The experience obtained in a former epidemic will not have been forgotten—viz., that the soldiers occupying an elevated site in the vicinity of Cairo had an immunity from the disease. One of the great things to be done in an epidemic is to select and occupy new and clean sites, to spread out the men as far as possible, and to have the freest ventilation. We have no doubt that even the movement of soldiers out of barracks in anticipation of, instead of after, an attack is occasionally the wisest course that can be adopted. The principal medical officer and medical staff in Egypt have, however, practical experience to guide them in dealing with epidemic cholera, and we may consequently feel every confidence in their judgment in this respect. The health of the British troops, however, continues to be excellent. The percentage of sick, including slight maladies, in the military hospitals on the 25th, according to telegraphic intelligence through Reuter's agency, was very low:—Cairo 6·06, Alexandria 4·81, Wady Halfa 4·83.

We wish that we could regard the sanitary state of Egypt generally, and of its towns in particular, as satisfactory as far as water-supply, drainage, and surface cleanliness are concerned. It is, after all, only during times of freedom from epidemics that the necessary work can be undertaken to prevent their occurrence, and it has been with a full knowledge of this fact that we have so constantly urged upon the Government of Egypt and of this country the grave importance of their duties and responsibilities in this respect. It will be a disgrace to our rule if we leave Egypt in the same unsanitary condition in which we found it. In finance, in the administration of law and justice to all classes alike, in education, and in promoting the greatest happiness of the greatest number England has done well in Egypt, but in sanitation and attempts at improving the public health little or nothing has been done up to the present time.

DEATH CERTIFICATION.

THE general meeting of the metropolitan counties branch of the British Medical Association was held on the 22nd inst., Sir William O. Priestley, M.P., presiding. The subject before the meeting was the improvement in the present procedure in death certification and registration, and from the report of the proceedings it is manifest that they took a very practical turn. Sir Henry Thompson moved the following resolution: "Considering that a Select Committee of the House of Commons has in 1893 made an extended inquiry into the subject of death certification and registration on the plan now followed in this country, and has reported that it manifestly fails to accomplish the purpose for which it was designed, this meeting is of opinion that Her Majesty's Government should be respectfully memorialised to bring in a Bill as soon as possible to give effect to an improved procedure in general accordance with the suggestions offered in the committee's report." Sir Henry Thompson passed on to observe that during the last twenty years or more the existence of grave defects in the system of death certification adopted in this country had not unfrequently been manifested, whether this system be regarded as a safeguard against criminal attempts on life or as a means of forming trustworthy records of disease for scientific purposes. He next referred to the fact placed before the Select Committee, that in 1892 no fewer than 15,000 cases of death occurred, in each of which no inquiry had been made into its cause and no certificate as to its cause had been forthcoming. This number of uncertified deaths formed a percentage of nearly three on the total number of deaths returned for the year. It also appeared that in 25,000 other deaths—a percentage of 4½—the cases were so inadequately certified as not to be classifiable, making together a class of 7½ per cent. in which no evidence of any value as to the cause of death existed. He suggested that they should forward a memorial to the Home Secretary with a request that he would consider the important work which had been already done by the Select Committee, and, if he saw fit, take steps to embody their recommendations in an Act of Parliament for the purpose of giving the country a greatly improved procedure in exchange for that at present employed.

In the absence of Dr. Farquharson, M.P., Dr. Isambard Owen seconded the resolution, and asserted that the State now winked at an exceedingly loose system of death certification, since under the present procedure it was possible for a medical man to give a death certificate on a patient whom he might not have seen for an interval of several weeks and perhaps months. The resolution was supported by Mr. Nelson Hardy, Dr. Alderson, Dr. Hugh Woods, and others, and was unanimously adopted. It is greatly to be hoped that other meetings may be held to discuss this very important subject, the resolutions adopted being forwarded to the local representatives in the House of Commons. While fully admitting the desirability of reform in our registration system, we would urge all members of the profession to avoid the somewhat pessimistic views adopted by the speakers at the Metropolitan Counties Branch. For is it justified by facts? Granting the 7½ per cent. of uncertified or badly certified deaths, and allowing 5½ per cent. for deaths certified by coroners, this makes 13 per cent., leaving 87 per cent. of the total deaths which may be assumed to be properly certified, and it must also be remembered that a proportion of deaths, by no means small, which the Registrar-General classifies as uncertified have been certified (in a fashion) by coroners after an informal inquiry. It is, therefore, most desirable that in criticising our death registration system it should be borne in mind that of the total number of deaths the large proportion of 87 per cent. are registered with a fair approximation to accuracy. Before, therefore, applying the legislative screw it will be well carefully to consider the present system so as to see where the defects are, and, this being ascertained, what are the reforms which should be made. The existing system has been in force in England and Wales for nearly sixty years, while death certification has been compulsory for twenty-two years. The deaths number in round numbers 550,000, being influenced by the presence or absence of epidemics, &c. As we have seen, with the exception of the percentage of thirteen no fault is apparently to be found, and this accords with every-day experience. In an overwhelming proportion of deaths the deceased is attended in the last illness by a registered medical practitioner, who gives a certificate of its cause (the correctness of which is not disputed) to a relative or friend. The death is registered, a burial order is given, and the body is buried. In cases where an inquest is held the coroner sends the cause of death as given by the jury to the registrar. The principal charges suggested by the Select Committee are that the body of a deceased person should not be disposed of either by burial or cremation without the certificate of a registered medical practitioner or of a coroner after inquest. This would imply that all informal inquiries by coroners are in future to be dispensed with. It is also recommended as a consequence of this that there should be appointed in every district a medical certifier to inquire into every uncertified death. The certificate of death is to be sent to the registrar direct and not to be given to the representatives of the deceased. The body is to be verified by the medical attendant, who is to be allowed a fee of half a crown for verification and certificate. That Medical attendance is to mean two visits before death within a fixed period of days. These and other recommendations will have to be most carefully studied before they are adopted in England and Wales. These parts of the United Kingdom have been divided into registration and coroners' districts which are presumably convenient, and the present system has been in working for more than half a century. It is a very grave question whether the suggestion of medical certifiers is a practical or workable one, and it is certain that coroners would strongly resent any encroachment upon their functions. So also with regard to the suggestion that the certificate should be sent directly to the registrar a very little reflection will show that this is wholly impracticable. What is really required is that the Act of 1874 should be carried out in the spirit as well as in the letter by medical practitioners, who should never give a certificate in any case which is doubtful, referring all such to the coroner. The registrars should in turn not accept a certificate which

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is doubtful. Coroners should improve their informal inquiries and should have power to remunerate the medical practitioner called in for making an inspection of the body. Medical certificates should be given to the informant in a sealed envelope addressed to the registrar. In short, the present system should be improved in those points which need improving. These are much to be preferred to changes which would completely dislocate the present machinery without any compensating advantages.

THE SOUDAN EXPEDITION.

NOTWITHSTANDING that the Egyptian troops under the training and leadership of English officers and non-commissioned officers have undergone a remarkable improvement, and that their marching powers and endurance are undoubted, it seems to be still doubtful in the minds of many whether they will prove reliable in action if fiercely attacked by brave and determined troops like the Arabs. The Soudanese black regiments are, no doubt, excellent, and have also proved steady and reliable in a fight, but Egyptian regiments are composed of material which has been subjected to slavery and oppression from the time of the Pharaohs up to nearly the present period. The Egyptian soldiers are fine men in point of physique, patient, hard-working, and, in a military sense, well-trained and disciplined, but it seems to be still the opinion that they will require to be well "stiffened" by European troops when the advance on Dongola takes place. Anyway, the troops—both British and Egyptian—appear to be in excellent health and fettle at the present time. The power of the Khalifa is not what it was, and there seems to be little doubt that there is a good deal of disaffection and dislike to the present rule and a growing belief in the desirability of a change. If the Dervishes could only feel that they were to be subjected to English and not to Egyptian rule things would probably soon assume a different aspect, for, whatever may be the case now, the Arabs, with their courage and manly qualities of character, once had a firm belief in the fairness and justice of the British.

As regards the hospital accommodation and arrangements at the different stations everything appears to be in a satisfactory state, and, considering the great heat, the dust-storms, the fatigue and monotonous life, and the difficulties in the way of provisioning the force, the low sick-rate shows that the sanitary and hygienic arrangements of the expeditionary force must be uncommonly good. Time is the most important element in expeditions of this nature. The less the time at disposal the greater the pressure, of course, on all concerned and especially on the medical, commissariat, and store departments of an army. Happily, in the present instance, there has been sufficient time available for making all the preparations and arrangements for the expedition in a satisfactory way. The hospital accommodation at Akasheh is composed of huts and is good and sufficient, and the same may be said of that at the other stations; the sick transport arrangements are also working satisfactorily. It may be added that, as far as the officers of the force are concerned, the work has been very hard. The Nile is believed to be now rising. The past week has been comparatively uneventful; there has been no fighting, the Anglo-Egyptian force being simply on the alert and attempting to perfect their preparations for the future advance.

THE EVELINA HOSPITAL FOR SICK CHILDREN.—The report of this hospital for the year ending Dec. 31st, 1895, is a very satisfactory document so far as the management of the institution is concerned, but, like a great many more charities at the present time, the hospital requires increased support from the benevolent public. During the past year 782 children have been treated in the hospital. The total number of deaths during the year was 163; of these 31 cases were admitted moribund (dying within forty-eight hours), and in 83 the children were under two years. In the out-patient department 802 minor operations and about 1000 dental operations have been performed. Five hundred and twenty accidents have been attended to, 42 cases being admitted to the wards; of these 20 were of a serious character.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On the Sanitary Condition of the Borough of Pembroke, by Dr. R. J. REECE.—The borough of Pembroke, which includes Pembroke proper and Pembroke Dock, has the reverse of a satisfactory history and it has received seven visits from the medical department of the Local Government Board since 1878. The population has oscillated, but since 1871 it has undergone some steady increase until in 1891 it reached 14,978, and building operations are still in progress. In Pembroke proper the water-supply comes from a number of sources; these include local wells, both public and private, and they are in many instances open to the risk of pollution. One known as the Commons Well was condemned by Dr. Airy of the Local Government Board in 1879 and was referred to as a supply that should be closed, but in 1895 it was still in use. The wells in Pembroke Dock answer to much the same description and they cannot be regarded with any satisfaction in so far as wholesomeness and freedom from pollution are concerned. On the other hand, certain public supplies are available, and some further action has been attempted by the town council with the view of increasing the service from a tunnel driven into a hillside. The sewage outfalls from Pembroke are most imperfect. One, for example, is into a mill-pond connected with the Pembroke river; another is into the Commons Lake, a piece of marshy land through which a stream flows, and this stream is at times resorted to for a water-supply. The drains of Pembroke are very deficient, having originally been constructed of rubble to carry off surface water. At Pembroke Dock certain sewers have been constructed, but these are a cause of nuisance at their outfall, the sewage being deposited, for example, under wharves and on the foreshore. But the main part of Pembroke Dock is altogether unsewered. In the matter of house drainage, excrement disposal, &c., the sanitary administration of this borough also leaves much to be desired; but it is evident that the questions of water-supply and of sewerage are those to which the greatest importance attaches at the moment. Formal complaints have been addressed to the Local Government Board and to the town council in these matters, and it is impossible to dissociate Dr. Reece's recent visit and report from the action which the central department may determine to take as regards this borough. When Dr. Airy reported in 1879 he stated that the medical officer of health and the inspector of nuisances had kept the town council truthfully informed of the sanitary requirements of the district, but that the town council had a most imperfect realisation of their duty as a sanitary authority. With but trivial exception—the exception including the improvement of the Pembroke Dock water-supply—this statement is declared by Dr. Reece to be as true now as it was when it was penned seventeen years ago. The interests of the public as well as of the ordinary population are involved by reason of the Admiralty Dockyard, and it seems clear that some decided change of administration must now be insisted on in this antiquated and backward borough.

On the Prevalence of Enteric Fever in West Bromwich, by Dr. G. S. BUCHANAN.[1]—This report deals not only with a prevalence of enteric fever but it also enters with much detail into the sanitary conditions with which that disease has been associated. The population of the borough now exceeds 60,000, and for years past there has been excess of enteric fever. In 1890 the notified cases were 84, in 1893 they reached 91, and in the first ten and a half months of 1895 they were 112 in number. In seeking the causes of this occurrence Dr. Buchanan ascertained that there were many serious defects in the sanitary administration of the borough which can hardly fail to have had a distinct relation to the sustained prevalence of fever. This was especially the case with respect to the privy-middens and large ash-middens which prevail and which are definitely referred to as constituting a serious danger to the health of the inhabitants. The description given in the report as to this is about

[1] Eyre and Spottiswoode, East Harding-street, E.C.; John Menzies and Co., Edinburgh and Glasgow; Hodges, Figgis, and Co., Ltd., Dublin. 11 pp. 1896. Price 3d.

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as disagreeable reading as anything could be, and it really becomes a marvel how some of our large boroughs can in these days maintain such a system. It is altogether monstrous that a sanitary authority should not deal with the "semi-liquid, evil smelling" matter of excrement, slops, and all sorts of offensive filth which foul the air around the several groups of houses, and which are allowed to accumulate until either the inspector of nuisances or, failing him, some householder chooses to call attention to the existence of a nuisance. It is the whole system which is wrong, for the very construction of such midden-privies must necessarily involve a recurring nuisance and source of danger to health. Happily, wells have been got rid of as local supplies of water and other amendments have been carried out, but in some respects—as, for example, in the faultiness of its refuse removal—West Bromwich remains much as it did when reported on by Dr. Ballard in 1875. Every point bearing on the health and sanitation in the borough, including its milk-supply, is discussed with much care in the report, which is the first one which the Local Government Board have issued from the pen of Dr. G. S. Buchanan. As the record of a careful inquiry into the administrative aspects of a large borough which has suffered from preventable disease it is a most carefully compiled piece of work, and recalls the excellence of the early work of the writer's father, the late Sir George Buchanan.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Liverpool Port Sanitary District.—The jurisdiction of the Liverpool port sanitary authority extends over a very considerable area, reaching as it does from the south side of the River Ribble on the north, to the north side of the River Dee on the south, and embracing the waters of the Mersey to a point considerably eastward of the entrance to the Manchester Ship Canal. The staff of the authority consists of Dr. E. W. Hope, medical officer of health of Liverpool, an assistant medical officer, and three sanitary inspectors of shipping. The completion of the Manchester Ship Canal has had the effect of converting Manchester into a seaport town and several inland districts into riparian districts. Arrangements have accordingly been made whereby the Liverpool port sanitary authority deal with cases of infectious disease found on vessels passing through the Liverpool waters but bound for Manchester, while the sanitary supervision of vessels themselves is left to Manchester. During 1895 the inspectorial staff of the Liverpool port sanitary authority inspected 3153 vessels, and no less than 50 per cent. of them were found in one or another sense to be defective from a sanitary standpoint. Defects: Total number, 3154; average per vessel, 2. (*a*) Of construction, 678 = 21·4 per cent.; (*b*) structural, 963 = 30·6 per cent.; and (*c*) dirt, 1513 = 47·9 per cent. The above is taken from the report before us. During 1895 there were 63 cases of infectious disease taken from vessels arriving at Liverpool, as compared with the average for the previous ten years of 33·9. Among the cases of non-notifiable disease which came to the knowledge of the authorities there were, we note, three cases of Beri-beri. The figures of emigration for 1895 show an increase on those for 1894 of 11,049, but it must be remembered that owing to the restrictions placed upon emigration to the United States there was a very large diminution in numbers during 1894. Among the 117,196 emigrants, 91,805 were bound for the United States and 20,385 for Canada, the month during which most emigrants embarked being August. The emigrants are medically inspected by medical officers appointed by the Board of Trade, but one of the port sanitary inspectors is present at each of these inspections to take charge of any who may be rejected by the medical examiners. Amongst those rejected during 1895 we note that scabies and alcoholism were common, as also were varicella and measles.

Ipswich Urban Sanitary District.—The population of Ipswich is estimated to the middle of 1895 as 60,022; the birth-rate for the year in question was 31·1 per 1000 and the general death-rate 18·7. There were eighty-six cases of enteric fever notified in the borough during 1892, and of this number no less than thirty-one occurred in the parish of Stoke. The population of Stoke is not furnished in the report before us, but we gather from the 1891 census that at that time it was 4099, a fact that would seem to indicate that, even allowing for a considerable increase during the last quinquennium, about one-third of the total cases of enteric fever occurred among a twelfth of the population. Mr. George Elliston states that his annual report for 1891 contained an account of a serious outbreak of enteric fever in Stoke, and he now adds that the recurring outbreaks of the disease in that locality "show that the drainage is utterly bad and no improvement in the health of the district can be looked for until it is properly sewered." Surely the Ipswich Corporation should now take the matter in hand. In that part of his report relating to the port of Ipswich Mr. Elliston states that several complaints were made during the hot season of the nuisance in the river at the main outfall works, and additional screening of solid matter was undertaken. It is to be regretted that a beautiful estuary like the Orwell should be thus polluted, and it is surely time that a proper method of treatment should be adopted for the sewage of Ipswich. We are glad to note in regard to the sanitation of individual houses that during 1895 some 250 privy middens were converted into waterclosets. It is to be hoped that in the next annual report Mr. Elliston will be able to record the drainage of California and Stoke.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6284 births and 3775 deaths were registered during the week ending May 23rd. The annual rate of mortality in these towns, which had been 18·5 and 18·4 per 1000 in the two preceding weeks, further declined last week to 18·1. In London the rate was 17·8 per 1000, while it averaged 18·4 in the thirty-two provincial towns. The lowest rates in these towns were 12·4 in Bristol, 12·5 in Brighton and in Hull, 12·6 in Leicester, and 13·8 in Cardiff; the highest rates were 22·9 in Birmingham and in Manchester, 24·5 in Sunderland, 25·4 in Oldham, and 26·0 in Salford. The 3775 deaths included 590 which were referred to the principal zymotic diseases, against 622 and 561 in the two preceding weeks; of these, 214 resulted from measles, 186 from whooping-cough, 83 from diphtheria, 50 from diarrhœa, 31 from scarlet fever, 25 from "fever" (principally enteric), and 1 from small-pox. No fatal case of any of these diseases was recorded either in Plymouth or in Swansea; in the other towns they caused the lowest death-rates in Wolverhampton and Bradford, and the highest rates in West Ham, London, Salford, Oldham, and Sunderland. The greatest mortality from measles occurred in Hull, Birkenhead, Sunderland, Portsmouth, and Oldham; and from whooping-cough in Cardiff, Newcastle-upon-Tyne, Salford, Preston, and Sunderland. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 83 deaths from diphtheria included 56 in London, 7 in West Ham, 5 in Birmingham, and 3 in Leicester. One fatal case of small-pox was registered in Bristol, but not one in London or in any other of the thirty-three large towns. There were 22 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 23rd inst., against 13, 15, and 20 at the end of the three preceding weeks; 5 new cases were admitted during the week, against 3, 5, and 6 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2596, against 2523, 2527, and 2539 on the three preceding Saturdays; 305 new cases were admitted during the week, against 236, 238, and 293 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 260 and 249 in the two preceding weeks, further declined to 218 last week, and were 87 below the corrected average. The causes of 46, or 1·2 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Leeds, Hull, Newcastle-upon-Tyne, and in sixteen other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Preston, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18·9 and 19·3 per 1000 in the two preceding weeks, declined again to 19·2 during the week ending

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May 23rd, but exceeded by 1·1 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·7 in Perth and 15·0 in Paisley to 20·9 in Glasgow and 22·7 in Greenock. The 560 deaths in these towns included 29 which were referred to whooping-cough, 21 to measles, 18 to diarrhœa, 6 to "fever," 5 to scarlet fever, 3 to diphtheria, and not one to small-pox. In all, 82 deaths resulted from these principal zymotic diseases, against 76 and 69 in the two preceding weeks. These 82 deaths were equal to an annual rate of 2·8 per 1000, which corresponded with the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 30 and 25 in the two preceding weeks, rose again to 29 last week, of which 25 occurred in Glasgow, 2 in Aberdeen, and 2 in Paisley. The deaths from measles, which had been 11 in each of the two preceding weeks, rose again to 21 last week, and included 18 in Glasgow and 2 in Dundee. The deaths referred to different forms of "fever," which had been 4, 9, and 14 in the three preceding weeks, declined again to 6 last week, of which 5 occurred in Glasgow, where the 5 fatal cases of scarlet fever were also recorded. The 3 deaths from diphtheria corresponded with the number in the preceding week, and included 2 in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 88 and 110 in the two preceding weeks, were 109 last week, and slightly exceeded the number in the corresponding week of last year. The causes of 38, or nearly 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 21·9 and 22·8 per 1000 in the two preceding weeks, further rose to 23·7 during the week ending May 23rd. During the past eight weeks of the current quarter the death-rate in the city has averaged 23·4 per 1000, the rate during the same period being 18·6 in London and 17·7 in Edinburgh. The 159 deaths registered in Dublin during the week under notice showed an increase of 6 upon the number in the preceding week, and included 9 which were referred to the principal zymotic diseases, against 13 and 5 in the two preceding weeks; of these, 3 resulted from whooping-cough, 3 from "fever," 1 from small-pox, 1 from scarlet fever, and 1 from diarrhœa. These 9 deaths were equal to an annual rate of 1·3 per 1000, the zymotic death-rate during the same period being 3·5 in London and 0·9 in Edinburgh. The 3 fatal cases of whooping-cough exceeded the number in any recent week. The deaths referred to different forms of "fever," which had been 7 and 0 in the two preceding weeks, were 3 last week. The mortality from scarlet fever corresponded with that recorded in the previous week, and the fatal case of small-pox was the first registered within the city during the past six weeks. The 159 deaths in Dublin last week included 22 of infants under one year of age, and 31 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a marked decline from the numbers in the preceding week. Eight inquest cases and 7 deaths from violence were registered; and 68, or more than a third, of the deaths occurred in public institutions. The causes of 7, or more than 4 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-MAJOR SIMPSON has embarked for South Africa and Surgeon-Captain Perry has been appointed to succeed him at the Royal Arsenal, Woolwich. Surgeon-Captain Jevers has been appointed to the Medical Charge at Dorchester and Surgeon-Captain Cummins to Hounslow. Surgeon-Captain Lavie has arrived in Egypt. Surgeon-Captain Burke has embarked for the West Coast of Africa and the arrival there of Surgeon-Captains Hosie and Josling is reported. Surgeon-Captain Browne has been transferred from Buttevant to Cork.

ARMY MEDICAL STAFF.

Surgeon-Lieutenant-Colonel Robert Blood, M.D., has been appointed Brigade-Surgeon-Lieutenant-Colonel, vice J. P. H. Bolleau, M.D., F.R.C.S.I., retired.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Lieutenant-Colonel P. A. Weir (Bengal) is appointed to officiate as Residency Surgeon in the Western Rajputana States, with effect from the date of assuming charge and during the absence on furlough of Surgeon-Lieutenant-Colonel A. Adams, or until further orders. Surgeon-Captain P. J. Lumsden, Residency Surgeon in the Persian Gulf, is appointed to officiate as Medical Officer of the Deoli Irregular Force and of the Haraoti and Tonk Political Agency, with effect from the date of assuming charge, vice Surgeon-Lieutenant-Colonel P. A. Weir, M.B., and during such time as Surgeon-Captain H. R. Woolbert, M.B., may officiate as Residency Surgeon in Mewar, or until further orders. Surgeon-Major F. F. Perry, Professor of Surgery, Lahore Medical College, is appointed to officiate as Principal of that College, in addition to his own duties, during the absence on leave of Surgeon-Lieutenant-Colonel S. H. Browne, or until further orders. Brigade-Surgeon-Lieutenant-Colonel Robert Jameson, Deputy Sanitary Commissioner, North-West Provinces and Oudh, retires from the service.

NAVAL MEDICAL SERVICE.

Inspector-General of Hospitals and Fleets Adam Brunton Messer, M.D., has been placed on the Retired List.

The following appointments are announced:—Surgeons: J. C. Ferguson, B.A., M.B., to the *Herald;* H. E. South to the *Victory*, additional for the *Duke of Wellington;* W. H. S. Stalkart, M.D., to the *Mosquito;* and A. S. Nance to the *Edinburgh*.

THE LATE ASHANTI EXPEDITION.

The late Ashanti expedition seems likely to be productive of great benefit in many directions. There is every reason to hope that an end will be put to the frequent raids and incursions of the Ashantis into the districts in their vicinity, that a great check has been imposed upon slavery, and that the downfall of Prempeh will be followed by the total prohibition of human sacrifices and other cruelties. The political and commercial consequences of the expedition will likewise be considerable. Let us hope, now that we have a dominating control over that part of the country, that attempts will be made to improve the sanitary condition of the stations occupied by us. The loss of life on the West Coast of Africa from fever and climatic disease is terrible. Numbers of young men go out from this country to that part of Africa only to die there or to return invalided to England with their health and strength wrecked and shattered. A very careful inspection of the districts occupied by Europeans should be made with a view to the total abandonment of the most unhealthy and the selection of the best stations that can be found; and attempts should be made to drain the soil, to harden and cleanse its surface, to make roads, and to clear away superfluous vegetation. Proper habitations, well raised above the soil, should also be provided.

DEATH IN THE SERVICES.

Deputy-Inspector-General R. J. Sweetnam, R.N. (retired), at Mount Pleasant, Dawlish, on the 20th inst., aged fifty-three. He joined the Navy as a surgeon in February, 1864, and in the following year was present at the action of Ikorudu, in the Lagos Lagoons. For his services in attending the wounded on the field on this occasion he was mentioned in despatches, and received the thanks of the Secretary of State for War. He was in medical charge of the Niger expeditions 1864–66 and was the author of the "Rules and Regulations for Preserving the Health of Ships' Companies in Lagos Lagoons and the Niger," which have been embodied in the North-East Africa "Station Order-book."

THE ROYAL CAMBRIDGE ASYLUM FOR SOLDIERS' WIDOWS.

Lord Wolseley presided on Tuesday last at the forty-fifth annual general court of this institution, when it was announced that there were sixty-six widows in the asylum each receiving 7*s.* a week and a coal allowance. A new system of nursing the aged and infirm had been inaugurated, but owing to want of funds there would be no election of inmates this year. The receipts for the year amounted to £3000 and payments to £4000, £1399 of which had been invested.

ROYAL MILITARY TOURNAMENT.

The Royal Military Tournament opened yesterday at the

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Agricultural Hall, Islington. Surgeon-Major Alexander of the Coldstream Guards, the medical officer in charge of the troops, is assisted by Surgeon-Major Lawless, A.M.R., and Surgeon-Lieutenant Kenneth Cameron, A.M.S.

H.R.H. the Princess Louise will open the new Headquarters of the London Companies Volunteer Medical Staff Corps, Calthorp-street, and distribute ambulance prizes on on Wednesday, June 10th.

Correspondence.

"Audi alteram partem."

MEDICAL CERTIFICATES AND PUBLIC ELEMENTARY SCHOOLS.

To the Editors of THE LANCET.

SIRS,—In connexion with the remarks in your issue of this week on the subject of Medical Certificates and Public Elementary Schools will you allow me to call attention to a recent departure in the practice of the Education Department which, if followed out and insisted upon, is certain to do much harm by impeding some of the most obvious and important steps which should be immediately taken in connexion with incipient epidemics of infectious disease amongst school children in rural districts? I use the term "fresh departure" advisedly, because there happens to be a larger number of separate public elementary schools in the extensive area for which I act as executive medical officer of health than in the case of any other medical officer of health in England and I am almost daily called upon to give certificates of some kind or other in connexion with public schools, but it is only on one or two very recent occasions that I have met with a demand for such a certificate as is referred to below. All medical officers who have had much experience in rural districts in the etiological investigation of epidemics of such diseases as diphtheria, scarlet fever, whooping-cough, and measles will agree with me that in sparsely populated districts the public school is as a rule the predominant source of infection and that in the majority of cases the dissemination takes place through mild and medically unattended cases affected so slightly as not to attract serious attention even from their parents and who either attend school personally or, if remaining at home with what is called (and often generally believed to be) merely "a cold," their brothers and sisters continue to attend school.

Medical attendance is less accessible and of necessity much more frequently done without by the working classes in rural districts than in urban districts, so that a large proportion of cases escape notification and often, after a few days' illness with "a cold and a bit of a rash or of sore-throat," children are sent back to school in response to the customary printed form of notice either to send the child or a medical certificate. Often and often when remonstrating with parents for sending children to school whom, although not medically attended, they must have known were suffering from a prevailing epidemic, I have been met with the production of the formal printed notice to send the child, also with the remarks by the mother that "the child was not bad enough to need a medical man and they were afraid of being summoned, and they thought if any harm did come through the child going to school they would not be to blame after receiving such a notice." It is in such cases as these that the cordial coöperation of a zealous and intelligent school teacher is of the utmost assistance to sanitary officials in carefully excluding all justifiably suspicious cases and all children from families where there is reason to believe any are ill with the prevailing complaint, although no medical man is in attendance. Such assistance school teachers are as a rule most anxious to afford, but their hands are already, as it is, very much tied by the regulations requiring the child's attendance or a medical certificate; but if the new departure of the Education Department is enforced they will be very much more tied, as this requires that, on counting up the number of attendances made by a child in the calculation of the daily average attendance of a school for the purpose of the grant in aid, before any allowance can be made for absence through illness under the 101st article of the code it must be shown that the child had been excluded by a special order of the sanitary authority referring separately to each child, and stating beforehand the date at which the exclusion was to commence and when it was to cease. This article in the code is not new, but the practical application of it in the way referred to in this letter is new, at least in my experience, and constitutes the new departure in practice to which I wish to direct attention.

As I write this I have before me an official letter from the Education Department in which it is stated, in reference to a number of children who had been most properly excluded from school during an epidemic of scarlet fever—either because a brother or sister was notified as suffering from scarlet fever, or some children in a house were with good reason suspected of being similarly affected but with ill-defined and exceedingly mild symptoms and medically unattended, or for some other good reason on my advice as medical officer of health—that the Education Department decline to make any allowance unless it can be shown that the children were so excluded by a previous special order of the sanitary authority. Considering that to be of any service exclusion should be immediate and that as a rule sanitary authorities meet, as in the present instance, once a month only, the absurdity is too patent to merit comment. That the term "sanitary authority" is here used by the Education Department in its technical and legal sense—viz., as the sanitary council of the department—is obvious from a reference to Clauses 88 and 101 in the 1896 Education Code. Even assuming each sanitary authority to have power to transfer its responsibility in such cases to the medical officer of health, his visiting, diagnosing, and writing orders in each individual case will involve very injurious delay, to say nothing of an enormous number of immediate and often unnecessary visits and certainly in many cases a very undesirable clashing with private medical practitioners. In a similar case which came under my notice a few weeks ago and in which the orders for exclusion were similarly demanded by the Education Department if any allowance was to be made, the epidemic had been one of whooping-cough and only a few of the most severe cases had been medically attended. The schoolmaster had simply used his common sense and good judgment to exclude children coming from houses in which it was a matter of notoriety and an admitted fact that the children were suffering from whooping-cough.

Such unnecessary and impracticable regulations tend to restrict personal discretion and to check the salutary zeal for the prevention of disease with which school teachers are often imbued.

I am, Sirs, yours faithfully,

W. N. THURSFIELD, M.D. Edin.,
Medical Officer of Health for a number of Sanitary Districts in Shropshire and Seven Adjacent Counties.

Shrewsbury, May 23rd, 1896.

"REGISTRATION OF MIDWIVES."

To the Editors of THE LANCET.

SIRS,—I desire to thank you for your kind and appreciative notice of my labours in connexion with this unhappy and unfortunate midwifery business.

Your wise remarks as to the necessity which exists, in view of any practical legislation, of greatly simplifying suggestions in connexion with this subject are well timed, and will I hope be taken to heart by the Midwives Institute and its supporters. Not only are the geese of these people all swans, but their very ducks belong to the same species. The importation by them of so exalted a body as the Privy Council into the administration of what after all is a very humble matter, is a good example of unconscious humour and also of the fact mentioned. It reminds me of the case of the governor of a certain German castle, who was severely taken to task for having omitted to fire a Royal salute upon a necessary occasion. The poor governor gave the following reasons for his apparent neglect of duty: (1) that he had no proper artillerymen, (2) that his powder was bad, and (3) that there was not such a thing as a cannon on the premises. The last reason might have sufficed and been fairly conclusive. The Midwives Institute and its supporters have apparently plenty of cannon, although perhaps, after all, they are not very big guns and are more suitable for firing salutes than for practical warfare. They will, no doubt, learn in time that by using a simple musket they would be

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able to shoot with much greater accuracy and precision and with infinitely better results.

I am not sure that the suggested creation of an expensive and complicated system of midwives boards stands in much better case than the suggestion anent the Privy Council. It is invariably a wise thing to resist the beginnings of evil, and the absence of these boards would greatly tend to promote simplicity and economy in dealing practically with this question. I certainly regard them as more ornamental than useful. It is in this connexion a very remarkable fact that, while we have heard on all hands of the great things which have been done in other countries in connexion with the registration of midwives—the Austrian Minister of the Interior and the regulations issued by him have been, for example, a perfect Godsend to the council of the Lancashire and Cheshire Branch of the British Medical Association in connexion with their Bill—it never apparently occurred to any of these Bill promoters that the Local Government Board is the Ministry of the Interior in these islands and that its medical department is in the highest degree qualified to deal with certain aspects of the present question. All sanitary details should, for example, be left absolutely to its discretion, so that they might be varied from time to time as the progress of knowledge and altered circumstances might dictate. A "complication" of labour within the meaning of the Act would not, of course, be a varying quantity and should be definitely stated in the Act itself. How natural also in this connexion it would be to avail ourselves of the complete network of sanitary administration spread over the country. The local medical officer of health, having received his instructions from the Local Government Board, would annually issue to the midwifery nurses upon his register a copy of the sanitary precautions they must take and a list of "complications" the presence of which would demand medical assistance. In this way two desirable objects would be attained: (1) the nurses would be annually reminded of their duty in these respects; and (2) they would be kept in touch with the local administration.

The General Medical Council, having already many duties to perform, is naturally very shy about being too closely connected with any Act for registering midwives, but I am afraid that in any Act which would in any measure do justice to our profession some action on the part of the General Medical Council is absolutely indispensable. Its duties, however, need not be very onerous and would be mainly three: 1. To formulate rules for the guidance of members of the profession engaged in the training of midwifery nurses and to see that they were observed. In this way the midwife manufacturing business would be brought within the limits of what was reasonable and necessary, and the advantages to be derived from being a registered medical student and pupil midwife would again become more real and less problematical. 2. To increase from time to time the six months' minimum training, if necessary and desirable. 3. To nominate examiners and institute examinations should they be found necessary, which, in my opinion, they are not. Under any system of registration the training of these women will form a humble but integral part of the medical education of the country, and the General Medical Council certainly is the proper authority to deal with the matter, although there is no reason why the examinations should be either elaborate or costly. Their absence would certainly simplify matters, although there is no apparent reason why, if instituted in the way suggested and not made too numerous they should not pay for themselves. I attach, however, no great value to these suggested examinations and regard the training as the one question of primary importance; it is, perhaps, needless to say that the present system should, as far as possible, be carefully avoided. To inflict upon these very partially educated women learned and long-winded harangues upon the science and art of midwifery seems to me a proceeding of very questionable taste and utility. The aim of any real training should rather be to drill into these women day after day, not only by precept but also by example, the infinite importance of cleanliness, of patience, and of kindly consideration in the discharge of their duties, and to endeavour as far as possible to make them masters of the practical management and hygiene of a normal case of labour and of the nursing details essential to the comfort and welfare of every parturient woman. It is neither necessary nor desirable that these women should aspire to be amateur doctors or even specialists in their own department, although no doubt some advances have already been made in this direction. "You are suffering from inflammation of the overtures" said one of these highly educated and diplomatised ladies recently to a confiding client. I dare say the poor client believed her; but our profession will no doubt be well advised in very politely declining any "overtures" of that description. The educational overture should be set to an entirely different tune. It might further be quite fairly urged against the necessity for any examination that the majority of the candidates in midwifery nursing who might afterwards undertake the duties of a midwife would probably be young and middle-aged widows of moderate education and good moral character who had been to some extent sobered by the cares of life and who would have many powerful incentives to diligence and care during the period of their training. The proposed midwifery nurse, then, having received such a training as I have indicated and having the medical officer of health to supervise her on the one hand and the medical practitioner to assist her when necessary upon the other, would be fairly launched upon the sea of life. Would the legal creation and recognition of such a woman be detrimental to the welfare of our profession? I cannot suppose that it would. It is, at least to me, quite obvious that the profession would do well to consider the facts connected with this subject wisely, lest they should be considered and dealt with in a manner which might prove very unwise. I have, however, no doubt that in dealing even with this thorny subject the profession will prove itself worthy of its traditions, neither forgetting what are its just and lawful rights nor wrapping itself up in an impenetrable cloak of ignoble selfishness, but that in this as in all things it will remember those higher claims of humanity to which it has never turned a deaf or an indifferent ear. "To do justly, and to love mercy" should be the aim of every one of us.

I am, Sirs, yours truly,

Salford, May 27th, 1896. WM. FRASER.

A DECEPTIVE ETHER INHALER.

To the Editors of THE LANCET.

SIRS,—I remember some years ago hearing of a case in which a patient was anæsthetised with a Clover's inhaler pure and simple. When the operation had been successfully concluded it was discovered that the ether bottle had never been opened, and that the only anæsthetic used had been the carbonic acid manufactured by the patient himself. I have recently had a somewhat similar experience which is, I think, worthy of record. I had occasion to anæsthetise a lad aged fifteen years in order to reduce a dislocation of the patella. As I was working single-handed I naturally preferred to give ether, and I used for the purpose a Clover's inhaler which had not been used before since it reached me from the maker. Having poured in a measure of ether I began the administration with the indicator at "0," and gradually rotated the box until after about two minutes the pointer stood at "Full." The patient did not cough at all and struggled very little. By the time the indicator was at "Full" he had passed into a condition of partial anæsthesia and in this state he continued for some minutes. Muscular relaxation was not complete and the corneal reflex was not abolished, but cyanosis was so marked that I did not think it wise to carry out the rule I learned from Dr. Hewitt, to keep the inhaler closely applied until the breathing became stertorous, and only then to begin to allow the patient an occasional breath of fresh air. Owing to the cyanosis, though stertor was not present and the pupils had not begun to dilate, I removed the inhaler for a breath after every eight or ten breaths. It was quite apparent that the patient was not getting enough ether to anæsthetise him fully, and as the room was rather cold I thought that defective evaporation might account for it. I therefore applied hot sponges to the box of the inhaler, but the patient's condition remained unchanged. Twice I laid aside the inhaler for a moment and endeavoured to reduce the dislocation, but each time I found that muscular relaxation was not complete, and that the patient (who was otherwise quiet) resisted my manipulations. Finally, after about ten minutes, during all of which time the indicator was at "Full" and the patient had only an occasional breath of fresh air, I gave up the ether in despair, administered chloroform to complete anæsthesia, and reduced the dislocation without

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difficulty. When I came to examine the vitals of the ether inhaler the mystery was cleared up. The marks on the box were liars; when the indicator was at "0" the patient was receiving the full blast of ether, and when it was at "Full" he was receiving back from the bag nothing more than his own breath. But this was not simply the fault of the engraver, for the "0" is where it is usually placed in the instrument made by Messrs. ——, beneath the side-tube through which the ether is poured into the box. The inhaler itself is at fault—a case of "transposed viscera." The inhaler was made by one of the best-known firms in London. I am not desirous of publishing the name of the makers, for this incident has not shaken my confidence in the quality of their goods; but I shall write privately to inform them of the practical joke they have played on me. Perhaps the most remarkable fact about the whole experience is that the patient did not cough at the outset of the administration, when, with the index at "0," he was receiving the full blast of ether. I have since tried it myself and find the effect of this strength of ether vapour on a membrane not yet dulled by commencing anæsthesia extremely irritating. I am, Sirs, yours truly,

Nagasaki, Japan, Feb. 6th, 1896. MAURICE EDEN PAUL.

EUPHORBIUM AS A CAUSTIC.

To the Editors of THE LANCET.

SIRS,—The following particulars may be of interest to some of your readers. I was staying in the country in Normandy last year and was asked one day, in an unofficial way, what was a good thing for "warts." The mention of the different 'folk," magical, and cabalistic methods led to a general discussion of the subject, and at last the proprietor of the hotel related the case of a child who had been treated for months without any benefit by the leading skin specialists for innumerable warts on the face, and who had been cured in a few days by a local sorceress. The remedy used was the fresh milky juice from the stems of the common garden euphorbium, a weed that is plentiful in those parts. It so happened that one of the kitchenmaids at the hotel had recently developed a crop of warts on the hands and she very willingly consented to become the subject of an experiment, which was entirely successful. The application of the juice leads to the formation of a blister under the wart, which falls off in due time. According to Dorvault, a French text-book on pharmacy, exotic euphorbium enters into the composition of an "everlasting blister" into some topical applications for cancer in veterinary remedies, and the 'Aveloz nült," a cancer specialty, consists also of it. The dried gum resin requires the greatest caution in manipulation on account of the irritating nature of the powder. Folkard[1] says that a variety is cultivated in India as a sacred plant, prayers being addressed and hogs sacrificed to it.

I am, Sirs, yours faithfully,

Rue Vernet, Paris, May 14th, 1896. OSCAR JENNINGS.

PIG *v.* OX BILE TABLOIDS IN JAUNDICE.

To the Editors of THE LANCET.

SIRS,—As success in treatment sometimes depends more on the kind and mode of preparation of the remedy employed than anything else, from having noticed the remarks in the Laboratory Record of THE LANCET of May 16th on the advantages of coating bile tabloids with keratin to enable them to pass through the stomach undissolved into the intestines, where alone they are of therapeutic value in cases of jaundice, I desire to supplement those judicious remarks by what appears to me would be a useful hint to manufacturing pharmacians from a therapeutic point of view, and that is to employ in their preparation pig's instead of ox bile, for the important reason I pointed out in a work on the various forms and treatments of jaundice some thirty years ago, that from the ox being a herbivorous animal its bile is but ill suited for the purposes it is intended in a flesh-eating animal such as man is; whereas the pig being omnivorous like the human being, its bile contains exactly the ingredients necessary to supply the place of those that are absent from the digestive canal in cases of jaundice in the human being, which ox bile does not. Why, then, one naturally asks, should our pharmacians put ox bile into their tabloids when it is quite as easy for them to obtain and use pig's bile—seeing that the object in view in prescribing another animal's bile is to prevent the patient from emaciating and dying from inanition in consequence of his food not being properly digested and prepared in the intestinal canal for the purposes of absorption and assimilation? For if the food be not rendered fit for the body to assimilate it, it might just as well not be given to the patient at all, in so far at least as the object held in view is concerned. As I know manufacturing pharmacians desire to aid the practitioner in combating disease and death by every means in their power, and that they are always willing to adopt all reasonable improvements both as regards the modes of preparation and the forms of administration of drugs, I trust the calling their attention to such an important therapeutical suggestion as the above—founded as it is on true physiological principles—in the pages of THE LANCET will have the desired effect.

I am, Sirs, yours faithfully,

Harley-street, W., May 22nd, 1896. GEORGE HARLEY.

[1] Plant Lore Legends and Lyrics.

"THE OPTICIAN *v.* THE OPHTHALMIC SURGEON."

To the Editors of THE LANCET.

SIRS,—My attention has been directed to the admirable article in THE LANCET of May 9th on the relations between oculist and optician, and I may say at once that I entirely concur with the spirit of your remarks; but in dealing with the matter—very naturally and rightly from the standpoint of the medical profession—you seem to me to do us traders rather scant justice, and I therefore crave permission for a few words from the point of view of the optician, and the essence of my protest lies in your use of the word "encroach." Surely, if the word is to be used at all it is rather applicable to the oculist than to the optician; but the word is not a nice one and I would prefer to represent the state of affairs in this way. The correction of defective sight by means of spectacles has remained for centuries almost entirely in the hands of the trader; but the great increase during the last thirty years in the knowledge of ocular refraction and the therapeutic use of spectacles has lifted the whole matter into the professional sphere. But in this connexion it should be recognised that we are still in a state of transition. I think the majority of opticians—those, at least, who have a due sense of the responsibilities involved—look forward hopefully to a time when people will go as naturally to the medical practitioner for advice on eye and sight troubles as they do now for defects of hearing. I think, too, they are doing good work, each one according to his opportunities, towards bringing that time about. But there are many difficulties that the optician has to meet, such as the refusal of people to take their defects of sight seriously, ignorant prejudice, the ingrained habit of old-fashioned customers, and, not least common, the specialist's fees. No doubt time will dissipate these difficulties, but meanwhile it would be generous—one might almost say just—to make allowances for them and to give the optician credit for doing his best to adapt himself and his business to the new conditions.

I am pleased to think that in my main view of our present duty I am absolutely in accord with the recommendations of your article. No encouragement should be given to proposals for measures, legislative or other, such as have recently agitated the State of New York. Feelings of rivalry should be restrained and the issue left to easy and natural development. I am, Sirs, yours truly,

New Bond-street, W., May 21st, 1896. W. A. DIXEY.

SHORTHAND IN MEDICINE.

To the Editors of THE LANCET.

SIRS,—With reference to the remark in your annotation on our petition to the General Medical Council I may point out that the petition is for "shorthand," and not any one system, to be allowed to bear some marks to those who choose to present it. The wide use of phonography has been, perhaps, unwisely referred to in the petition, but the College of Preceptors accept any system of shorthand as an optional subject at the same examination as is recognised by the Council. Those who are passing it for the medical profession, however, do not present shorthand because the General Medical Council has not included it as a subject for

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which marks may be given. Any really legible system of shorthand will serve for personal use, but uniformity of system is necessary for intercommunication and for such help to acquisition and familiarity as our publications and circulating manuscript magazines present. Each of the latter is in effect a small society for the discussion of medical questions without need for proximity of the members. I have reason to think that many members of the profession and students have acquired shorthand who have not yet joined our society. May I take this opportunity of asking them to do so without delay and to write to Dr. Neil, Warneford Asylum, Oxford, our honorary secretary?

I am, Sirs, yours faithfully,

May 27th, 1896. W. R. GOWERS.

"POOR-LAW OFFICERS' SUPERANNUATION BILL."

To the Editors of THE LANCET.

SIRS,—The above Bill has been passed so rapidly through the committee stage that several very necessary amendments have not been inserted into it. Many months since it was pointed out to its promoters that the Bill as it stood would operate very strongly against the interests of trained nursing in Poor-law infirmaries, and, indeed, that the Bill appeared to be drafted in the interests of some of the superior officers, who would derive benefit from the salaries of their inferiors. Thus the trained nurse rarely stays any length of time in a Poor-law infirmary; the conditions under which her work has to be done are so antagonistic in most cases to the proper performance of those duties that she will not stay beyond her probationership or beyond the time she is bound by the terms of her training. Again, a trained nurse is past her work soon after fifty. At Guy's Hospital she is compulsorily retired at fifty, at the London Hospital at fifty-five. The Royal National Pension Fund for Nurses, it is true, puts the age for compulsory retirement at sixty, but at the request of the authorities of Guy's Hospital the nurses there are permitted to retire under their scheme at fifty, and they have recently added another table to their previous ones with a view to encouraging the retirement of trained nurses at this age. No one would voluntarily be attended by a trained nurse who was close on sixty years of age, yet the Bill I am referring to puts the voluntary age for retirement at sixty and the compulsory one at sixty-five. It is evident that under such regulations few trained nurses will enter Poor-law infirmaries. It is true that a recent amendment has been made to Clause 8, providing that any person not dismissed for her own fault shall have her payments returned to her, but there is a considerable probability that this clause may be interpreted to mean that the deductions from the salaries will only be returned if the nurse remain a certain minimum period of time, and this will operate as unfavourably as the original clause. I am informed that all the Poor-law infirmary authorities, nursing and medical, are strongly opposed to the Bill on these grounds, and I have no doubt but that if the required amendments be not inserted it will even now be blocked. It is so difficult to get the proper class of persons to take up workhouse infirmary nursing or even to enter as probationers that nothing which increases this difficulty will be tolerated. May I ask for your powerful support in this matter?

I am, Sirs, yours faithfully,

Fellows road, N.W., May 26th, 1896. F. R. HUMPHREYS.

"THE ARMY MEDICAL STAFF."

To the Editors of THE LANCET.

SIRS,—With your permission I would wish to endorse every word in the letter of "Brigade-Surgeon, A.M.S.," published in THE LANCET of May 9th. It is, I consider, the most to the point and the best of the many letters written on this subject. After more than a score of years spent in the service I have no hesitation in saying that the advances which have been made within my memory have been enormous. Never before was the soldier so well looked after in health and so well treated and nursed when sick, and never before would he be so well cared for in war, within the limits of numbers, as at the present day. I am confident that the soldier generally recognises this though his officer may not, as the latter no longer has his familiar friend—or drudge, as the case may be—"old pillbox" at his elbow. Let not the authorities hastily or unadvisedly sweep away this organisation, the result of care and forethought, and which has necessarily taken a generation of medical officers to bring up to its present, I maintain, high standard. Rather let them make the service, by one means or the other, sufficiently attractive to induce a desirable stamp of man to compete for it. The tangible grievances of the service are, I consider, three—viz., (1) the large proportion of foreign service, at present equalling about three-fourths of the whole; (2) the non-recognition of various warrants and ill-treatment of medical officers by the Indian Government; and (3) the frequent changes of station of junior medical officers at some of the home stations. The first two could be rectified by the Indian Government taking over the medical treatment of white troops in India, as I see has been frequently advocated of late; and considering the treatment they have received in India and the depreciated rupee I think the Army Medical Staff would be but little the losers. The abolition of half-pay appointments and a relatively larger number of medical officers serving at home, together with a headquarters order on the subject, would meet the third, which is an important one from the patient's point of view, as it often leads to change of medical men in treatment of his case. Most of the sentimental grievances would disappear in course of time with a generally higher class of medical officer, and at those which did not we could afford to smile.

I am, Sirs, yours truly,

May 23rd, 1896. ACTIVE LIST.

PROFESSIONAL CONFIDENCES.

To the Editors of THE LANCET.

SIRS,—Can you or any of your readers give me any help with regard to the following circumstances? A few days ago I was called in to see a young unmarried woman who had recently miscarried. On inquiring if any instrument had been used she admitted that it was so. For some days the patient was in a very critical condition, but is now going on all right. Ought I, seeing that the attempt to procure abortion is in itself a criminal offence, to report the case to the police?—I am, Sirs, yours faithfully,

May 26th, 1896. YOUNG PRACTITIONER.

*** We should say "No." The information was obtained *sub sigillo*, and we do not think it is the duty of a medical man to give information to the authorities under such circumstances as our correspondent details.—ED. L.

THE ST. GEORGE'S HOSPITAL GRAPHIC SOCIETY.—The annual general meeting of this society will be held at the hospital on Tuesday, June 2nd, at 2.30 P.M. By permission of the board of governors the annual exhibition, which is strictly limited to the work of members, will be held in the board-room of the hospital. The exhibition will be opened immediately after the meeting and will remain open until the end of the week.

THE DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—The annual general meeting and conference of this society was held on May 20th, Dr. P. H. Pye-Smith, F.R.S., President, being in the chair. The reports of the council and treasurer were adopted and the following were elected office-bearers for the ensuing session:—President: J. F. Payne, M.D. Vice-presidents: Dr. McCall Anderson, Dr. J. Hughlings Jackson, Dr. Robert Liveing, Dr. P. H. Pye-Smith, and Dr. S. Wilks. Treasurer: Dr. Stowers. Council: Dr. P. S Abraham, Dr. R. Bowles, Dr. H. A. G. Brooke, Dr. J. Galloway, Dr. A. J. Harrison, Dr. S. Mackenzie, Dr. Walter Smith, Dr. F. Taylor, Mr. Anderson, Mr. A. Cooper, Mr. J. Hutchinson, and Mr. B. Shillitoe. Secretaries: Mr. L. A. Bidwell and Mr. G. Pernet. After a vote of thanks to the retiring President Dr. Payne took the chair and gave his introductory address on the Etiology of Diseases of the Skin, with special reference to impetigo contagiosa and eczema, and the *rôle* of micro-organisms. Dr. Walter G. Smith (Dublin) read a paper on the Properties of Chrysarobin and Chrysophanic Acid. Dr. Stopford Taylor, Dr. Waldo, and the President discussed the paper. The following cases were also shown:—Dr. D. Walsh: (1) Elephantiasis; and (2) Thimble Eczema. Dr. A. Eddowes: (1) Unilateral Lupus Erythematosus; (2) Ichthyosis; (3) Urticaria Papulosa; (4) Eczema of the Eyelid; and (5) Dysidrosis and Hyperidrosis. Dr. P. S. Abraham: Erythema Persistans, &c.

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THE BATTLE OF THE CLUBS.—XXXI.[1]

(FROM OUR SPECIAL COMMISSIONER.)

(*Continued from p. 1380.*)

DERBY: THE ABORTIVE MOVEMENT OF 1872; THE APATHY OF THE PROFESSION; FEMALE CANVASSERS.

IT must at once be acknowledged that my investigations in the town of Derby did not lead to any encouraging conclusions. My first visit was to Mr. Francis, President of the Derby Medical Society, which was formed some four years ago. It is quite different to other medical societies. The society has about sixty members. They meet for social and convivial purposes and also to discuss scientific papers; but, according to Mr. Francis, the society is in no wise prepared or anxious to take up economical questions. At the same time I should also state that I met with younger members of the profession at Derby who held more hopeful views. They had less knowledge of past and disappointing experiences. It appears that in 1872 a requisition was signed by a large number of practitioners at Derby demanding increased pay from the various friendly societies and medical aid associations established at Derby. The case, I am told, was badly put and failed to excite public sympathy. A number of meetings were held in private houses and were supposed to be private meetings. Nevertheless, there were always one or two medical men present, who went and reported all that had occurred to the committees of the friendly societies. The feeling of solidarity among the members of the profession, it will be seen, was very weak, but as this occurred twenty-four years ago the fact should not dishearten the men of to-day. Ethics have made great progress within the last quarter of a century. The selfish sense of individualism is dying out; the new word and the new teaching of solidarity is gaining a firmer hold on the public conscience, and people in all trades and professions are beginning to realise at once the material necessity of unionism. In 1872, however, all friendly societies were well prepared and able to resist the demands of the Derby medical men. They amalgamated and formed a United Friendly Societies' Dispensary. They not only refused to continue the pay of their medical officers, but introduced three new practitioners, to whom they paid fixed salaries and to whom they entrusted all their patients. Thus the dissatisfied medical officers not only failed to obtain an increase of pay, but lost what little they had. Mr. Francis, however, succeeded in keeping his lodges of Oddfellows, who now pay him about £200 a year in a 3*s.* 6*d.* annual subscription for each member. Mr. Francis seemed quite satisfied with the arrangement. During the course of twenty years no complaints had been lodged against him; he had not once been summoned to appear in self-defence before the committee. He was, if necessary, able to attend to any private patient who might happen to call at his house during the hours set aside for seeing club patients. To use his own words, he felt the coming in, but did not feel the going out—that is to say, if the number of members increased he felt the financial benefit, but the extra work this might entail was less perceptible. As for having too much work to do he thought that serious cases among the club patients were generally well treated. Undoubtedly there were some abuses. Rich men made political capital of having belonged for twenty-five years to a friendly society and having never drawn a penny, but they were careful not to state how much medicine and medical advice they had obtained from the friendly society's medical officer. On the other hand, these wealthy and superior men were generally members of the committees of the friendly societies. Being more intelligent than ordinary workmen they had the good sense to hear both sides when a question or complaint was raised. These wealthy and superior members of the friendly societies were really a protection to the medical officers and saved the latter from much needless and vexatious worry. Seeing the utter failure of the movement attempted in 1872 Mr. Francis was not at all desirous to resume the struggle even under the present more favourable conditions.

My next visit to a neighbouring practitioner was not more encouraging. In answer to my questions the medical man in question informed me that he received £4 or £5 per quarter from the London and Manchester Insurance Company and that their members and patients gave him very little trouble. Though the profession in the neighbouring town of Nottingham have risen in arms against this very same insurance company the Derby medical officer of the company declared that he was not even aware there was an agitation against them.

My third visit was to a consulting physician, and he certainly did speak in contemptuous terms of the medical men who, in different parts of the country, were employed at fixed salaries at the dispensaries established by these friendly societies. He thought it was a mistake to imagine that the men who accepted such posts were all young and inexperienced medical men. But was he to render himself unpopular with all the workmen of the town by refusing to meet in consultation the medical officers of the friendly societies' dispensary? Why should he be called upon to "bell the cat"? He agreed that the poor members of friendly societies were the most neglected and received the worst attendance. It was clear that a medical man who had club practice, but aimed at ultimately obtaining a private practice, would give himself much more trouble with regard to these club patients who were better off and could afford to become private paying patients when he left the club. Thus the club medical officers lent themselves to the establishment of a system of favouritism which told to the disadvantage of the poorer members of friendly societies. Surely this evidence should be taken to heart by the working-classes. It should make them understand how completely it is to their own advantage that a wage limit should be established and that medical attendance should not be given to wealthy members of benefit or friendly societies. On their side the members of the medical profession should realise how thoroughly the friendly societies reduce their medical officers to the level of mere paid servants, and that the medical aid they organise is established, not as a professional matter, but as a pure matter of business. This is fully set forth in Rule 19 defining the duties of the managing committee of the Derby Amalgamated Friendly Societies' Dispensary. The rule is as follows and I italicise the important passages: "The managing committee shall purchase all necessary drugs, instruments, surgical appliances, furniture, fixtures, books, forms, and other items *for carrying on the business of the Association*, and make such arrangements for the efficient and proper working of the dispensary as they may deem necessary." ..... "*They shall draw up agreements* for the due fulfilment of the duties of the medical officers and dispenser, and submit the same to the general committee for their approval and see that such agreements are properly carried out. They shall also have *power to suspend* a medical officer or dispenser for any misconduct or breach of agreement until such time as the matter of complaint has been laid before the general committee (which must be as early as possible after a complaint arises), when, if complaint be proved, the general committee shall have power to request the committee of management *to dismiss with or without notice* such medical officer or dispenser *for any misconduct or breach of agreement*, and if notice to resign be given, such notice shall be for one, two, or three months, as may be determined by the committee."

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Aug. 24th, 1895, Brussels; (2) Aug. 31st, 1895, Brussels; (3) Sept. 21st, 1895, Portsmouth; (4) Sept. 28th, 1895, Portsmouth; (5) Oct. 5th, 1895, Eastbourne; (6) Oct. 12th, 1895, Lincoln; (7) Oct. 26th, 1895, Lincoln; (8) Nov. 2nd, 1895, Grimsby; (9) Nov. 9th, 1895, Bexhill-on-Sea; (10) Nov. 16th, 1895, Hull; (11) Nov. 23rd, 1895, Hull; (12) Dec. 7th, 1895, York; (13) Dec. 14th, 1895, Northampton; (14) Dec. 21st, 1895, Fermanagh Medico-Ethical Association; (15) Dec. 28th, 1895, Northampton; (16) Jan. 4th, 1896, Birmingham; (17) Jan. 18th, 1896, Birmingham; (18) Jan. 25th, 1896, Club Practices in Rural and Mining Districts; (19) Feb. 1st, 1896, The Formation of a Provident Medical Association at Folkestone; (20) Feb. 8th, 1896, The Manchester Medical Guild and Medical Aid Associations; (21) Feb. 15th, 1896, The Leicester and Leicestershire Provident Dispensary; (22) Feb. 22nd, 1896, The Organisation of the Profession at Leicester; (23) March 7th, 1896, Loughborough: Local Efforts Defeated by Consultants from Neighbouring Towns; (24) March 14th, 1896, Medical Aid Societies in Small Heath; Medical Clubs at Stockport; (25) March 21st, 1896, General Meeting of the Profession and the Formation of a Union at Nottingham; (26) April 4th, 1896, Nottingham; the London and Manchester Industrial Assurance Company, Limited; the Public-house Medical Aid Clubs; United Action at Lincoln; (27) April 11th, 1896, Leicester and Wolverhampton; a Hastings Dispensary wound up; (28) April 25th, 1896, Walsall, Formation of a Medical Union; the Medical Profession and the Friendly Societies; Trade and Medicine; the Family Clubs; Women's Public-house Clubs; (29) May 9th, 1896, Sheffield: An Ancient Medical Society; Workmen Sweaters; The Old Grievances; Probable Formation of a Medical Union; (30) May 16th, 1896, Lincoln: Medical Protection Fund Started; Benefit Societies and Medical Men; Medical Union at Nottingham.

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Such dispensaries are not only injurious in themselves to the interests of the medical profession; they compel medical men who try to start private dispensaries of their own to accept equally low terms. But such private dispensaries are slipping out of the hands of the profession, they are better organised, or rather more actively pushed by the canvassers in the employ of insurance companies. As agents canvass so actively for these companies, medical men who have private dispensaries of their own now also employ a canvasser, so that, as far as the dignity of the profession is concerned, it all amounts to much the same thing. I was assured that at Derby there are some private dispensaries where even girls are employed to collect and to canvass for subscriptions. So keen is the competition that members of medical aid associations or dispensaries are emboldened to make exorbitant demands on their medical officers. One club medical officer complained that he was compelled to give death certificates for nothing, though the Registrar who only copies the medical certificate is always paid for such copies.

There is also at Derby a sort of charitable provident dispensary, and at this institution, after the drug bill, the dispenser, and other expenses have been paid, there only remain 2*s.* per annum per member for the medical officers. It will be seen, therefore, that club practice at Derby stands at a very low ebb; but what is far more discouraging is the fact that at present no action is being taken to remedy these evils. Perhaps, however, when the Derby practitioners read what has been attempted and already achieved in many other towns they will awake from their present lethargy. In any case the younger members of the profession with whom I discussed the matter agreed that nothing but a strong union could save them from still further degradation. Unfortunately these younger men are not sufficiently influential to start the movement, and in the higher ranks of the profession there unfortunately at present prevails much apathy.

THE GAINSBOROUGH DISPENSARY.

It seems to be a generally recognised rule among the members of a certain class that workers of all kinds are entitled to full payment for what they do, except in the case of medical men. At the annual meeting of the Gainsborough Dispensary a "requisition" was read from the medical officers of the dispensary, and the following are the main points of the said requisition. In 1872 the remuneration of the medical officers was fixed at 66⅔ per cent. of the whole sum received by the dispensary. From 1884 to 1894 the sums received by the medical officers have varied between 50 and 57½ per cent., thus falling far below the remuneration fixed by the rules of the institution. Other sections of the requisition dealt with the boundaries of the district, the payments of members, fines, &c. It appears that the medical men attached to the dispensary who drew up the requisition held sundry meetings to consider it. They were all unanimous in its favour, and all signed it. Then arose the question what should be the course of action in the event of the Dispensary Committee refusing to accept the requisition, and according to our information they came to the conclusion that if the committee rejected it they would withdraw it. This seems to be a weak method of procedure. It savours too much of "These are my opinions, gentlemen, but if you don't like them I shall be happy to change them." The example of Cork shows what can be done by steady refusal to work for inadequate sums and by firm organisation. The tone of the Dispensary Committee was not of the best, witness the speech of one member, who, according to the *Retford and Gainsboro' News*, characterised the requisition as an "audacious solicitation" and also talked about "two new doctors." Despite the efforts of the chairman to secure a just and equitable settlement the requisition was withdrawn. Now, we have no knowledge of the circumstances other than we have procured from newspapers, &c., but if the medical men of Gainsborough want their bond they will have to fight for it. It is no possible use saying, "We want this, but if you say 'No' we won't ask again." A little firmness, a little unanimity, and the battle will be won.

LINCOLN MEDICAL PROTECTION FUND.

To the Editors of THE LANCET.

SIRS,—The following subscriptions have been received to the above fund since you so kindly published our appeal of the 16th inst.:—

	£	*s.*	*d.*
J. B. Neale, New Wandsworth	1	1	0
H. T. Butlin, Harley-street, W.	5	5	0
T. T. Blease, Altrincham	2	2	0
E. E. Llewellyn, Ramsey, Hunts	1	1	0
Portsmouth Medical Union	2	2	0
H. C. P. Howes, Lincoln	2	2	0
C. Arblaster, Madeley, Salop	0	10	6
H. P. and G. C. Taylor, Trowbridge, Wilts	3	3	0
F. Cassidi, Derby	1	1	0
H. Meadows, Leicester	1	0	0
C. H. Marriott, Leicester	2	2	0
R. H. Dawson, Saundby, Notts	1	1	0
Previous list	119	10	0

Two of the late officers of the medical clubs are now associated with the New Lincoln Provident Medical Association, whilst the third is at present engaged in *locum tenens* work. It is impossible as yet to estimate the amount that will be required for the purposes of the fund, but should the practical sympathy of the profession enable us to carry on for a few months we have every hope of an ultimate victory. Mr. C. Brook, Dr. C. Harrison, and Mr. G. Mitchinson, together with myself, have been appointed trustees for the fund.

I am, Sirs, yours truly,

Lincoln, May 28th, 1896. W. A. CARLINE, Hon. Treasurer.

"A DOCTORS' STRIKE."

To the Editors of THE LANCET.

SIRS,—May I, as a general practitioner, thank you and your Special Commissioner for the able and interesting way in which you are calling the attention of the medical profession to their present state of degradation? It appears that now is the time for us, as a body, to work out our salvation in this matter. The defeat of the profession at Lincoln and other places would clearly mean the subserviency of the profession to the medical aid associations and the absence of wage limit and the continuation of the present small rate of pay. I append a cutting from our local paper showing that in places medical men whose demands are reasonable suffer temporarily from our want of union. THE LANCET, since the days of its founder, has been the friend and journal of the general practitioner. I would suggest that you should:—

(*a*) Issue a circular to all medical men and students stating the principles contested—viz., (1) the establishment of a wage limit; (2) the abolition of paid canvassers and medical aid associations as at present constituted; and (3) the increase of rates of club pay—and asking them to subscribe to the same and join an association for the establishment of the same.

(*b*) Open a subscription list to help to carry out these objects. If every medical man in practice subscribed from one to three guineas, according to his means, you would have a fund of at least £20,000 to compensate those who may lose appointments and to enable those with little means to tide over their temporary embarrassment.

(*c*) Form a central and local committee to carry out the above objects. If your journal would undertake this it would earn the gratitude of all general practitioners and especially that class whose livelihood depends on club-work.

Yours faithfully,

May 23rd, 1896. CLUB DOCTOR.

[Cutting.]

A Doctors' Strike.

The medical men of —— and —— (near ——) recently gave notice to the friendly societies of the district that after next month they would not attend patients for 4*s.* a year as before, and also that they would not accept men earning 30*s.* a week as club patients. These demands are not assented to by the members, who are a numerous body, and the difficulty has been overcome by the appearance of a new resident medical practitioner, who has taken over the clubs on the old terms.

*** Our correspondent states very clearly the principles which are at issue in the present crisis of the profession in regard to club practice—(1) the establishment of a wage limit; (2) the abolition of canvassing and touting in all forms; and (3) the increase of rates of club pay. THE LANCET has sufficiently often published these points, so as to leave any member of the profession who disregards them or who takes the place of a medical officer who suffers for asserting them without excuse. It remains for the profession in each locality to apply principles so just and to organise club arrangements on the spot in which these principles shall be recognised. There remains the question

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f the treatment of the "appearance of a new resident ıedical practitioner to take over the clubs on the old terms." 'he provision of a fund for indemnifying sufferers is worth onsideration; but more is to be done by firm action and rganisation.—ED. L.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Ladies' Charity and Lying-in Hospital.

THE medical staff of this charity have remained unaltered ı their attitude. The epithets of "brutal" and "inhuman," 'hich have been so freely bandied about, are now, I am glad ɔ say, found to have been most unfairly bestowed on conuct that was the only possible course of action consistent ·ith dignity.

Intramural Interments.

The report of the medical officer of health on intramural ıterments, issued at the request of the health committee f the City Council, contains some interesting reading. 'r. Hope says that interments under certain conditions are ;ill permitted in eleven burial-grounds in Liverpool; upon ıe use of some of these the Home Office places certain ·strictions. The numbers of applications to the medical fficer of health for permission to inter in city graveyards, here such application is necessary, have during the last five ears been respectively 64, 69, 42, 58, and 56. The largest umber of interments appears to take place at the Necropolis, here notice is not required to be sent to the sanitary departıent, though occasional visits are made to it. At this burialround there is an arrangement of tiers, separated by a course f flagging and with brickwork between each coffin. The alls between the vaults are 4½ in. in thickness, and a stone ag covers over the top course of coffins about 2 ft. 6 in. elow the surface of the ground. The vaults contain about ıirty-six coffins. The approximate number of interments ıot including "stillborns") which have taken place at this ·metery since it was opened is 82,341. The occupiers houses abutting on this cemetery state that their houses ·e infested with mice of a peculiar light-fawn colour, hich they believe come from it. Among other in·resting matters Dr. Hope mentions that instances have ·me under his notice where municipal necessities have d to the absorption of parts of a city graveyard in which .e remains of more human beings have been found beneath single tombstone than the record on the tombstone indi·ted. He concludes his report by saying that "whilst the scontinuance of the practice of interment in burial-grounds tuated in populous parts of the city cannot be otherwise an advantageous to the general public it need not be tended with any hardship to those immediately interested."

Hospital Saturday.

The annual street collection to supplement the weekly ntributions made during the year in workshops, warehouses, and offices on behalf of the local hospitals took ace on the 16th inst. Three hundred and fifty ladies, cluding many hospital nurses, devoted the whole day to e collection. No place where there was a chance of ·tching a copper was neglected by the fair and persistent endicants. Particular attention was paid to the railway ·ations, the landing stage, and the flags of the Exchange. y means of their efforts over £500 were obtained. When is amount is added to the Fund resulting from the weekly llections made all the year round in the above-mentioned ·siness places a goodly sum will be available for distribution the local charities.

The City Hospitals and Police Ambulance.

A deputation from the representatives of the working men the committee of the Hospital Saturday Fund recently ·ited on the Watch Committee of the City Council to urge e necessity of establishing a police horse ambulance corps an auxiliary to the hospitals. The proposal was favour·ly entertained by the committee, who have instructed the ad constable to report on the subject.

May 26th.

WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Resignation of the President of the University College of South Wales and Monmouthshire.

AT a special meeting of the Court of Governors of the University College of South Wales and Monmouthshire held on May 13th a letter was read from the Dean of Llandaff resigning his position as president of the College on the ground that his medical adviser debarred him from the exertion which his appearance in public at the installation of the Prince of Wales as the first Chancellor of the Welsh University would involve and a motion which had been moved by the chairman asking Dean Vaughan to reconsider his decision was seconded, but upon a statement being made by the Dean's medical attendant in reference to his health and stating that the very greatest kindness that could be done was to accept the resignation, the chairman thought it would be cruel to proceed any further with his motion and he accordingly withdrew it. The Dean of Llandaff's resignation was, therefore, regretfully accepted.

Freedom of Bristol from Small-pox.

At the meeting of the Bristol sanitary authority held on May 21st the medical officer of health (Dr. D. S. Davies) reported that no case of small-pox had been notified since May 9th. There are only seven cases in hospital and all convalescent. No cases have been left at home. From inter-notification returns the outside districts also appear to be remarkably free. The only case to cause any anxiety is one in St. George, Gloucestershire, left at home, for though no doubt every care is being exercised, home-nursed cases are always a source of considerable danger, as shown in Gloucester, when the outpacing of the hospital accommodation promptly sent up the weekly returns from 70 or 80 to a maximum of over 200 per week.

The Annual Meeting of the Bristol Branch of the National Society for the Prevention of Cruelty to Children.

The annual meeting of this Society was held on May 20th, under the presidency of the Mayor. The report stated that during the past year the complaints of cruelty brought before this branch of the society numbered 304, and of these 286 were, upon investigation, found to be true. These involved 339 offenders, and affected the welfare of 468 children. The cruelties complained of included—exposure for begging purposes, &c., 22; ill-treatment and assault, 57; neglect and starvation, 207. Of the children affected 33 were found to be insured for sums which in the aggregate amounted to £180. The 286 well-founded complaints were dealt with as follows—warned 225; prosecuted (of whom 58 were convicted and 3 discharged), 61. The majority of offenders were parents. The contributions received during the last year amounted to £567, being an advance of about £100 upon the sum raised in the corresponding period of 1894–95, and the accounts show a local surplus of £125.

Aberystwith College.

Having furnished the Government with the necessary certificate that the college authorities had raised the stipulated sum of £5000, the Registrar of the University College of Wales, Aberystwith, has just received a cheque for £5000, being the last instalment of the conditional grant of £10,000 promised by the Government.

Suggested Visit of the British Association to Bristol.

On May 18th an important deputation, representing the University College, Bristol, the Bristol Medical and Chirurgical Society, and the other scientific societies and institutions of Bristol waited upon the Mayor of that city and asked him to invite, in the name of the citizens, the British Association to visit Bristol in 1898. Professor Lloyd Morgan mentioned that the British Association had been in existence sixty-five years and had met in Bristol twice, in 1836 and 1875, and the feeling of the societies represented that day was that the time had come when Bristol should put in a claim to invite the Association to visit them a third time. The Mayor stated that he would be very pleased to further the invitation.

The South Wales University College.

A meeting was held at Bridgend on May 21st, under the presidency of the Earl of Dunraven, in support of the special building fund of £20,000 for the South Wales University

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College. His lordship promised a donation of £400, and altogether a total of £680 was promised.

The Prevention of Floods in Bristol.

The Bristol Town Council has adopted the report of the Floods Committee, which recommended relief culverts for the prevention of flooding from the Cutler's Mills and Boiling Wells streams, the further improvement of the river Froom, and the erection of pumping machinery for accelerating the discharge of flood water from the harbour, the estimated cost for the various works being £90,000. It is stated that this scheme will deal with any rainfall similar to any that has ever occurred in Bristol, and consequently there ought not to be a recurrence of such floods as were recorded in THE LANCET of Nov. 20th, 1895.

Accident to a Medical Man.

On May 16th as Dr. Moynihan and his wife, of Northover, Ilchester, were driving home from Yeovil, the horse bolted, and both the occupants of the trap were thrown out. Dr. Moynihan fell with great violence upon his head. He was at once taken to the Yeovil Hospital, where it was found that he was suffering from a fractured skull, and it is feared that he will not recover. His wife sustained only a slight injury. Dr. and Mrs. Moynihan have only been married about a fortnight.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Dr. George Hare Philipson.

FOR twenty-eight years Dr. George Hare Philipson has occupied the post of physician to the Royal Infirmary in this city. The time has now arrived when by statute his services can no longer be retained as a visiting physician. Dr. Philipson has taken leave of his class and intimated to the weekly committee that the statute applies to him, so that there can be little doubt that a vacancy will be soon declared. It will be no easy task for anyone to succeed Dr. Philipson. There will be no difficulty in finding another physician, but for many years to come the gap made by his absence from the wards will be apparent to all acquainted with the working of the infirmary. Punctual, courteous, and kind, his example will be one worthy of imitation, difficult to equal, and impossible to improve upon.

Opening of a new Out-patient Department in connexion with the Hospital for Sick Children in Newcastle-on-Tyne.

The Hospital for Sick Children is situated on the Moor Edge, a considerable distance from the centre of the town. It is a very beautiful little hospital and was given to the town by the late Mr. Flemming, a wealthy solicitor. The out-patient department opened this week is in the centre of the town. It is the gift of Lord Armstrong as a memorial of the late Lady Armstrong. It was opened with a golden key by Mr. W. Cruddas, M.P., and the deeds were handed over to the Right Worshipful the Mayor on behalf of the trustees and governors of the charity. There is no more popular institution in Newcastle than the Hospital for Sick Children, and the work done there is great in amount and good in quality.

Annual Meeting of the Eye Infirmary, Newcastle.

The usual decorum, not to say dulness, of the annual meeting of this charity was somewhat departed from last week. The vicar of Newcastle occupied the chair, and there was a larger attendance of subscribers than is usual. Dr. Jeaffreson read the annual report, after which an attempt was made to alter the rules. At present the staff consists of two surgeons, one of whom has just resigned, so that there is a vacancy. It was sought to increase the number of surgeons from two to three and to allow any registered medical practitioner to be eligible for office. Under the existing rules it is necessary that a surgeon to the Eye Infirmary should be a Member or Fellow of one of the Royal Colleges of Surgeons. After a lively discussion it was determined that there should still be two surgeons and that Masters in Surgery should be eligible as well as Members and Fellows of the Colleges of Surgeons. There were five applicants for the post of surgeon, two of whom were ruled to be ineligible. From the other three—viz., Charles Lightfoot, M.D., M.C. Edin., M.R.C.S. Eng., T. G. Ouston, F.R.C.S. Eng., and A. S. Percival, M.A., M.B., B.C. Cantab., M.R.C.S. Eng.—a selection will be made by the special committee shortly. Much interest is taken in the appointment, which is certainly a very important one for this district.

The Heatherdene Convalescent Home, Harrogate.

This useful institution, in connexion with the Sunderland Infirmary, was opened in September, 1892, for women and children. In 1894 the foundation stone of a new wing for men was laid by Mrs. Laing of Sunderland. This wing has cost upwards of £4000, and last Wednesday it was declared open by Mr. Laing and to be free from debt. The building will now accommodate forty patients.

Thirty Years' Service as a Poor-law Medical Officer.

Mr. B. Maclaren has tendered his resignation of the post of Poor-law medical officer for Bedlington. On the motion of the Rev. and Hon. M. C. Ellis it was agreed to put on record an expression of the high opinion held by the board of Mr. Maclaren's thirty years' work and of regret at losing his services. The chairman said Mr. Maclaren had been a good officer against whom they had not had a single complaint.

A Pamphlet.

A pamphlet headed "Juvenile Depravity, a Tale of the Newcastle Workhouse in 1895," is being pretty extensively circulated here just now. It alludes to discreditable circumstances which lately occurred in the workhouse in connexion with which a man formerly the boys' warden died suddenly while awaiting his trial. The pamphlet strongly suggests that a grave injustice has been done to an innocent man. However this may be, no one can read it without feeling very strongly indeed that the master of a large workhouse should be a properly paid educated man of better social standing than that from which masters are generally selected. The charge of a large workhouse with its sick, imbecile, aged, and juvenile inmates is an important one, quite as much as—most people would say more than—that of a governor of a gaol. It should certainly be occupied by men of as good position as those who are responsible for the custody of felons. Nine-tenths of the friction which arises from time to time in workhouse administration between the medical officer and the master would undoubtedly cease to arise if the master were a man of better social standing.

Newcastle-on-Tyne, May 25th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Opening of the University Athletic Field.

ON Saturday of last week the new athletic field for the University of Edinburgh was formally opened by the Lord High Commissioner. Much interest was evinced in a cricket match between the University eleven and the staff of the Royal Infirmary. The former played with broomsticks. The Infirmary team included Mr. Chiene, Dr. Bramwell, Mr. Cotterill, Mr. Cathcart, and others, most of whom had not touched a bat for years. The University eleven won, and several of the Infirmary eleven experienced the following day the discomforts consequent upon unusual exertion. The ceremony and the match were, however, regarded as having been most successful.

The Lord High Commissioner.

As is usual when Her Majesty's representative is at Holyrood the Royal colleges and other important bodies have during the present week paid their respects to him. He and Lady Tweeddale have on their side visited the Infirmary and other institutions, at all of which they were gladly received, their visit always being a source of interest and pleasure to the patients.

May 26th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Unfounded Charge against a Medical Man.

ON the 26th inst. in the Northern Dublin Police-court Mr. Frederick P. Smith of Kevit Castle, Crossdoney, county Cavan, was charged before Mr. Keys, Q.C., with having feloniously assaulted a servant girl at Wellington-place, Clyde-road, between nine and ten o'clock on last Thursday night. According to the girl's statement she left the festivity

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at Ball's Bridge at about nine o'clock and went towards her master's house. In Wellington-place she was attacked by two men, one of whom held her down while the other ravished her. On Monday—that is, four days after the occurrence—she went to Cyclopia with a policeman and identified the accused. Mr. Drummond, Q.C., stated that the accused was a medical man, having been qualified for about a year, that having by the death of a relative come in for some property in the county Cavan he had ceased to practise his profession, and, finally, that he (the learned counsel) would prove beyond the shadow of a doubt that the case was one of mistaken identity. Mrs. Saunderson (the wife of Colonel Saunderson, M.P.), in answer to Mr. Drummond, deposed that she was in charge of the Cavan stall at Cyclopia, Mr. Smith being one of her assistants, and that he was present at the bazaar between nine and ten o'clock on Thursday night. The witness, moreover, asserted, in reference to the girl's statement that the person whom she accused was dressed in light tweed, that Mr. Smith wore a suit of black. Mr. Edward Saunderson (the son of the last witness) deposed that Mr. Smith was in the stall with him during practically all the evening until it closed. Mr. R. W. Reeves stated that he was a deputy-lieutenant for the county Clare and that he was assisting at the county Clare stall, which was situated close to the Cavan stall, and that he saw Mr. Smith preparing to close up the Cavan stall at half-past nine on Thursday night. The defendant, Mr. Smith, was then called, and stated that on Thursday he was at the bazaar from two until after eleven o'clock. Some other witnesses were also examined, after which Mr. Drummond said that it was plain as daylight that the case was one of mistaken identity. Mr. Keys at once concurred, stating that he looked upon it as a case of mistaken identity and that he would dismiss it. Mr. Smith after leaving the dock was warmly congratulated by a large crowd of sympathising friends.

The Inquiry at the North Dublin Union.

At the last meeting of the board a resolution was adopted asking the Local Government Board to hold a sworn inquiry in reference to the allegations contained in a letter from Mr. Kennedy as to the management and discipline of the house.

Downpatrick Water-Supply.

A public meeting of the Downpatrick ratepayers was held on May 18th at which a resolution was adopted protesting against the unsatisfactory and deplorable state of the Downpatrick water-supply and works and the delay on the part of the board of guardians in dealing with the matter. It was stated that a tax of over £500 annually is being paid for which the inhabitants received practically no equivalent. A strong resolution was passed condemning the board of guardians for their indifference and incompetence in the exercise of their sanitary powers, and pressing the Local Government Board, in the interest of the ratepayers and to prevent indefinite waste of time and money, to take the conduct of the matter entirely out of the hands of the board of guardians or compel them to proceed without delay to remedy the defects in the works. An influential committee was appointed to look after the interests of the ratepayers in the matter of the water-supply.

The Ulster Eye, Ear, and Throat Hospital.

The foundation-stone of the new wing to be added to this hospital was laid on May 20th by Miss Benn and the Lady Mayoress of Belfast. This new part of the building will contain five small wards, two bath-rooms and closets, and a spacious operating-room. The present hospital was opened in 1871, a quarter of a century ago. In the next year Mr. Edward Benn (brother of one of the ladies who laid the foundation-stone) offered to build a new hospital, which he did at a cost of over £3000, and it was opened in 1874. His brother, Mr. George Benn, gave during his lifetime £1000 to endow the hospital and also in his will bequeathed a similar sum for the same purpose. In the working of the hospital it was soon seen that additional accommodation was needed for day-rooms, operating-theatre, bath-rooms &c., wards, and laundry. The laundry, bath-rooms &c., and two day-rooms in, or connected with, the old building are completed and it is expected the rest of the extension will soon be ready. When finished the new Ulster Eye, Ear, and Throat Hospital will be complete in every respect.

Opening of County Monaghan Infirmary.

On Friday, May 22nd, his Excellency Earl Cadogan, Lord-Lieutenant of Ireland, who has been paying a visit to Lord Rossmore, performed the opening ceremony of the new county infirmary in the town of Monaghan, a place which was once represented by an ancestor of Earl Cadogan. The old infirmary, built in 1768, was for a long time found to be in every respect unsuitable, and when the grand jury put up the old county prison for sale the board of governors of the infirmary bought it for £550. The southern portion of this building has been altered and transformed into a hospital at a cost of about £2000, the money for this purpose being raised by a bazaar. There are seventy beds in this new infirmary. One of the wards was named after the present surgeon to the hospital—Dr. J. Campbell Hall—by the governors in appreciation of his services to bring the new arrangements to a successful issue. Mrs. and Miss Murray-Ker have given £250 to furnish two wards, another gentleman has furnished another, while a fifth ward has been named the "Young Ward," in memory of Mr. A. K. Young, who was for fifty-three years surgeon to the institution and who was one of the best-known medical men in Ulster. The Lord-Lieutenant was most enthusiastically received at the infirmary and was presented with an address. He declared the new hospital opened.

The Proposed New County Derry Asylum.

While in Belfast the coroner and others are doing all they can to prevent lunatics from being sent from the asylum to the workhouse in County Derry, the greatest opposition is being shown to the proposed enlargement of the asylum. It is admited that more accommodation is needed, but the great majority of the ratepayers think plenty of room can be found in the empty workhouses, and thus a large expenditure can be avoided. On May 23rd a most influential meeting was held in Coleraine, and resolutions were carried to the effect that the present was a most inopportune time to further burden the ratepayers of the county by throwing upon them the increased taxation arising from the building of a new asylum. This, it was said, would cost £120,000, and, owing to the present depressed state of agriculture, it was argued that it would be wiser to postpone the whole matter for the present. It is admitted on all hands that the present asylum is overcrowded, but it is thought the proposed legislation dealing with the amalgamation of unions (which must soon come) will solve the difficulty. Coleraine Union can accommodate 1000 inmates, while at present it has only 120; Limavady Workhouse was built for 800 or 900 inmates, while, as a rule, there are only 100 paupers in residence. Hence there is accommodation vastly in excess of what is needed, and if they were amalgamated one of these large workhouses would be empty and it could be utilised as an auxiliary asylum, and so the taxpayers would be saved the enormous expense of £120,000. Great dissatisfaction is also felt in the constitution of the board of governors of the County Derry Asylum, as out of twenty-three governors only three, it is said, really represent the county, the remainder having their interests centred in the city of Derry. The resolutions passed at the meeting are to be sent to the Lord-Lieutenant, the Chief Secretary, and the Board of Control of Asylums. Opposition to the enlargement of the asylum is being organised all over County Derry.

Museum for Londonderry.

An effort is at present being made to establish a museum in the historic city of Derry, and it is suggested that Gynn's Institution might be let for the purpose of a museum at a nominal rent. There is a nucleus of a museum, which was some time ago handed over to Mr. Bernard, and at present the articles are being arranged in suitable cases. They are chiefly minerals. Moreover several local gentlemen have private collections which would probably be forthcoming if a suitable habitation was obtained. Mr. Bernard, whose stock of relics and curios is a most valuable one, has expressed his willingness to hand them over to a local museum, and Sir J. A. MacCullagh, M.D. Dub., has also a series of relics specially associated with the past history of Derry. It is hoped a building will soon be set apart for the museum.

Belfast Royal Hospital.

At the quarterly meeting held on May 25th it was reported that 462 intern and 5733 extern patients had been treated during the past quarter. To the end of the quarter the expenditure has been £5940 14*s.* 5*d.*, and the receipts £5441 4*s.* 6*d.*; the expenditure has, therefore, exceeded the income by £499 9*s.* 11*d.*, but as a bequest of £500 is not available (without the sanction of the corporation) the expenditure exceeds the ordinary income by £999 9*s.* 11*d.*, which,

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adding the debt of last year (£142 4s. 10d.), shows a balance against the hospital of £1141 14s. 9d.

May 26th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Cocaine v. Guaiacol.

A FEW months ago MM. Lucas-Championnière and André vaunted the superiority of guaiacol over cocaine as a local anæsthetic, claiming that, employed in the form of subcutaneous injections, it conferred greater analgesia than the better-known cocaine. M. Reclus[1] now takes up the cudgels for his favourite anæsthetic after a fair comparative trial of the rival drugs. Eliminating those cases where (owing, perhaps, to defective technique) sphacelus ensued, and another where (owing, perhaps, to idiosyncrasy on the part of the subject) analgesia was nearly *nil*, he tells us that he has employed guaiacol in the following operations. Circumcision: six centigrammes injected; incision seven minutes later with violent pain. Cocaine (three centigrammes) then injected; pain *nil*. Resection of saphenous vein: half of the field of operation anæsthetised with guaiacol and half with cocaine; freedom from pain only in the cocainised area. The same results occurred in a case of radical cure of hydrocele and in one of castration. As for the dangers of cocaine, M. Reclus once more states that observance of the following fundamental rules suffices to avoid them. Use only a 1 per cent. solution and never inject more than twenty centigrammes, a less quantity almost always being ample. The patient must be lying down, and the piston of the syringe must be pushed progressively as the needle enters in order to avoid the introduction of a large quantity of the drug into a vein that may be pierced. The patient remains on his back for an hour or two after the operation and must eat something before he rises. With these precautions M. Reclus has thus practised 3500 operations without the slighest accident either during or after the operation. With a hypodermic dose of ten centigrammes he has done the radical cure of hernia, and with fifteen centigrammes a castration. He concludes that cocaine should be preferred whenever the incision is not too long, and that its superiority over guaiacol is an established fact.

Chronic Glaucoma: its Varieties and their Treatment.

M. Abadie[2] states that there are two varieties of chronic glaucoma. In one the symptoms are intermittent. The patient says he sees occasionally iridised circles around flames, vision is dulled and confused for a few hours, and then becomes normal. This form may be advantageously treated by iridectomy, which is, however, useless in the second form, where the progression of the morbid process and symptoms is uniformly slow, silent, and continued, revealing itself only by an increasing loss of sight corresponding with the proportional elevation of the intraocular tension. In this kind of glaucoma, which is perhaps the more common and which affects both eyes consecutively, neither iridectomy nor repeated sclerotomy is of the slightest use, the only benefit accruing being at best a temporary lowering of the tension and a consequent remission. But M. Abadie informs us that there exists a form of treatment which is efficacious in this hitherto incurable disease. Commence first with the administration of potassium bromide and sulphate of quinine in daily doses of one or two grammes and half a gramme respectively. Locally instil each day two drops of a ½ per cent. solution of eserine. As soon as the tension has become normal leave off gradually the bromide and the quinine, but continue indefinitely the instillations, the solution of eserine being carefully sterilised so as not to irritate the conjunctiva.

A Practical Gift.

Dr. Brouardel, the Dean of the Paris Faculty, has received from M. Lépine, the Prefect of Police, and some of his friends a subvention of 2000 francs to pay the expenses of the initiation of students who have completed their curriculum and junior practitioners into the diagnosis and therapeutics of diphtheria (bacteriology, sero-therapy, and intubation). Such a gratuitous post-graduate course will doubtless prove most useful to students who have not enjoyed the advantages of the *internat*.

[1] Académie de Médecine, May 19th, 1896.
[2] Société Française d'Ophtalmologie, Congress, May 7th.

Commercial Currant Jelly.

At a recent meeting of the Société Française d'Hygiène M. Tison revealed the real composition of a product consumed by the ingenuous Parisian as currant jelly. It is simply agar-agar coloured and flavoured with certain essences which confer on it the appearance and the taste of fruit. Strange as it may appear, the authorities refuse to prosecute the sellers of this article, provided it be labeled *gelée groseillée*, their contention being that its consumption is not injurious to health. I suppose this is one of the advantages civilisation and nineteenth century chemical progress bring in their train.

May 26th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

For the Prisoners of War and the Maimed.

IT is necessary to go back to the French disaster at Moscow in 1813 for something like a parallel to the miseries and humiliations brought upon Italy by her invasion of Abyssinia. Discomfiture on the battle-field she has had to endure; but the suffering and the torture it has entailed have tested her moral courage still more. Her wounded soldiery now under treatment in her hospitals are perhaps the best off among her victims of the war. Would that she could persuade herself that her sons, now captives in Abyssinian keepin , were equally well cared for. These are estimated to amount to some 5000; many of them are wounded, all of the m feel the privations of a prisoner's life under semi-barbarous conditions, and, to add to their misery, there is the torturing conviction that their families in the mother-land are still in agonies of suspense as to whether they are dead or alive, well or ill, whole or mutilated. But Italy has proved equal to the demand on her head and heart in this crucial moment; and certainly her energy and self-sacrifice go far to reassure her foreign friends as to her future rehabilitation and prosperity. Beginning with the King the subscribers to the fund in aid of the prisoners embrace all classes and all creeds, religious and political. The committee, whose president is the ex-War Minister, General Mezzacapo, has up to this collected 700,000 lire (£28,000). Count Rinaldo Taverna, representing the Red Cross and its workers in the same cause, has just added 300,000 lire (£12,000) to the 1.000,000 lire (£40,000) previously contributed. The leading journals throughout the kingdom are so many centres for subscriptions which come from the poorest villages as well as the richest towns; while the colonies, chief among which is the Argentine Republic, have already sent in over 300,000 lire. Great Britain has a considerable Italian population, which has also responded nobly; and the ladies of Italy, headed by one of the *grandes dames* of the Court (the Countess Sforza di Santafiora), have conceived the project of sending to South Abyssinia an eminent ecclesiastic, charged with comforts of every kind for the captives. A similar initiative has been taken by Count Costantino Wersowitz-Bey, a Bohemian by birth, but a warm sympathiser with Italy. With a few companions he starts immediately for Obock, whence in thirty-eight days he will reach Antoto. There he expects to find King Menelik, to whom he carries the most authoritative credentials and whose good offices in behalf of the prisoners he is more than likely to conciliate. Among his *impedimenta* are many bales of linen, chests containing clothes, medicines, and creature-comforts of all kinds. More acceptable than any of these, he bears a huge trunk filled with letters from dear ones at home, letters which if they reach those to whom they are addressed will prove the best of restoratives to many a yearning heart. The Count, I may add, is reinforced by the Vatican, and embarks on his mission with the Apostolic benediction and the substantial aid of the dignitaries of the Roman Catholic Church from the supreme Pontiff downwards. Nor is it only for the relief of her own sons that Italy is now straining her resources, moral and material. The poor Ascars, those native troops who fought so well for her at Abba Carima, claim her warmest solicitude—many of them maimed in the most horrible manner by the more savage of King Menelik's soldiery. She has in this department of her relief operations the countenance of the "Arms and Legs Charity," whose headquarters are in this city—a charity started about seventeen years ago by the late General H. H. Maxwell, C.B.,

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to whose nobly philanthropic life a touching tribute was paid in THE LANCET of June 4th, 1892. Signor Invernizzi, himself a skilled mechanician and reproducer of the "Beaufort limb," which formed the basis of General Maxwell's charity, has just come back from Massowah reporting on the success with which the poor Ascari have been rehabilitated by the "limb" (an arm or a leg) in question, and strongly advising the Italian Government to adopt the Beaufort system for those of them (300 mutilated ones) who have had to be sent back. Signor Invernizzi has himself, on whose initiative I know not, started a small workshop at Massowah for the manufacture of the Beaufort limb; while to meet the demand in Italy herself the "Arms and Legs Charity" is placing at the disposal of the War Office a certain number of limbs, primarily for those mained soldiers who are of Roman birth or parentage. Amid much that is humiliating to Italy in this disastrous Abyssinian enterprise, the courage, the energy, and the intelligence with which she is retrieving so many of its most tragic sequelæ are in the highest degree reassuring. In rehabilitating its victims she is, in no insignificant fashion, rehabilitating herself.

Cholera on the March.

Our Adriatic and Mediterranean seaports are yielding to panic in view of a cholera invasion. For this overcharged state of public feeling the arrivals from Alexandria are responsible. In that city the European mortality from the disease is said to be thirty-five out of every forty—a mortality still higher among the Arab population, which does not report the cases to the sanitary authorities for fear that the religious rites due to the dead might be officially interdicted. To counteract this motive for reticence the agents of the medical committee exercising surveillance over the districts into which Alexandria is divided are entitled to 10 fr. for every *bonâ-fide* case they report. What accelerated the stampede, and caused the various steamboat services—Lloyd's, the Messageries, the Navigazione Generale, and the Società Russa—to increase the number of boats calling at Alexandria, was the spread of the disease from the lower to the higher strata of society, the rapidly fatal case of the Baroness Richthofen, wife of the German Commissary serving on the Débit Publique, having made a profound and wide impression. Within a few hours of it becoming known all the homeward bound steamers were taken by assault, the fugitives not even inquiring to what port they were destined. This, as I have said, has sufficed to fill the Adriatic and Mediterranean harbour cities with alarm amounting to panic. Fortunately the Public Health Department has, this time at least, proved alive to the danger, and, as already stated, has, since February last, been both vigilant and active in its precautionary measures.

May 24th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Diseases of the Vena Cava Inferior.

A HIGHLY interesting lecture on Diseases of the Vena Cava Inferior has been delivered by Dr. Schlesinger at a meeting of the Medical Club, in which, after having enumerated the cardinal symptoms, such as œdema of both lower extremities and formation of a typical venous circulation, he referred to those cases in which the disease presents no symptoms and is only ascertained on post-mortem examination. Instances not uncommonly occur where œdema is observed on only one side; the thrombus may be produced by the occlusion of one of the iliac veins and the blood from the lower extremity of the opposite side makes its way to the heart partly by the vena cava and partly by the collateral veins. In these cases of unilateral œdema a diagnosis may be made by an examination of the collateral circulation, for if there are enlarged veins on both sides towards the armpit and the sternum the disease is situated at a point on the cardiac side of the junction of the iliac veins. Among other symptoms Dr. Schlesinger mentioned intumescence of the abdomen up to the costal arch, the occurrence of blood and albumin in the urine, catarrhal diseases of the stomach, bleeding from the intestine, and unilateral varicocele.

The Sense of Taste.

In the Physiological Society Dr. Frankl described last week his experiments on animals whose lingual nerve had been resected. He considered that this nerve contains gustatory fibres for the anterior two-thirds of the tongue and fibres passing into the chorda tympani, the gustatory function of which was discovered long ago, although the method by which the sensations arrive at the brain was unknown. Dr. Frankl believed that they pass with the fifth nerve, for after the resection of Gasser's ganglion agousia of the anterior part of the tongue is established. It has, however, not yet been satisfactorily ascertained whether these fibres are in the second or the third branch; but there are cases in which the sense of taste does not disappear after a lesion of the fifth nerve, and without doubt in these cases the ninth nerve contains fibres for the whole tongue. Section of the glosso-pharyngeal nerve causes atrophy of the gustatory cuplets in the papillæ circumvallatæ, whereas section of the lingual nerve produces atrophy in the anterior part of the tongue.

The Mobility of Abdominal Tumours.

Professor Nothnagel has just published a pamphlet in which he states that the mobility of abdominal tumours is one of their most important physical qualities. Their change of position may be due to the respiratory movement of the diaphragm, to the peristaltic motion of the intestines, to pressure from without, and to their own weight. The organs being below the diaphragm sink downwards with inspiration and rise again during every expiration. In making a differential diagnosis between a tumour of the liver and one of the stomach the possibility of retaining it fixed during expiration points to a tumour of the liver. There is no respiratory mobility of the tumour in pleurisy or emphysema, or in cases of enlarged liver or spleen, conditions by which the contraction of the diaphragm is hindered. The normal liver may also be displaced in the inferior right abdominal region and by palpation may be again restored to its original situation; but it may, on the other hand, be fixed by peritoneal adhesions, so that the immobility of an abdominal tumour is no argument against the existence of displacement of the liver, spleen, or kidney. Tumours of the intestines also show mobility in a high degree, a circumstance which is of great importance in cases where a diagnosis has to be made between new growths and paratyphlitic exudation. Abscesses, aneurysms, and tumours of the pancreas and the retro-peritoneal glands have no mobility.

Pathology of Death from Burns.

Dr. Spiegler has described in the *Medicinische Wochenschrift* the experiments made by him with the view of determining the nature of the virus which is produced in cases of burning and to which the fatal result is directly attributable. He heated the skin of a dead body on copper plates in the hope of obtaining toxic bodies from the burnt skin, but neither the extract nor the distillate had any influence on rabbits. Some years ago Dr. Lustgarten supposed this virus to belong to the group of muscarines, and he was encouraged herein by the fact that a patient suffering from serious burns recovered after an injection of atropine; but, on the other hand, Dr. Spiegler believed that a virus is formed by a disintegration of the albuminous matters in the blood, and he has observed in it numerous particles which are fragments of blood corpuscles. These act as foreign bodies and from them a toxic substance is formed which causes such symptoms as vomiting, spasms, anuria, increased specific gravity of the blood (1065 to 1072), and parenchymatous degeneration.

Mortality in Austria.

The Statistical Commission has just published a report on the death-rates during 1895 in fifty-six of the largest Austrian towns having an aggregate population of 3,536,194 persons. The highest death-rates were registered in Teschen (3·67 per cent.), Prossnitz (3·56 per cent.), Cracow (3·43 per cent.), Stry (3·29 per cent.), and Prague (3·28 per cent.), while the lowest (1·22 per cent.) was in Weinberge. Among each 10,000 of the population there died from small-pox—in Vienna 0·1, in Stanislau 0·9, in Lemberg 1·4, and in Tarnow 6·3; from measles—in Vienna 5·1, in Laibach 11·2, and in Trieste 0·1; from scarlet fever—in Prague 0·3, in Cracow 12·9, in Vienna 3, and in Asch 36·4; from enteric fever—in Tarnopol 7·5, in Lemberg 6·3, in Prague 5·9, in Brünn 3·1, in Salzburg 2·4, in Linz 1·1, in Innsbruck, 0·8, and in Budweis 0·3; from diphtheria—in Marburg 29·7, in Laibach 21·7, in Czernowitz 15·4, in Cracow 12·7, in Linz 9·8, in Brünn 8·2, in Vienna 4·6, in Troppau 3·8, in Salzburg 1·6, and in Karolinenthal 0·5; from phthisis—in Vienna 46·6, in Teschen 73·5, and in Asch 16·7.

May 17th.

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PHILADELPHIA.

(FROM OUR OWN CORRESPONDENT.)

Illiterate Immigration.

SOME action is imperatively demanded to check the flood of undesirable immigration. Various measures have been proposed, chief among them being the Stone Bill and the Bartholdt Bill. The former requires consular certification. Each immigrant must under this ruling procure a certificate from a United States Consul, showing that he does not belong to any of the prohibited classes. This would necessitate an increase in the consular service, with a corresponding increased expenditure on the part of the United States. In most cases the Consuls would be dependent on the local government for information relative to the eligibility of the applicant for a certificate, and this is probably the most vulnerable point of the measure. It would be a temptation to the local government to facilitate the departure of the worst element, especially the criminal class, while it would be practically impossible for the young, vigorous, and most desirable class to obtain the necessary certificate. It is likely, too, that efforts at substitution would be made or that the tickets might be bought and sold. The Immigration Restriction League regards the Bartholdt Bill as the most practical. This, known also as the educational test, requires that all male immigrants shall be able to read and write one language. All males between sixteen and sixty years of age unable to comply with this ruling are debarred admission to the country. Parents of persons already residents of the States are exempted, thereby avoiding the separation of families. One powerful argument adduced in favour of this measure is that the steamship companies, knowing ineligible persons will be refused admission to the country, will apply the test themselves, hence preventing their embarkation. This will prevent expenditure on the part of the United States and will spare many a poor soul trouble, expense, and in the end nothing but bitter disappointment. During 1895 about 37,000 people came from Italy. During the first quarter of the present year nearly 20,000 Italian immigrants landed in the United States. It is safe to say that the large majority of them are leaving in order to escape military duty and that very few are actuated by a love for this country. They are not the only undesirable element—Russia, Poland, and Austria-Hungary contribute a large share. These people as a class are illiterate, about 90 per cent. know no trade, and the majority have less than $5 to their name. Since they never readily form a part of the composite American such increments are obviously undesirable. In the case of the Italians, the theory that immigrants seek that part of the country of their adoption whose climatic conditions most nearly approach their native clime does not hold good, for fully 70 per cent. of them settle in New York City or State, a few only go to the South or West, and the balance locate themselves in some of the Eastern States. It is hoped that the Educational Test Bill will successfully close our portals against unworthy immigrants, though they shall ever be opened wide to the intelligent and industrious of any nationality.

Convention of Military Surgeons.

The sixth annual convention of the Association of Military Surgeons of the United States was held in this city on May 12th, 13th, and 14th. Addresses of welcome were delivered by Governor Hastings, who represented the State; by Mayor Warwick, for the city; by Major-General Snowden, on behalf of the National Guard of Pennsylvania; and by Dr. J. M. Da Costa, for the medical profession. The following are some of the topics discussed:—Instruction of the Hospital Corps, by Dr. C. H. Olden, Assistant Surgeon-General, U.S.A.; the Hospital Corps of the National Guard, by Major D. A. Kuyk, First Regiment, Virginia National Guard; Surgeon-General Senn, of the Illinois National Guard, presented a few remarks on a New Bullet Forceps which he had devised for the extraction of the new style of bullets. The proceedings of the second day were held at the University of Pennsylvania. Dr. J. Wm. White, in a clinic at the University Hospital, demonstrated the value of Roentgen rays in surgery. An interesting paper was read by Passed Assistant Surgeon Craig, U.S.A., on the Vitality of the Cholera Spirillum in its Relation to Certain Acid Fruits. A number of experiments were performed to determine the length of time cholera spirilli will live after implantation upon the cut surface of fruits. Cultures were made upon apricots, apples, banana, strawberry, orange, peach, lemon, and melons. It was found that lemon was the most, and water-melon the least, fatal to the germ. On the former fruit five minutes' exposure sufficed to kill them, while they could live several weeks on the melon. A paper on the French Field Sanitary Service and what may be Learned Therefrom was read by Major Havard, Surgeon, U.S.A. At the final session a paper written by Major Paul Brown, entitled "Determination of the Personal Identity of the United States Soldier," was presented. He recommended the introduction of the Bertillon system of measurement as the only reliable means of identification of soldiers. It is used in the French Army. While it has been the practice in this country to record descriptive data of each recruit who enters the army, its use at any future time for the purpose of establishing his personal identity is of questionable value. He said the Bertillon system would be useful in those cases in which an application for a pension is made. The election resulted in the appointment of Medical Director Albert L. Gihon, U.S.A., to the presidency for the ensuing year.

A Case of Prolonged Hypnosis.

A case of prolonged hypnosis, somewhat similar to the one recently on exhibition in London and commented upon in the columns of THE LANCET, is reported from Fort Wayne, Indiana. Santanelli, a professional hypnotiser, put a man to sleep. He is to remain in that state for a week, neither eating nor drinking, constantly being watched by medical students, who will hourly record the temperature, pulse, and respiration. The Humane Society took the matter up and charged Santanelli with assault. He was taken before the justice's court and fined. He refused to awaken his subject and has appealed his case to a higher court.

Chicago: Right of Way granted to Physicians in cases of Obstruction to Traffic.

Some time ago the Chicago Council passed an ordinance granting the physicians the right of way in the streets and over bridges, ahead of processions, parades, fire lines, and other obstructions to ordinary traffic. Upon application and payment of fifty cents the physician is furnished with a special permit and badge. These secure for him the privileges of the ordinance. Ambulances are also given the right of way.

The Diagnosis of Pregnancy by Microscopical Changes in the Urine.

At a meeting of the North-West Medical Society of this city, held in April, Dr. Parkes read a paper with the above title. He spoke of various changes said to take place in the urine of pregnant women, including the kiestine pellicle, upon which at one time a great deal of stress was laid, but which has since been shown to be present in the urine of virgins and even in that of men. He then referred to an investigation pursued by a physician of one of the southern states, who claims to be able to diagnose pregnancy ten days after conception. His method is to add a few drops of the following alkaline solution—viz., ammoniæ murias, aqua ammoniæ, magnesiæ sulphas, of each two parts; aqua, eight parts—to 10 c.c. of urine. This precipitates triple phosphate crystals of the feathery variety. In urine generally these are found in beautiful fern-like or feathery forms, but in the urine of pregnant women they will be found distorted and fractured. Dr. Parkes has examined the urine of more than fifty women, and while he rightly considers the number too small to permit him to make an asseveration he feels that the subject is worthy of further attention. Should it fulfil the claims made for it it would certainly be the most valuable diagnostic sign of early pregnancy; in fact, the only sign.

May 15th.

Obituary.

THOMAS CHARLES STEUART CORRY, M.D. ABERD., M.R.C.S. ENG., L.R.C.P. EDIN.

ANOTHER of the older of the Belfast practitioners, Dr. T. C. S. Corry, has passed away in his seventy-first year. Dr. Corry, who had been in declining health for some years, died on May 20th at his residence, Belfast, to which he had been confined for the past six months. Dr. Corry was the eldest son of Mr. T. C. S. Corry, D.L., of Rockcorry Castle,

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county Monaghan, where he was born. He studied at the old Belfast Medical School, became M.R.C.S. Eng. in 1846, M.D. Aberd. in 1856, and L.R.C.P. Edin. in 1859. His whole professional life was spent in Belfast, where for a time he was dispensary medical officer during the great cholera epidemic which visited that city about half a century ago. For about twenty-five years he was a member of the board of guardians and only retired in last March. At the end of last year he attained his jubilee as a medical practitioner, when he was presented with an address and testimonial by his friends. Dr. Corry wrote "A Guide to the Scenery and Antiquities of Ireland," which has passed through eight editions; and he was the proprietor of two dioramas of Irish scenery. He also wrote a book of "Irish Lyrics" and "Poems, Sketches," &c. Dr. Corry was a great favourite with the poor, who valued his advice and kindly manner. His funeral was private, but a large number of personal friends attended it.

SURGEON-MAJOR FREDERICK DUCKWORTH, M.D. ST. AND.

AT his residence, Cardiff Castle, Cleveland Town, Bangalore, there died, on the morning of April 28th last, Surgeon-Major F. Duckworth, M.D. (retired list), I.M.S. The deceased gentleman was aged sixty-three years and seven months. He was taken ill about three months previously with Bright's disease, but later he improved. However, a sudden change for the worse taking place, he succumbed despite all that medical aid could do. In 1849 Surgeon-Major Duckworth, at the age of seventeen, commenced his studies at the Madras Medical College. After passing out he was promoted to the rank of assistant apothecary in 1853, and while in that capacity in 1858 he served in the Indian Mutiny, when he was under the orders of Sir Colin Campbell during the siege and capture of Lucknow, for which he received the medal and clasp. In September, 1859, he resigned the Subordinate Medical Service and proceeded to London and thence to Scotland, where, in May, 1860, he took his degree of M.D. in the St. Andrews University. Returning to London in July, 1860, he successfully competed for and obtained a commission in Her Majesty's Indian Medical Service. In May, 1861, he returned to Madras and commenced service as an assistant surgeon. When at Tranquebar in the year 1867, while holding the appointment of civil surgeon and deputy magistrate, he, in conjunction with Mr. Crole of the Indian Civil Service, succeeded in establishing a civil dispensary, known as the Porya Dispensary, by voluntary subscriptions. By this means a sufficient sum of money was raised for the purpose, and the interest accruing therefrom rendered the institution self-supporting, and it stands to this day. In October, 1872, he was promoted to the rank of Surgeon-Major, and in August, 1878, after a meritorious service of twenty-five years in all, he retired on a pension. Since his retirement he had resided in Bangalore. He was the founder of the Duckworth Settlement of the English and Anglo-Indian Colonies and was Vice-President of the Mysore Branch of the British Medical Association. He leaves a widow and a family of five sons and two daughters. His remains were interred in the St. John's Hill Protestant Cemetery.

MEDICAL MAGISTRATE.—Mr. Neville Williams, M.A., M.B. Cantab., M.R.C.S. Eng., has been placed on the commission of the Peace for the borough of Harrogate.

VICTORIA HOSPITAL FOR CHILDREN, CHELSEA.—The annual Court of Governors was held on the 20th inst., when a very satisfactory report and balance sheet was presented. Previously to the adoption of the annual report it was announced that Her Majesty the Queen had forwarded a donation of £50 to help to free the hospital from debt. The Princess Louise had sent £25, and the Duke of York, as chairman at the Festival Dinner, at which a sum of nearly £3000 was subscribed, had contributed £25. 1130 in-patients have been admitted during the past year. The ordinary expenditure during the year amounted to £6529 on account of the hospital and of £1751 on account of the Home at Broadstairs, while the ordinary receipts have been £6110 and £704 respectively, the deficit having to be made up from capital account.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having passed the necessary examinations and having conformed to the by-laws and regulations have been admitted Members of the College, viz.:—

Acland, John Musgrave, L.R.C.P. Lond., University College Hospital.
Adams, William Francis, L.R.C.P. Lond., London Hospital.
Alford, Cyril Wolrige, L.R.C.P. Lond., Middlesex Hospital.
Allen, Walter Henry, L.R.C.P. Lond., Mason College, Queen's and General Hospital, Birmingham.
Anderson, John Sewell, L.R.C.P. Lond., St. Bartholomew's Hospital.
Anstey-Chave, Thomas, L.R.C.P. Lond., St. Bartholomew's Hospital.
Barclay, Herbert Clifford, L.R.C.P. Lond., University of Otago, Dunedin, New Zealand.
Barker, Ernest Marriott, L.R.C.P. Lond, Cambridge University and St. Thomas's Hospital.
Barlow, Thomas William Naylor, L.R.C.P. Lond., University College and Royal Infirmary, Liverpool.
Behramjee, Dinshah Burjorjee, L.R.C.P. Lond., University of Bombay and Charing-cross Hospital.
Bell, William Blair, L.R.C.P. Lond., King's College Hospital.
Bennetts, Frederick, L.R.C.P. Lond., St. Mary's Hospital.
Benson, John Robinson, L.R.C.P. Lond., King's College Hospital.
Betts, Leonard Bowring, L.R.C.P. Lond., Westminster Hospital.
Bickford, Nicholas Seymour, L.R.C.P. Lond., Charing-cross Hospital.
Black Lewis Potter, L.R.C.P. Lond., University of Cambridge and Middlesex Hospital.
Blagden, John James, L.R.C.P. Lond., St. Bartholomew's Hospital.
Bonney, William Francis Victor, L.R.C.P. Lond., Middlesex Hospital.
Bramwell, Charles, L.R.C.P. Lond., King's College Hospital.
Briggs, John Arthur Oswald, L.R.C.P. Lond., St. Bartholomew's Hospital.
Broadbent, Joseph, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
Brock, John, L.R.C.P. Lond., St. Bartholomew's Hospital.
Browne-Mason, Hubert Oliver Browne, L.R.C.P. Lond., St. Mary's Hospital.
Bullmore, Frederick Guy, L.R.C.P. Lond., St. Mary's Hospital.
Cameron, Malcolm, L.R.C.P. Lond., London Hospital.
Cann, Francis John Hughtrede L.R.C.P. Lond., Guy's Hospital.
Clark, Henry Colbatch, L.R.C.P. Lond., Middlesex Hospital.
Clarke, Astley Vavasour, L.R.C.P. Lond., University of Cambridge and Guy's Hospital.
Collis, Edgar Leigh, L.R.C.P. Lond., Oxford University and St. Thomas's Hospital.
Cooper, Harold Merriman, L.R.C.P. Lond., St. George's Hospital.
Coventry, Charles, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester, and Guy's Hospital.
Culmer, Joseph William, L.R.C.P. Lond., Guy's Hospital.
Dashwood, Charles Ewart, L.R.C.P. Lond., University of Cambridge and London Hospital.
Davis, William Lloyd Bowen, L.R.C.P. Lond., Guy's Hospital.
Douglas, Archibald Robert John, L.R.C.P. Lond., St. Bartholomew's Hospital.
Douglas, Stewart Rankin, L.R.C.P. Lond., St. Bartholomew's Hospital.
Draper, Robert Athelstan, L.R.C.P. Lond., University of Cambridge and St. Mary's Hospital.
Druitt, Claud Francis, L.R.C.P. Lond., University College and Royal Infirmary, Bristol.
Drury, Edward Guy Du, L.R.C.P. Lond., St. Bartholomew's Hospital.
Edington, George Henry, L.R.C.P. Lond., Royal Infirmary, Glasgow, and King's College Hospital.
Eley, Norman William, L.R.C.P. Lond., Mason College, Queen's and General Hospital, Birmingham.
Ellacombe, Gilbert Henry Wemyss, L.R.C.P. Lond., St. Bartholomew's Hospital.
Ellis, Henry Reginald, L.R.C.P. Lond., St. Bartholomew's Hospital.
Emms, Harry Robert, L.R.C.P. Lond., University College Hospital.
Evans, Harold Ward, L.R.C.P. Lond., London Hospital.
Evans, Robert Jones, L.R.C.P. Lond., University College and Royal Infirmary, Liverpool.
Farndale, John William, L.R.C.P. Lond., Mason College, Queen's and General Hospital, Birmingham.
Fenwick, Samuel Charles Collingwood, L.R.C.P. Lond., St. Mary's Hospital.
Fisk, Edward, L.R.C.P. Lond., Guy's Hospital.
Flory, Cyril Hobson, L.R.C.P. Lond., Guy's Hospital.
Folliott, Edwin, L.R.C.P. Lond., St. Bartholomew's Hospital.
Forman, George Herbert, L.R.C.P. Lond., St. Bartholomew's Hospital.
Foster, John Joseph, L.R.C.P. Lond., Guy's Hospital.
Francisco, Sylvester Agostinho, L.R.C.P. Lond., King's College Hospital
Fry, Arthur Brawnfield, L.R.C.P. Lond., London Hospital.
Fryer, Harold Edgar, L.R.C.P. Lond., St. Mary's Hospital.
Gardiner, John, L.R.C.P. Lond., Middlesex Hospital.
Garner, William Langham, L.R.C.P. Lond., University of Cambridge and Guy's Hospital.
Godwin, Frederick James, L.R.C.P. Lond., Charing-cross Hospital.
Goulden, Herbert Edward, L.R.C.P. Lond., Middlesex Hospital.
Grant, Alexander Smeaton, L.R.C.P. Lond., London Hospital.
Grazebrook, Edwyn Robert, L.R.C.P. Lond., University College and Royal Infirmary, Liverpool, and King's College, Hospital.
Greene, William Adams, L.A.H. Dublin, Ledwich School, Mercers and City of Dublin Hospitals, and London Hospital.

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Gross, Solomon, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds.
Gunson, John Bernard, L.R.C.P. Lond., University of Adelaide, London Hospital, the University and St. Louis Hospital, Paris.
Hackney, Alfred Clifford John Hill, L.R.C.P. Lond., University College Hospital.
Hallam, Herbert, L.R.C.P. Lond., Firth College and General Infirmary, Sheffield, and University College Hospital.
Ham, Bertie Burnet, L.R.C.P. Lond., Melbourne University and Guy's Hospital.
Hamilton, Roger Kerr, L.R.C.P. Lond., London Hospital.
Hanwell, Gerald Lucas, L.R.C.P. Lond., St. Thomas's Hospital.
Haymes, Henry Evered, L.R.C.P. Lond., St. Thomas's Hospital.
Heard, John, L.R.C.P. Lond., Westminster Hospital.
Hedden, Richard, L.R.C.P. Lond., Guy's Hospital.
Henley, Albert William, L.R.C.P. Lond., Charing-cross Hospital.
Heywood, William Benjamin, L.R.C.P. Lond., Cambridge University and London Hospital.
Hill, Reginald Augustus Lowder, L.R.C.P. Lond., St. Thomas's Hospital.
Hitchfield, Alfred Reginald, L.R.C.P. Lond., Guy's Hospital.
Holliday, William Henry, L.R.C.P. Lond., Yorkshire College and General Infirmary Leeds.
Hope, Edward Culberton, L.R.C.P. Lond., Melbourne University and University College Hospital.
Hopkins, Charles Hensley, L.R.C.P. Lond., St. Bartholomew's Hospital.
Horder, Thomas Jeeves, L.R.C.P. Lond., St. Bartholomew's Hospital.
Hutton, Albert Edward, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds.
Infield, Stephen, L.R.C.P. Lond., Guy's Hospital.
Innes, Hubert, L.R.C.P. Lond., London Hospital.
Johnson, Henry Heath Pochin, L.R.C.P. Lond., Charing-cross Hospital.
Johnson, Marcus Beauchamp, L.R.C.P. Lond., Cambridge University and St. Mary's Hospital.
Jones, Thomas, L.S.A. Lond., London Hospital.
Knowles, Ralph, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
Latchmore, Arthur Thomas, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds.
Leicester, John Cyril Holdich, L.R.C.P. Lond., University College Hospital.
Lowe, Henry, L.R.C.P. Lond., Mason College, Queen's, and General Hospital, Birmingham.
McCarthy, Robert Pringle, L.R.C.P. Lond., Cambridge University and St. Mary's Hospital.
Maurice, Walter Byron, L.R.C.P. Lond., St. Mary's Hospital.
Milbank-Smith, Harry James Miltank, L.R.C.P. Lond., Guy's Hospital.
Moon, Edward Gibson, L.R.C.P. Lond., St. Mary's Hospital.
Muriel, George Bertram, L.R.C.P. Lond., Cambridge University and Guy's Hospital.
Murphy, Jerome Joseph, L.R.C.P. Lond., St. Bartholomew's Hospital.
Murray, William Berkeley, L.R.C.P. Lond., King's College Hospital.
Nash, Elwin Harral Thomas, L.R.C.P. Lond., St. Thomas's Hospital.
Noble, Hugh Percy, L.R.C.P. Lond., Middlesex Hospital.
Parsons, Courtenay Charles, L.R.C.P. Lond., St. Mary's Hospital.
Pendred, Berthorn Fleming, L.R.C.P. Lond., Guy's Hospital.
Phillips, Charles Alleyne, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds.
Pierson, Arthur Cecil Brigg, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds.
Plummer, William Edwin, L.R.C.P. Lond., Guy's Hospital.
Powell, Josiah Cecil, L.R.C.P. Lond., St. Bartholomew's Hospital.
Pratt, Eldon, L.R.C.P. Lond., St. Bartholomew's Hospital.
Preston, Charles Chichester, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester, and St. Mary's Hospital.
Price, Henry James, L.R.C.P. Lond., University College Hospital.
Price, Thomas Henry, L.R.C.P. Lond., Mason College, Queen's, and General Hospital, Birmingham.
Pridmore, John Walter, L.R.C.P. Lond., University College Hospital and Mason College, Queen's, and General Hospitals, Birmingham.
Prior, John Ralph, L.R.C.P. Lond., King's College Hospital.
Reid, Ernest Stewart, L.R.C.P. Lond., Edinburgh University.
Richards, Lewis William, L.R.C.P. Lond., St. Thomas's Hospital.
Richmond, Benjamin Arthur, L.R.C.P. Lond., Guy's Hospital.
Ridgeway-Macauley, William George, L.R.C.P. Lond., St. Thomas's Hospital.
Roberts, Richard Lumley, L.R.C.P. Lond., Guy's Hospital.
Robinson, Arthur, M.D., C.M. Edin., Edinburgh University.
Rowlands, William Herbert, L.R.C.P. Lond., Mason College, Queen's, and General Hospitals, Birmingham.
Savage, Ernest Smallwood, L.R.C.P. Lond., Oxford University and London Hospital.
Sealy, Geoffrey Orr Fern, L.R.C.P. Lond., Grant Medical College and Bombay University.
Shepherd, Henry Brooks, L.R.C.P. Lond., Middlesex Hospital.
Simmonds, Ernest George, L.R.C.P. Lond., St. Bartholomew's Hospital.
Slocock, Richard, L.R.C.P. Lond., St. Thomas's Hospital.
Smith, Edward Archibald, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds, and University College and General Infirmary, Liverpool.
Smith, Maurice Hamblin, L.R.C.P. Lond., Cambridge University and Guy's Hospital.
Smith, Sidney Frederick, L.R.C.P. Lond., St. George's Hospital.
Spark, Percy Charles, L.R.C.P. Lond., Charing-cross Hospital.
Spear, John Augustus, L.R.C.P. Lond., St. Bartholomew's Hospital.
Spicer, Arthur Herbert, L.R.C.P. Lond., Guy's Hospital.
Stanton, Thomas William, L.R.C.P. Lond., Guy's Hospital.
Stead, Charles Clement, L.R.C.P. Lond., Cambridge University and Guy's Hospital.
Stephens, Stanley, L.R.C.P. Lond., St. Mary's Hospital.
Sturdee, Frederick Herbert, L.R.C.P. Lond., St. Thomas's Hospital.
Sutcliffe, Edward Harvey, L.R.C.P. Lond., St. Thomas's Hospital.
Sweet, Edward Hoare, L.R.C.P. Lond., St. Mary's Hospital.
Sworder, Ernest George, L.R.C.P. Lond., St. Mary's Hospital.
Tahmisian, Boghos Boghdasar, L.R.C.P. Lond., St. George's Hospital.
Taylor, Gordon Ernest Oddin, L.R.C.P. Lond., St. Thomas's Hospital.
Teale, Michael Aubrey, L.R.C.P. Lond., St. Thomas's Hospital.
Thomas, William George, L.R.C.P. Lond., Mason College, Queen's and General Hospital, Birmingham.
Tipper, Ernest Harry, L.R.C.P. Lond., Guy's Hospital.
Vellacott, Philip Northcott, L.R.C.P. Lond., Guy's Hospital.
Vise, John Neville Blithe, L.R.C.P. Lond., Westminster Hospital.
Walter, Albert Elijah, L.R.C.P. Lond., Middlesex Hospital.
Ward, Arthur Blackwood, L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital.
Warner, Allan, L.R.C.P. Lond., St. Thomas's Hospital.
Welburn, Charles Matthew, L.R.C.P. Lond., St. Bartholomew's Hospital.
Whitelaw, Francis, L.R.C.P. Lond., St. Mary's Hospital.
Williams, Charles Elihu, L.R.C.P. Lond., King's College Hospital.
Williams, Ralph Paul, L.R.C.P. Lond., King's College Hospital.
Williams, Stanley Walter, L.R.C.P. Lond., University College and General Infirmary Liverpool.
Wimble, Herbert Charles, L.R.C.P. Lond., St. Bartholomew's Hospital.
Woods, William James, L.R.C.P. Lond., Queen's College, Belfast, Royal Hospital and Royal University of Ireland.
Wright, Samuel Reginald, L.R.C.P. Lond., Charing-cross Hospital.

SOCIETY OF APOTHECARIES OF LONDON, MAY, 1896.—The following candidates passed in the undermentioned subjects:—

Surgery.—F. J. Ayre, St. Mary's Hospital; R. A. Cooper, St. George's Hospital; M. P. Gabe, Middlesex Hospital; D. C. Kemp, University College Hospital; E. S. Langworthy, St. George's Hospital; J. K. McKinlay, Westminster Hospital; M. Orange, Royal Free Hospital; V. A. Settle, Middlesex Hospital; W. V. P. Teague, London Hospital; C. H. Thomas, London Hospital; and G. S. Thompson, St. George's Hospital.

Medicine, Forensic Medicine, and Midwifery.—F. J. Avre, St. Mary's Hospital; E. M. Henwood, Royal Free Hospital; J. W. F. Rait, University College Hospital; and L. St. J. Reilly, London Hospital.

Medicine and Forensic Medicine.—D. C. Kemp, University College Hospital.

Medicine and Midwifery.—A. M. St. J. Wright, Madras.

Medicine.—G. R. Smith, Manchester.

Forensic Medicine and Midwifery.—A. P. Murtz, King's College Hospital.

Forensic Medicine.—C. G. Schultz, St. Mary's Hospital; and V. A. Settle, Middlesex Hospital.

Midwifery.—C. H. Nicholson, Middlesex Hospital.

The diploma of the society was granted to the following candidates, entitling them to practise medicine, surgery, and midwifery:—F. J. Ayre, E. M. Henwood, D. C. Kemp, J. R. McKinlay, C. H. Nicholson, M. Orange, G. R. Smith, and A. M. St. J. Wright.

ROYAL UNIVERSITY OF IRELAND: SPRING EXAMINATIONS, 1896.—The examiners have recommended that the following candidates be adjudged to have passed the under-mentioned examinations:—

M.B., B.Ch., B.A.O. Degrees Examination: Upper Pass.—*Samuel T. Beggs, Queen's College, Belfast; *Stevenson L. Cummins, Queen's College, Cork; *Robert J. Johnstone, B.A., Queen's College, Belfast; *Thomas J. Kenny, B.A., Queen's College, Belfast; James St. L. Kirwan, B.A., Queen's College, Galway, and Catholic University School of Medicine; *Walter S. Smyth, Queen's College, Belfast; William M. H. Spiller, Queen's College, Belfast.

Candidates marked thus (*) may present themselves for the further examinations for honours.

Pass.—Richard Allan, Queen's College, Belfast; Harry F. Browne, Queen's College, Belfast; Robert A. Cunningham, Queen's College, Belfast, and School of Medicine, Edinburgh; Miss L. Dobbs, London School of Medicine for Women; George K. Finlay, Catholic University School of Medicine; Francis T. Heron, Queen's College, Belfast; Benjamin B. Hosford, Queen's College, Cork; Edward J. Liddle, Queen's College, Belfast; George M. B. Liddle, Queen's College, Belfast; Francis J. L. P. M'Kenna, Queen's College, Cork, and Catholic University School of Medicine; William J. Prendergast, Queen's College, Cork; Patrick J. Scannell, Queen's College, Cork; George Scott, Queen's College, Belfast; John V. G. Tighe, Catholic University School of Medicine; and Clara L. Williams, B.A., Royal College of Surgeons.

M.D. Degree Examination.—Emily W. Dickson, M.B., B.Ch., B.A.O., and John H. M'Gee, M.B., B.Ch., B.A.O. (private study).

ROYAL COLLEGE OF SURGEONS IN IRELAND—FELLOWSHIP EXAMINATION.—The following gentlemen having passed the necessary examination have been admitted Fellows of the College:—

J. Davison, G. W. Dawson, A. S. Deane, J. D. McFeely, and J. I. Moore.

FOREIGN UNIVERSITY INTELLIGENCE.—*Halle:* Dr. P. Eisler has received the honorary title of Professor of Anatomy.—*Rostock:* Dr. Barfurth of Iurieff (Dorpat) has been appointed to the chair of Anatomy in succession to Dr. A. von Brunn, deceased.—*St. Petersburg (Military Medical Academy):* Dr. S. Botkin has been appointed Extraordinary Professor of Infectious Diseases and of Bacteriology.—*Philadelphia (Jefferson Medical College):* Dr. W. W. L. Coplin of the Vanderbilt University has been appointed Professor of Pathology and Bacteriology.

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NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—meeting of this society was held on May 20th, Dr. Mutch, esident, being in the chair. Dr. Michie showed the llowing pathological specimens:—(1) Hydronephrotic dney containing two Calculi; (2) a Large Myoma Uteri;) Uterus removed for Pyosalpinx, the tubes being opened)m below; (4) Two Uteri removed for Cancer; (5) Five ches of Colon removed for Cancer; and (6) Portion of Pig's testine showing method of suturing. Dr. Michie then read paper on Gastro-enterostomy. He claimed that the eration relieved pain and prolonged life in cases of cancer the pylorus for a year or two. He deprecated preliminary ashing out of the stomach and abstinence from food by the outh. Washing out should be done through the wound mediately after incising the stomach. The method of iiting the stomach and jejunum was described, suturing ing considered preferable to the use of Murphy's button or her mechanical appliance. Nothing should be given by the outh for the first twenty-four hours, but ordinary diet uld generally be borne on the fourth day. Of six patients erated upon four gained weight and survived for consider-le periods, one died from the operation, and one from the fect of the anæsthetic (ether). The paper was discussed r the President, Dr. Watson, Dr. Tresidder, Dr. Hunter, r. Wood, and Mr. Ringrose.

THE DIFFUSION OF SMALL-POX.—The informa-on coming to hand bears out the opinion that as soon as loucester had, in so far as the bulk of her population is ncerned, secured the protection of vaccination, the idemic of small-pox would abate. The number of new ses of the disease has been for some weeks steadily decreas-g, though even now some hundreds of patients in various ages of the malady are in the hospitals and dwellings of e city. Up to Thursday of last week the cases reported ring the present epidemic period had reached a total of 13. The population of Gloucester is estimated at 42,000 rsons, hence the disease has attacked 1 person in every 25 of e whole place. This rate of 4 per cent. of population is cessive, seeing that for only some six months has the isease been present in the town. Within the last three eeks the cases have totalled in round numbers to 200, a otable quantity still, although far below the records of any ree weeks of the special epidemic period, March and pril. It would be interesting to have the data as to ages persons recently attacked and their condition in reference vaccination. The rush to the vaccination stations as subsided, and with a declining attack-rate is likely ill further to subside. In these circumstances the ty has to fear during the coming summer months a ccession of cases, not only in the unvaccinated class, but so among adults who, having been vaccinated in infancy ily, may fall victims to attacks of a mild nature, hich are no less mischievous in the way of infective ality than the severer cases. Indeed, it may be estioned whether these mild cases do not do more rm, by reason of the fact that they so little in-mmode the sufferers, who accordingly do not always sort to those precautions which are so essential to the fety of others. It is proposed to borrow the sum of 2000 to meet the cost of the exceptional vaccination rangements, though the matter has still to be finally ttled. It would mean four half-yearly rates of ½*d.* in the The cost of vaccination and revaccination, inclusive of mph and other expenses, works out to 1*s.* 10*d.* for each rson operated on. A long discussion has been going in the St. Thomas's rural district on account of leged neglect on the part of the council as to e non-isolation in hospital of a case of small-pox, e council holding the medical attendant to have been blame in the matter. A case of supposed small-x from Westbury, in the Barton Regis rural district, s on admission to hospital in Bristol been diagnosed by . D. S. Davies, the medical officer of health, as one of rpes of an unusual type, and the release from the institu-n of the patient has been ordered. A man suffering from all-pox at Oystermouth has been isolated in the Swansea spital, and has succumbed to the malady. Another case m Mumbles close by has occurred in a household to which me flowers had been consigned from Gloucester. The mber of small-pox cases in hospital at Swansea has declined m 13 a fortnight ago to 6, all mild, on Saturday last. The currence of another case of small-pox at Pontypridd, in the rson of a woman who had slept one night at Gloucester, has placed the authorities in a difficulty because there was no available accommodation in the temporary hospital, which had been designed for one sex only, and was in the occupation of a male patient. The curate of St. Peter's, Derby, has been attacked by small-pox and removed to hospital, the disease having, it is supposed, been contracted whilst he was officiating in some of the low lodging-houses of the borough. At Dalton-in-Furness a second case of small-pox has been sent to the hospital, the patient being the wife of the former patient. She had been in close attendance on her husband.

BRITISH MEDICAL TEMPERANCE ASSOCIATION.—The twentieth annual meeting of the British Medical Temperance Association was held on Thursday, May 21st, at the Wilfrid Lawson Temperance Hotel, Woodford Green, near London. Several members enjoyed a drive through Epping Forest before the meeting. Sir B. W. Richardson presided and Dr. J. J. Ridge, the hon. secretary, read the report which showed that 24 new members and 41 new student associates had been enrolled during the year, making in all 430 members, 96 student associates, and 2 (lay) associates. The official organ, the *Medical Pioneer*, besides being sent to every member, associate, and a large number of subscribers, had been gratuitously distributed to the number of 15,000 to medical men and to medical schools and libraries. This would be extended as funds permitted. Notice was taken of the formation of a Continental Medical Temperance Association on similar lines. The treasurer, Dr. Morton, presented the balance sheet, showing a balance in hand of £22. A prize of £3 offered to medical students for an essay on the Action of Alcohol on the Nervous and Circulatory Systems had been awarded to Mr. J. Phillips, jun., of the Bristol Medical School. The usual temperance breakfast will be given at the annual meeting of the British Medical Association in Carlisle on Thursday, July 30th, in the Central Hotel.

PRESENTATIONS TO MEDICAL PRACTITIONERS.—Dr. F. Haycraft Berry, of Watford, Herts, has been presented by the honorary and ordinary members of the Loyal Phœnix Lodge of Oddfellows with a silver epergne.—Dr. Evan Evans has been presented by the successful members of the Llanelly Branch of the St. John Ambulance Class with some silver plate for his instruction on First Aid.—Mr. Jas. G. Boyce, L.R.C.P., L.R.C.S. Irel., of Wotton-under-Edge, has been the recipient of a silver cigarette-case, appropriately inscribed, from the members of the Wotton-under-Edge class of the St. John Ambulance Association as a token of appreciation of his gratuitous services as their lecturer.—Mr. William Hammond, L.R.C.P. Edin., M.R.C.S., of Liskeard, has received a present from the students at Doubledois whom he successfully instructed on First Aid to the injured. The present comprises a revolving bookcase, an armchair, a writing table, a side table, and an illuminated address.—Mr. George John Morgan of Kinnerley, Salop, who is about to leave the district in which he has practised for over twenty years, has been the recipient of an address from the Loyal Argoed Lodge of Oddfellows, to which he was surgeon, and another from friends in the neighbourhood. Mr. Morgan, who is public vaccinator to the Oswestry District Union, has also received a testimonial given under the common seal from the Directors of the Oswestry Incorporation.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The annual general meeting of the society was held on Wednesday, May 20th, at 11, Chandos-street, W., the President, Sir James Paget, being in the chair. From the report read by the secretary it appeared that during the year seven new members had been elected and eleven had died and six resigned, leaving 296 at the end of the year. Three widows had been added to the forty-nine on the funds and four had died. The number of orphans receiving assistance had been reduced by one, leaving eight. The receipts available for payments had been £3280 and the grants and expenses had been £3223, including a sum of £452 given at Christmas as a present to the widows and orphans on the books. The funded property had been increased by the purchase of £500 stock, the funded property being now over £95,000. An additional amount—£500—had been received from the executors of Miss Carpue. A grant of £26 under Law 78 was made to a widow. A vote of thanks to the editors of the medical journals for their great kindness in making known the objects of the society was proposed by Mr. Christopher Heath and carried unanimously. The following gentlemen were elected directors to fill the

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vacancies caused by death and retirement—viz.: Mr. Bennett, Dr. Wilks, Dr. Frederick Roberts, Dr. Sylvester, Mr. Fountaine, Mr. Malcolm Morris, and Mr. Butlin. A vote of thanks, proposed by Mr. Felce and seconded by Mr. Day, was passed to the President, Sir James Paget, for his kindness in presiding at the meeting.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—The annual dinner of the above society was held at the Café Monico on May 20th, the President, Dr. Symons Eccles, being in the chair. Nearly 100 members and guests were present. After the usual loyal toasts the President, in proposing the toast of "The Society," referred to the great success which had been achieved during the current session, especially pointing out that over eighty new members had joined the society and a quarterly medical journal had been successfully started in connexion with the society. The toast of "The Medical Societies" was given by Mr. Bruce Clarke, and acknowledged by Dr. Clement Godson, in the unavoidable absence of the President of the Royal Medical and Chirurgical Society. Dr. Campbell Pope proposed the health of the Cavendish Lecturer, to which Mr. Bryant replied. The "Health of the Guests" was given by Mr. F. Lawrance, and responded to by Sir James Linton, President of the Royal Institute of Painters in Watercolours. The toast of "The President, Dr. Symons Eccles," proposed by Mr. C. B. Keetley in a humorous speech, was received with musical honours. A very successful evening was brought to a close with the toast of "The Officers of the Society," proposed by Mr. H. Menzies, and responded to by the treasurer, Mr. T. G. Alderton, and the secretaries, Mr. L. A. Bidwell and Mr. N. Wood. Both during and after dinner the orchestra of the Brighton Hôtel Métropole performed a selection of music.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Whitsuntide Recess.

THE House of Lords adjourned for the Whitsuntide Recess on Thursday, May 21st, and the House of Commons on the following day. The final sitting of the latter was an all-night one, lasting from 3 P.M. on Thursday until 1.30 P.M. on Friday.

Public Health (Scotland) Bill.

This Bill, after a somewhat severe handling in the House of Lords, has found its way into the House of Commons, where it has been put down for second reading on Monday, June 1st.

The Administration of Workhouse Infirmaries.

In the House of Commons there has been ordered a return showing, in respect of each workhouse and separate workhouse infirmary in England and Wales, the number of persons occupying the wards for the sick on June 1st, 1896 (distinguishing the sick and bedridden from those who are aged and infirm only), the number of paid officers acting as nurses (distinguishing those who, prior to their appointment by the guardians, had received any training in nursing from those who had no training prior to appointment and who are now, as probationers or otherwise, receiving training in nursing), and the period or average period of tenure of office of such officers, excluding those who had not received training in nursing prior to appointment; also the number of pauper inmates who assist in the personal care of the sick, &c., included in the return, distinguishing the number of those who are convalescent patients.

HOUSE OF COMMONS.

THURSDAY, MAY 21ST.

Swine Fever in Ireland.

Mr. Walter Long, in reply to Mr. Kilbride, said that the regulations which prohibit the movement of swine from Ireland into Lancashire except for slaughter and under licence were imposed by the local authority in order to prevent the introduction of swine fever into the county, and it rested with that authority and not with him to say whether, and if so at what date, the regulations might properly be withdrawn. It was unfortunately not the case that Ireland was a non-infected area, 371 outbreaks of swine fever having occurred during the first eighteen weeks of the present year.

Carlow County Infirmary.

Mr. Engledew asked the Chief Secretary to the Lord-Lieutenant of Ireland, with regard to the fact that the Carlow County Infirmary was provided by law for the treatment of the poor and destitute of that county and its expenses provided almost entirely from the public funds of the county, whether he was aware that there were grave doubts in the minds of the ratepayers of the county as to whether that institution treated any of the poor and destitute of the county, and whether the law as to the admission of the patients, the area from which such patients should be admitted, and the manner of admission was carried out, and as to whether the funds of the institution were spent to the best advantage; and whether he would, under these circumstances, consider the necessity of directing that this institution be inspected, as directed by law, by the Local Governme Board inspector, who would also inquire into its general admin tration, and also that all institutions provided for the treatme of the poor and destitute and paid for out of public funds should regularly inspected by a Government official as directed by law.—M Gerald Balfour replied: I am informed that 90 per cent. of the patie relieved in the Carlow Infirmary belong to the poorer classes who treated gratuitously; that the provision of the law as regards admission of patients is habitually complied with; that the goverm believe the funds are expended to the best advantage; and that accounts are periodically published after audit by a manager of Bank of Ireland. As regards the second part of the question I see sufficient ground for applying in this particular case a system of spection which for more than fifty years has fallen into disuse.

The Lee-Metford Rifle.

Mr. Brodrick, Under Secretary of State for War, stated, in reply Mr. Seton-Karr, that no information had been received at the W Office as to the discarding at Bulawayo of the Lee-Metford rifle, b he might say that the question of the bullet was being fully consider

BOOKS, ETC., RECEIVED.

BLAKISTON, SON, AND CO., Walnut-street, Philadelphia.
Borderland Studies. By G. M. Gould, A.M., M.D.

CHAPMAN AND HALL, Henrietta-street, Covent-garden, London.
The Old Light and the New: Dealing with the Chemistry of Colo and the New Photography. By Wm. Ackroyd, F.I.C. Illustrate 1896. Price 1s. 6d. net.

CHATTO AND WINDUS, Piccadilly, London.
An Easy-going Fellow. By C. J. Wills. 1896. Price 6s.

CHURCHILL, J. & A., Great Marlborough-street, London, W.
Southall's Organic Materia Medica. By John Barclay, B.Sc. Lon Fifth Edition. 1896. Price 6s.

GRIFFIN, CHAS., AND CO, Exeter-street, Strand, London.
Year-Book of the Scientific and Learned Societies of Great Brit and Ireland. Compiled from official sources. Thirteenth ann issue. 1836. Price 7s. 6d.

KEGAN PAUL, TRENCH, TRÜBNER AND CO., Charing-cross-road, Lond
Infantile Mortality during Childbirth and its Prevention. By Brothers, B.S., M.D. 1896. Price 7s. 6d. net.
The Co-Education of the Sexes. By Mabel Hawtrey. 1896.

MACMILLAN AND CO., London.
Physics for Students of Medicine. By A. Daniell, M.A., LL. D.Sc., F.R.S.E. 1896. Price 4s. 6d.
A System of Medicine. By many Writers. Edited by T. C. Allbu M.A., M.D. Vol. I. 1896. Price 25s.

NEWMANN, O., AND CO., Newman-street, London, W.
Original Songs, Games, and Entertainments for Infants' Scho (with tunes compiled from various sources). By Wilhelmina Rooper, revised by C. B. Shuttleworth. 1896. Price 2s.

NUTT, D., 270, Strand, London.
The Frog: an Introduction to Anatomy, Histology, and Embr logy. By the late A. Milnes Marshall, M.D., D.Sc., F.R Edited by G. H. Fowler, B.A., Ph.D. Sixth Edition. 18 Price 4s.

PENTLAND, YOUNG J., Edinburgh and London.
A Practical Guide to Meat Inspection. By Thomas Walk M.R.C.V.S. Third Edition. Illustrated. 1896.
The Fundus Oculi, with an Ophthalmoscopic Atlas illustrating Physiological and Pathological Conditions. By W. Adams Fro F.R.C.S. 1896. Price 3 guineas.

SCIENTIFIC PRESS, Strand, London.
Elementary Anatomy and Surgery for Nurses. By W. McAd Eccles, M.S. Lond., F.R.C.S. 1896. Price 2s. 6d.

STEINHEIL, G., Paris.
Formulaire Aide-Mémoire de la Faculté de Médecine et des Médec des Hôpitaux de Paris. Par Dr. Fernand Roux. Quatriè édition. 1896.

SWAN SONNENSCHEIN AND CO., Paternoster-square, London.
Thoughts on Evolution. By P. G. F. 1896. Price 1s.

UNWIN, T. FISHER, Paternoster-square, London.
In the Kingdom of the Shah. By E. Treacher Collins, F.R.C 1896. Price 12s.

Certifying Surgeon's Daily Report Book; edited by James Holmes, M (T. H. Hayhurst, Radcliffe, Manchester); price 2s.—Geometri Drawing for Science and Art Students; By Joshua Petty (O. Ne mann and Co., Newman-street, London); price 1s. 6d.—Pestalo Series of Aids for Teaching Geography (O. Newmann and C London).—The Quarterly Journal of Microscopical Science, M 1896 (J. & A. Churchill, London); price 10s.—Le Venin des Serpen par Dr. A. Calmette (Société d'Éditions Scientifiques, Paris, 1896.— Nouvelles Formules d'Oculistique (1889–1895); par Dr. de Bourg (Société d'Editions Scientifiques, Paris).—La Stérilisation Pratiqu Chirurgie; par Dr. C. Levassort (Société d'Éditions Scientifiqu Paris, 1896).—Brain: a Journal of Neurology; part 73; Spring. (Macmillan and Co., London); price 3s. 6d.—The Dwellings of t Poor: Report of the Mansion House Council for the year end Dec. 31st, 1896 (Cassell and Co., London, 1896); price 1s.—Mag zines, &c., for June: Strand Magazine, Boys' Own Paper, Gir Own Paper, Leisure Hour, Sunday at Home, Ludgate Magazine, We minster Review, Contemporary Review, Friendly Greetings, Arch tecture. Strand Musical Magazine, Chapman's Magazine, Myra Journal.

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Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ADAMS, J., M.D. Aberd., F.R.C.S. Eng., has been appointed Medical Officer for the Workhouse of the Eastbourne Union.

ARCHIBALD, A., M.B., M.S. Aberd., has been appointed Assistant Medical Officer to the Gordon-road Workhouse and the Infirmary of the Parish of Camberwell.

AYMER, JAMES, M.B., C.M. Aberd., has been reappointed Parochial Medical Officer by the Kinneff Parish Council.

BLANDFORD, J. J. G., L.R.C.P. Lond., M.R.C.S., has been appointed Fifth Assistant Medical Officer to the London County Lunatic Asylum at Banstead.

BORTHWICK, THOS., M.D, Ch.M. Edin., has been appointed Medical Officer for the district of Campbelltown South Australia.

BOSTOCK, R. H. F., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Norton Sanitary District of the Malton Union.

BRYAN, JOHN M., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer of Health for the St. James's (Northampton) Urban Sanitary District.

BUCKELL, F., M.R.C.S., L.S.A., has been reappointed Medical Officer of Health for the Borough of Romsey.

BURGES, R. E., M.D., M.Ch. Irel., has been appointed Medical Officer for Hoole, vice Watson, resigned.

BURNETT, L. B., L.R.C.P. Lond, M.R.C.S., has been appointed Assistant House Surgeon to the Leicester Infirmary.

CALLAGHAN, JOSEPH, L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed *pro tem.* Visiting Justice and Deputy Licensing Magistrate at Windsor, New South Wales.

CALVERLEY, J. E. G., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the Metropolitan Hospital, Kingsland-road.

COOLEY, A. G., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Medical Officer and Vaccinator for the District of Campbelltown, New South Wales.

CRAWFURD, RAYMOND, M.A., M.D. Oxon., M.R.C.P., has been appointed Physician to Out-patients at the Victoria Hospital for Sick Children, Chelsea.

CROUCH, E. J., M.R.C.S., L.S.A. Lond., has been appointed, *pro tem.*, a Government Medical Officer in Hobart, Tasmania.

FALKENER, L., L.R.C.P. Lond, M.R.C.S., has been appointed Assistant House Physician to the Metropolitan Hospital, Kingsland-road.

FENN, A. C., L.S.A., has been appointed Assistant Medical Officer at the Fever Hospital, Dover.

FINDLAY, W., M.B., C.M. Aberd., has been appointed Medical Officer to the Aberdeen General Dispensary, vice Edmonds, resigned.

FLORY, CYRIL H., M.R.C.S., L.R.C.P., has been appointed House Physician to the Royal Hospital, Sheffield.

FURNIVALL, P., F.R.C.S., L.R.C.P. Lond., has been appointed Assistant Surgeon to the Metropolitan Hospital, Kingsland-road.

HALLAM, H., M.R.C.S., L.R.C.P., has been appointed Junior Assistant House Physician to the Royal Hospital, Sheffield.

HAMPTON, T., L.R.C.P. Lond., M.R.C.S., has been appointed House Physician to the Metropolitan Hospital, Kingsland-road.

HOGG, F. S. D., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Bradwell Sanitary District of the Maldon Union.

HUGHES, A. E. P., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer to the Gordon-road Workhouse and the Infirmary of the Parish of Camberwell.

HUSBAND, C., M.R.C.S., has been reappointed Medical Officer of Health for the City of Ripon.

JACKSON, E. S., M.B., C.M. Edin., has been reappointed Medical Officer by the Carnforth District Council.

JOYCE, ALFRED F., M.B., Ch.B Melb., has been appointed Officer of Health for Moorabbin Shire, West Riding, Victoria, Australia.

KAY, J. G., M.B., M.S. Edin., has been appointed Medical Officer for the Tintern Sanitary District of the Chepstow Union and also for the Trellick Sanitary District of the Monmouth Union.

KER, CLAUDE B., M.B., C.M. Edin., has been appointed Medical Superintendent of the Edinburgh City Hospital for Infectious Disease.

LYDDON, RICHARD, M.R.C.S. Eng., L.S.A. Lond., has been appointed Medical Officer of Health to the Urban and Port Sanitary Authorities, Deal, vice A. Bruce Payne, deceased.

MATTHEWS, J. S., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of Health for the Rural Sanitary Districts of Machynlleth, Pennal, and Scuborycoed.

MORRISON, A. T., M.B., B.Ch. Irel., has been appointed District Medical Officer to the Aylesbury Union.

PHILLIPS, L. C. P., M.B., B.C. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed House Physician to the Royal Free Hospital, Gray's-inn-road, London.

POLLARD, GEO. W., M.B. Edin., has been appointed Senior House Surgeon to the Children's Hospital, Myrtle-street, Liverpool.

RAWLINGS, J. D., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed House Physician to the General Lying-in Hospital, York-road, Lambeth.

RANDALL, T. EDWARD, B.A., M.B., B.C. Cantab., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Medical Officer of Health by the Alford Urban District Council.

SHORTRIDGE, T. W., M.D. Brux., L.R.C.P., L.R.C.S. Edin., has been re-appointed Medical Officer of Health for Honiton.

SIBLEY, W. K., M.A., M.D. Camb., M.R.C.P. Lond., has been appointed Medical Examiner to the New York Life Insurance Company.

SOYE, E. J., B.Sc. Lond., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to the Metropolitan Hospital, Kingsland-road.

Errata.—In the Appointments column of May 23rd, under the name Woollcombe, "Senior Honorary Surgeon" should read *a Senior*, &c., and the name "Squire" should read *Square*.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRENTFORD UNION.—Medical Superintendent of Infirmary and Medical Officer of Workhouse and Schools. Salary £250 per annum, with furnished residence in the Infirmary, rations, washing, &c., or £300, with furnished residence, washing, &c. Also Assistant Medical Officer, unmarried. Salary £100 per annum, with furnished apartments in the infirmary, rations, washing, &c. Applications to the Clerk to the Guardians, Union Offices, Isleworth, W.

BOROUGH HOSPITAL, Birkenhead.—Junior House Surgeon. Salary £80 per annum, with board and lodging, but no wines, spirits, or beer.

BUCKS COUNTY LUNATIC ASYLUM.—Assistant Medical Officer, unmarried, at the Asylum at Stone, near Aylesbury. Salary £100 per annum, with board and furnished apartments in the Asylum. Applications to the Clerk, County Hall, Aylesbury.

CANCER HOSPITAL (Free), Fulham-road, S.W.—House Surgeon for six months. Salary at the rate of £50 per annum, with board and residence.

CHARING-CROSS HOSPITAL, London.—Surgical Registrar. Salary £40 per annum.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. Salary at the rate of £30 per annum, with board and residence.

FISHERTON ASYLUM.—Locum Tenens wanted the second week in June for three weeks. Apply to Dr. Finch, The Asylum, Salisbury.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Surgeon to Out-patients (non-resident), for six months. Salary 25 guineas.

LONDON HOSPITAL, Whitechapel, E.—Medical Registrar. Salary £100 per annum. Also Assistant Physician.

MANCHESTER CLINICAL HOSPITAL FOR WOMEN AND CHILDREN, Park-place, Cheetham-hill-road.—Honorary Assistant Physician.

PARISH OF CREICH (Sutherland).—Resident Medical Officer and Vaccinator. Salary as Medical Officer, to include medicines, £45 per annum; as Vaccinator, the statutory fees, with an allowance of £5 per year on certain conditions. Applications to Inspector of Poor, Bonar Bridge, Sutherland.

PARISH OF KINCARDINE, Ross.—Resident Medical Officer and Vaccinator. Salary as Medical Officer, to include medicines, £42 10*s.* per annum, as Vaccinator the statutory fees, with an allowance of £5 per year; on certain conditions. Applications to the Chairman of the Parish Council, Ardgay, Ross.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—Physician to Out-patients. Applications to the Secretary, Office, 27, Clement's-lane, E.C.

Births, Marriages, and Deaths.

BIRTHS.

DALTON.—On May 26th, at Cranmer House, Cambridge, the wife of J. H. C. Dalton, M.D. Camb., of Trinity College, of a son, born prematurely.

HUME.—On May 24th, the wife of F. N. Hume, Medical Superintendent of the Northern Hospital, Winchmore-hill, N., of a son.

MILTON.—At Port Said, Egypt, the wife of F. R. S. Milton, M.R.C.S., of a son.

PEACHEY.—On May 23rd, at Ballyconnell, co. Cavan, the widow of Allan Thomas Peachey, M.R.C.S., of a son.

PERCEVAL.—On May 23rd, at Whittingham, Preston, the wife of F. Perceval, M.R.C.S., L.R.C.P. Lond., of a daughter.

PRESTON.—On May 8rd, at Kent House, Ryde, I.W., the wife of Lionel L. Preston, M.B. & B.S. Durh., of a daughter.

WILKINSON.—On May 20th, at Leh House, Windsor, the wife of Clement J. Wilkinson, M.R.C.S., of a daughter.

MARRIAGES.

CLUTTON—YOUNG.—On May 21st, at Guildford, H. H. Clutton, F.R.C.S., of Fortland-place, W., to Margaret, third daughter of the late Rev. Canon Young, Rector of Whitnash, Warwickshire.

TUNSTALL—HALLWRIGHT.—On May 2th, at St. Augustine's Church, Edgbaston, John Ogle Tunstall, M.D. Lond., of Ashby House, Sutton Coldfield, to Sibyl Gertrude, younger daughter of Matthew Hallwright, M.R.C.S., Hagley-road, Birmingham.

WYSE—GALLIERS.—On May 19th, at Hanwell Parish Church, by the Rev. Ewart Barter, Richard Wyse, M.A., M.D., Polmont, Stirlingshire, to Anne Sophia, daughter of George Tomkins Galliers, Yan Yean, Australia, late of Herefordshire.

DEATHS.

DUCKWORTH.—On April 28th, at Cardiff Castle, Wheeler-road, Cleveland Town, Bangalore, F. Duckworth, M.D., Surgeon-Major, Retired List, late of Her Majesty's Indian Medical Service, aged 63 years and 7 months. Deeply regretted.

HARKNESS.—On May 22nd, at his residence, Fairlight House, Hampton-hill, Alex Harkness, L.R.C.P. & S. Edin., aged 45 years.

HORTON.—On May 26th, at Bryn Hafod, Bromley, Kent, the residence of his son-in-law, James Horton, M.R.C.S. Lond., of Stepney and Highbury, in his 76th year.

PEACHEY.—On May 22nd, at Ballyconnel, co. Cavan, Allan Thomas Peachey, M.R.C.S., aged 39 years.

WEBB.—On May 20th, 1896, at Rock Bank, Carlton-road, Tunbridge Wells, Kent, Edward Lowe Webb, M.R.C.P. Ed., M.R.C.S. Eng., L.S.A., aged 71 years, late of 9, St. George's-road, London, S.W.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 28th, 1896.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
May 22	29·91	S.W.	50	49	65	58	47	0·12	Raining
,, 23	29·98	N.	57	56	70	66	50	0·02	Overcast
,, 24	30·35	N.E.	58	51	102	64	50	...	Cloudy
,, 25	30·46	N.E.	54	48	101	62	45	...	Cloudy
,, 26	30·37	E.	54	49	111	66	47	...	Cloudy
,, 27	30·24	N.E.	57	51	115	68	47	...	Fine
,, 28	30·27	N.E.	56	51	115	66	50	...	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (1st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.).

TUESDAY (2nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (3rd).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY (4th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Great Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (5th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.) Gt. Northern Central (2.30 P.M.).

SATURDAY (6th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (1st).—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-square, W.C.).—8 P.M. Annual General Meeting. Dr. Washbourn: Some Points in Connexion with the Bacteria of the Mouth.

WEDNESDAY (3rd).—OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown. Papers:—Mr. A. Doran: Cases of Fibroma of the Ovary and Ovarian Ligament Removed by Operation; with a Series of After-histories of Cases reported in the "Transactions" since 1879.—Dr. J. Phillips: Anterior Colpotomy.—Mr. T. H. Morse: A Case of Impacted Ovarian Dermoid Cyst Removed during the Ninth Month of Pregnancy.

FRIDAY (5th).—WEST LONDON MEDICO-CHIRURGICAL SOCIETY (West London Hospital, W.).—8.30 P.M. Clinical Evening. Dr. Clemow: Rodent Ulcer Excised and Grafted.—Mr. S. Edwards: Curious Anal Affection.—Dr. Abraham and Dr. Dockrell: Skin Affections. And other Cases by Dr. Chapman, Mr. Keetley, Mr. Bidwell, and Mr. Eccles.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (1st).—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Mr. G. Stoker: Chronic Glandular Disease of the Nose and Naso-Pharynx.

WEDNESDAY (3rd).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Dr. Tooth: Paralysis of the Cranial Nerves.

HOSPITAL FOR CONSUMPTION, &c. (Brompton).—4 P.M. Dr. Wethered: Types of Pulmonary Tuberculosis.

LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Payne: Acne.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. S. Paget: Surgical Cases.

THURSDAY (4th).—LONDON POST-GRADUATE COURSE.—Brit. Inst. of Preventive Medicine, Gt. Russell-st., W.C., 3.30 P.M., Dr. Allan Macfadyen and Mr. A. G. Foulerton: Qualitative Tests for Sugar and Acetone in Urine.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. T. Bryant: Clinical Lecture.

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-st., W.C.).—4 P.M. Lecture by Dr. Barlow.

VICTORIA HOSPITAL FOR CHILDREN (Tite-street, S.W.).—4 P.M. Dr. Rolleston: Hepatic Disease in Children.

FRIDAY (5th).—LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Actinomycosis and Glanders.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

A DIAGNOSTIC SIGN IN MALARIA.

DR. BOISSON, a French military surgeon, finds that patients suffering from malarial affections, even those of a masked or latent character, always present a peculiar discolouration of the nails. It appears to be independent of the locality in which the malaria was contracted, as he has found it in soldiers both from Tonquin and Madagascar. It appears before the rigor, increasing during the cold stage, and attains its maximum in the middle of the hot stage, after which it gradually diminishes, disappearing towards the close of the sweating stage. This discolouration has been remarked by other observers, but has generally been looked upon as due to circulatory troubles during the cold stage. According to Dr. Boisson, however, it cannot be thus accounted for, as it commences before the cold stage and is most evident later on. It differs also from the livid blue tint due to local asphyxia, being of a gray slate colour, and is due probably to a change in the hæmoglobin of those red corpuscles which are destined to be destroyed during the acute stage. As to the diagnostic value of the sign, he has never failed to find it at the commencement of a malarial attack, and has observed it where no fever occurred in an abortive attack. Once when a patient known to have had malaria was attacked by acute fever with rigors, as the ungual discolouration was absent Dr. Boisson excluded malaria in his diagnosis, and the sequel proved that he was justified in doing so, the affection proving to be an ordinary acute croupous pneumonia. Again, a man with cystitis suffered from intermittent attacks of pyrexia, which Dr. Boisson, in consequence of the presence of discolouration of the nails, was able to diagnose, correctly as it afterwards proved, as due to malaria and not to urinary infection.

L.S.A.—Next week.

"A FEMALE MEMBER OF THE ARMY MEDICAL DEPARTMENT."

To the Editors of THE LANCET.

SIRS,—With reference to "Inquirer's" remark as to the qualifications of Inspector-General James Barry not being traced by him in the "Medical Directory," I have to state that the Chief Clerk in the Army Medical Office, Victoria-street, has to-day informed me that James Barry was duly qualified M.D., and was always so designated in official records. In my earliest letter on this subject in THE LANCET, and again in the preface to my novel "A Modern Sphinx," I alluded to the fact, quoting the experiences of Dr. Thomas Jobson, who qualified in Edinburgh at the same time. I am, Sirs, yours faithfully,

Savage Club, May 21st, 1896. H. ROGERS, Lieutenant-Colonel.

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MEDICAL CORONERS AND PROFESSIONAL ETIQUETTE.

To the Editors of THE LANCET.

SIRS,—I beg to call your attention to the following, and shall be glad if you will publish the same in THE LANCET as I consider it to be a matter especially calling for attention.

In January last, about 2 A.M., I was called to a woman aged sixty years, resident two miles from my house. Upon arrival I found the patient had been dead about half an hour; she had had no occasion to consult a medical man for a period of twelve months previously. The case was reported to the coroner for the lower division of Gloucestershire in the customary manner, and two days later the relatives of the deceased informed me that the coroner had decided not to hold an inquest.

A few days later I received an urgent message to visit a private patient, who had been under my care for over three years. I found him to have all the symptoms of corrosive poisoning, and, in addition, certain bottles containing corrosive fluids were removed from his bedroom. All these I carefully sealed down and still retain in my possession. The patient was afterwards seen by my partner, and, later, by a consulting physician from Clifton, and the above diagnosis maintained; the patient succumbed on the tenth day. The coroner was notified, and on the day of the inquest I was informed by the police officer that another local medical man had been ordered to make a post-mortem examination, the said officer remarking, "Of course, you will attend the inquest." I need hardly mention that I did not do so. At the inquest the medical man was of opinion that death was due to inflammation of the intestines and a verdict was returned in accordance with his evidence.

In commenting on these two cases I may say I did not receive any intimation from the coroner, in fact, my claims were completely ignored by him. In the first case I should like to know, Was the coroner justified in giving a certificate of death without holding an inquest? In the second case, Is it not customary for medical men in attendance to be called to give evidence when an inquest is held? If we are to receive such treatment from a medical coroner what may we expect from lay ones?

Since writing the above my partner has been similarly treated by the same coroner. Yesterday he was called to a man who had been run over by a cart. He found him in a dying condition and he expired almost immediately. An inquest was held to-day, and although he was not summoned my partner was present at the inquiry. A verdict was arrived at without any medical evidence, notwithstanding the fact that a juryman expressed surprise that no medical evidence was forthcoming. The coroner even went so far as to say that the man probably died from internal hæmorrhage, the result of rupture of the liver; and quoted a previous case as an example; whereas my partner, who found fractures of several ribs, the clavicle, and left tibia, is of opinion that the liver was uninjured. The coroner also remarked to the jurymen that had the deceased been found dead in bed he would have granted a necropsy; this is at variance with his behaviour in the first case. Apologising for troubling you, I am, Sirs, yours truly,

Kingswood, May 5th, 1896. R. WILLIAM BRIMACOMBE.

M. U.—The next International Medical Congress will be held at Moscow in 1897. Our correspondent does not sufficiently define the post of the gentleman whose name is desired, but the "Medical Directory" properly searched will give full information.

J. H. W.—We regret not to have had the information handy. The Caledonian and the Sun both offer the facility required; but not, perhaps, without limitations.

"STERILISATION OF MILK."

To the Editors of THE LANCET.

SIRS,—I desire to make a correction in my letter that appeared in THE LANCET on p. 1406, May 16th inst., to this effect: Immersion during five minutes of any steriliser (such as the Cathcart apparatus) in my cooler for hot sterilised milk reduces the temperature of the latter 100° F. (not 50°) say from 200° to 100°, and in ten minutes cools the milk down to the temperature of the water from the main tap; the latter envelops the entire heated surface of the steriliser by direct contact, running in and out of the cooler with great velocity. The water being often down to 45° F., all bacterial development is practically stopped whilst the immersion is continued.

I am, Sirs, yours faithfully,

Waterloo, Liverpool, May 25th, 1896. C. H. LEET, F.R.C.S. Eng.

A. H. C.—Our correspondent's previous communication contained no details. He could not expect us to guess at the causes of quarrel and then comment on them. He hardly needs our encouragement to believe that it is wrong to practise without a diploma. With regard to the offending notice board we can only repeat what we have previously said: In the absence of any precise rules on the matter, the size of a board, the phraseology of its legend, and the duration of its public life must be matters of private taste.

H. A. B.—We are not quite certain whose conduct our correspondent wishes to bring to the notice of the General Medical Council. He should consult his solicitor.

THE TREATMENT OF PLEURITIC EFFUSION.

To the Editors of THE LANCET.

SIRS,—I should be obliged to any of your readers for their advice on the following case. A patient was sent to me in April, recovering from pleurisy with effusion, for which he had been aspirated by his local medical attendant. Finding fluid present I, on April 16th, aspirated, drawing off 150 ounces, but so quickly did it return that on the 24th I again drew off 130 ounces, and on May 7th and 21st 160 and 167 ounces respectively. Locally I have tried blisters, painting with iodine, and a compound ointment of mercury, belladonna, iodine, and camphor, but with no effect. Internally he is taking iodide of potassium and syrupus ferri iodidi. Would frequent aspirations be of use, and what local or internal remedies could I try? I am, Sirs, yours truly,

May 25th, 1896. UBIQUE.

Mr. J. A. Todd.—It is illegal to make a post-mortem examination without permission of the friends of a deceased person or the coroner, as the case may be. This is both common law and equity. The offence is looked upon as "an assault on the body." We fully endorse the letter and spirit of the law. Many people have a religious and sentimental objection to a necropsy on departed relatives or friends, and surely this should receive due recognition. Like other privileges it is liable to abuse. We have reason to believe that it is not an uncommon practice for paupers in workhouses to bequeath their bodies to fellow inmates to prevent their being utilised for dissection under the Anatomy Acts.

R. W. (Epsom).—Any of the instrument makers whose names occur in our advertisement columns could make the appliances at a moderate cost according to instruction. We are not aware that we have ever alluded to any one firm by name.

"THE POISON OF THE PRIMULA."

To the Editors of THE LANCET.

SIRS,—In answer to Dr. Clemesha's letter I may mention that during the last few months I have seen two cases of what may be described as eczema resulting from the presence of the primula family. The face and hands were chiefly affected. In both patients the eyelids of one eye were inflamed and closed, and the fingers presented erythematous eczema with small blebs, some of which were hæmorrhagic. I agree with the writer in thinking that primula poisoning is rather common.

I am, Sirs, yours truly,

HENRY WALDO,

Physician to the Bristol Royal Infirmary, and in charge of

May 26th, 1896. the Department for Skin Diseases.

Mr. R. Lloyd Legate.—So far as we can learn there is no intention of including in this Bill any but poor-law officers as such, and, if so, its provisions will not extend to posts of medical officers of health, whether held by poor-law medical officers or not.

J. D.—Henoch's Diseases of Children can only be obtained by subscribing to the New Sydenham Society. It is, perhaps, the best book on the subject.

ERRATUM.—The price quoted for "Bowlby's Surgical Pathology" in our review of the book on May 23rd is 9s., it should have been 10s. 6d.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Rochdale Observer, Birmingham Post, Kendal Mercury, Wakefield Herald, Oldham Standard, Sussex Daily News, Hereford Times, Ashton-under-Lyne Reporter, Bradford Observer, Newcastle Leader, South Wales Daily News, Pioneer Mail, Dundee Advertiser, North Express, Times of India, Sheffield Telegraph, Sunderland Herald, Bristol Mercury, Western Daily Mercury, North British Daily Mail, Worcester Daily Times, Leeds Mercury, Manchester Courier, Leicester Post, Craven Herald, Scotsman, Builder, Forfar Herald, Bridgwater Independent, Western Mail, Somerset City Herald, Liverpool Daily Post, Architect, Yorkshire Post, Wellingborough News, Sanitary Record, City Press, Brighton Gazette, Spalding Free Press, Yorkshire Evening Post, Elgin Courant, Hertfordshire Mercury, Weekly Free Press and Aberdeen Herald, Reading Mercury, Local Government Chronicle, West Middlesex Standard, Mining Journal, Oswestry and Border Counties Advertiser, Surrey Advertiser, West Middlesex Advertiser, Belfast Evening Telegraph, Local Government Journal, Beverley Recorder, Sunday Times, St. Bartholomew's Hospital Journal, Gloucestershire Chronicle, Dorset County Chronicle, Eastern Counties Times, Glasgow Evening News Durham Chronicle, Lincolnshire Echo, Le Courrier de la Presse, Western Mail, &c., &c.*

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J.—*Journal of the Society of Public Arts*, Sec. of.

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The Croonian Lectures:

A CONTRIBUTION TO THE STUDY OF THE BLOOD AND THE CIRCULATION.

Delivered before the Royal College of Physicians of London,

BY GEORGE OLIVER, M.D., F.R.C.P. LOND.

LECTURE I.[1]

Delivered on June 2nd, 1896.

MR. PRESIDENT AND GENTLEMEN,—My first duty is to offer you my sincere thanks for the honour you have done me in asking me to deliver the Croonian Lectures for the present year. The fulfilment of your request has proved not merely a grateful exercise in itself, but a useful incentive to the execution of it. I am, however, painfully sensible of the incompleteness of the results which I propose to submit to your consideration, of the many gaps that remain to be filled in, and of the shortcomings that may be amended by further observation. During the past few years my leisure has been devoted to the physiological study of the circulation and the blood, and during the clinical portion of the year the results attained have been applied to practical ends, so that it has happily fallen to my lot to study side by side, as it were, the physiological and the pathological — the two aspects of one united whole. The subjects chosen may not appear to be closely allied in a physiological or clinical sense. Nevertheless it will be found that the thread of the inquiry has in some degree strung them together. They will be dealt with in the twofold aspects of experimental and applied physiology. The methods of observation and the experimental data will, therefore, precede the application of the physiological positions which they support to "the prevention, control, and cure of diseases"—the practical aim of this course of lectures. According to the injunction imposed by this College on the Croonian lecturer, it would seem that he is expected to hold the balance true between the science and the practice of medicine, and to do his best to further and substantiate the latter by his inquiries into the foundations of the former. The remark is now almost trite and commonplace, but it will bear repetition, that medicine is but a department of physiology. It is practical physiology, or as the Lumleian lecturer of 1892 (Dr. Pye-Smith) tersely and forcibly put it, "pathology is only a chapter of physiology which for convenience we have separated from the rest." Further, practical pathology rises to its highest ideal when it becomes as physiological as are its principles. Research is year by year drifting us upwards to this higher level; and it may now be truly said that the most prominent feature of the practical medicine of to-day is the physiological. In the course of these lectures a few aspects of strictly physiological medicine will come under consideration, such as those relating to exercise, rest, baths, massage, the movement cures, and the animal extracts, in so far as these various agencies affect the circulation and the blood. Some of the physiological modes of treatment to be referred to—such as massage and resistive movements—are distrusted by many, perhaps because they may seem to be somewhat too pretentious and are apt to prove fruitful ground on which charlatanism may flourish. It is to be hoped, however, that further inquiry may shed some light on the physiology of these methods and afford some presumptive evidence of the practical utility of them, so that what in them promises to be useful may not be cast aside through insufficient examination.

This and the following lecture will be devoted to the results of observation on the circulation, and the third and fourth lectures to those referring to the blood.

THE CIRCULATION.

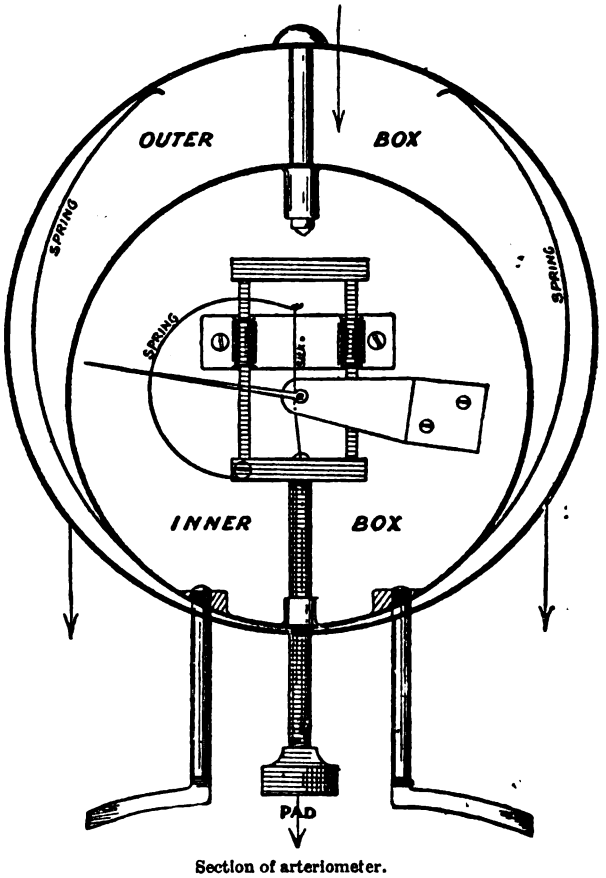
My observations on the circulation in man have been mainly directed to the determination of the calibre of the radial artery and blood pressure with the view of ascertaining the causes—physiological and pathological—which produce variation or which may prevent variation in these important aspects of the pulse. Inasmuch as the diagram of the pulse furnished by the sphygmograph practically leaves these aspects unrecorded or at any rate sheds but an indefinite light upon them, it seemed to me that an inquiry having as its object the direct measurement of them might yield some useful results.

APPARATUS EMPLOYED.

The observations on the pulse were made by means of two instruments — one the arteriometer, so called because it measures the calibre of the artery, and the other the pulse-pressure gauge. The former instrument, however, not merely directly records the calibre, but indirectly indicates the blood pressure; for the calibre is, as a rule, determined by the pressure in the normal condition of the circulation. Hence the arteriometer has been largely relied on in these observations, especially, too, as the varying resistance of the tissues over the artery does not affect the readings obtained by it. The two facts—calibre and pressure—are, however, not always in accord in the pathological field, and for the purpose of discriminating between them the pressure gauge has been found useful. Having recently described these instruments[2] and the mode of using them, it will, perhaps, be unnecessary on this occasion to do more than afford a brief description of the arteriometer. A hydrostatic method of measuring the volume of the limb has also been adopted. In the experiments on animals made in conjunction with Professor Schäfer in the Physiological Laboratory of University College the usual appliances of a well-appointed laboratory were employed.

1. *The arteriometer.*[3]—The mechanism is enclosed in a small circular box (inner box, Fig. 1) which presents below

FIG. 1.



Section of arteriometer.

three stems—one on each side, fixed to the box, carrying the foot-rests, and one between, to which the pad or button is screwed, is free to settle over the site of the artery. This central stem is fixed to a frame, which slides in grooves to maintain the exact vertical direction of the up and down

[1] Lecture II. was delivered on June 4th and Lectures III. and IV. will be delivered on June 9th and 11th.

[2] Pulse Gauging, 1895.

[3] This instrument was described by me at the meeting of the Physiological Society held at King's College in March, 1894.

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movement. This movement is communicated to the hand on the dial by a silk thread attached to the lower part of the frame and maintained in a state of uniform tension around the axle by a piece of hair-spring, so that the exact position of the pad in relation to that of the foot-rests is indicated by the hand on the dial. If, now, the two foot-rests are planted by the sides of a piece of rubber tube the pad will settle on it, and the hand on the dial will indicate the position which it has assumed as the starting-point of the measurement to be made, and all that is necessary in order to determine the internal diameter of the tube is some arrangement that will push forward the pad until it closes the tube, when the hand on the dial will travel from its initial position and furnish the required measure. That arrangement is secured by a rod attached to the outer case enclosing the instrument which merely thrusts before it the frame carrying the pad when that case is pushed downwards. As the outer box is pressed forwards you observe that a point is reached when air can no longer be blown through the tube, and in the meanwhile the diameter is recorded on the dial. The outer box serves a most important purpose in making such a delicate measurement as that of the radial calibre. It is separated from the instrument by the intervention of springs which glide towards the rod as it is pressed downwards; so that a uniform pressure is thus maintained on the foot-rests throughout every observation, and the observer cannot unconsciously or in any way modify the reading obtained. The personal equation is thus much more satisfactorily met than it could be even by more elaborate mechanical arrangements. The dial provides for the measurement of four millimetres and is graduated in tenths of a millimetre, and it automatically revolves with the indicator, so that every reading is made from zero and not from a variable part of the scale, as would be the case were the dial to remain fixed. Lastly, it will be obvious that the force used to close the artery always exceeds that of the blood pressure, otherwise the indicator would not travel on the dial.

2. *Volumetric measurement of a limb.*—With the view of determining the difference which may be produced in the volume of a limb by local exercise, by faradaism, by massage, by resistive movements, and by baths, a mode of measurement afforded by the displacement of water has been preferred to that furnished by the plethysmograph or the tape. The following is the method which has been found the most satisfactory. The observations have as a rule been made on the arm. A large trial jar is placed in an overflow basin. After it has been very carefully adjusted to an absolutely horizontal position by a spirit-level it is filled exactly to the brim with tepid water (95° F.), this point being indicated by the correct reflection of a window on the surface. The arm, around which an aniline line has been drawn above the elbow, is immersed until the line is touched all round by the surface of the water. The overflow is then measured before and after the experiment.

THE RESULTS OF OBSERVATION.

Before affording some of the results of observation one or two remarks should be made in regard to the tactile estimation of the lumen of the radial artery which have been suggested by the use of the arteriometer. This instrument has repeatedly yielded me useful service in correcting illusory impressions furnished by the finger in regard to the calibre of the artery under different physiological and pathological conditions. No results have been accepted unless confirmed by two or three separate applications of the instrument, and the corrections it has furnished have often been very considerable. In like manner the tactile estimations of others in regard to the lumen have been tested by it with similar results. The outcome of these observations, therefore, suggests that it is not always such an easy matter as is usually supposed to accurately distinguish between the beat of the pulse and the calibre of the artery. Perhaps this defective discrimination is apt to arise mainly from the ictus so monopolising the tactile appreciation that the observer's estimate of the calibre is liable to be biased by it, and from the difficulty of duly appreciating more than one sensation through the sense of touch at the same time. Observation has shown that the well-trained finger is not so apt to go astray in gauging the lumen when high tension exists as in estimating it when the minimum pressure is much reduced; for then it would seem as if the increased difference between the minimum and maximum pressures is apt to afford an exaggerated impression of the calibre. Examples illustrating this point will be found when reference is made to the effects of exercise, massage, resistive movements, vaso-dilators, and hot baths on the radial pulse.

I. *Physiological Variations of the Radial Pressure and Calibre.*

1. *Posture.*—A change of posture (e.g., from the sitting to the recumbent posture or the reverse) in health is almost invariably accompanied by an immediate and decided alteration in the radial blood pressure and calibre. They both fall as the recumbent posture is assumed; taking the average of observations the variation in the pressure is from 20 to 40 mm. of Hg., and that of the calibre from 0·4 to 0·6 mm. As a rule, when the health is good, and presumably when the vasomotor tone is satisfactory, these postural variations are so well adjusted to the changes of posture that they take place together, without any detectable interval between them and without any oscillatory disturbance intervening; but even in apparent health slight transitional variations, lasting but a few seconds and immediately following the change of posture, are not uncommonly met with before the normal level for the posture assumed is attained. Such transitory intervening variations are probably accounted for by the hydrostatic moment not being compensated for by the dynamic moment, but in a few seconds the compensation is duly adjusted. Moreover, the same fact was repeatedly observed by Mr. Leonard Hill when experimenting on the effects of change of posture on the blood pressure in animals.[4] It probably is the nucleus of that much larger and more prolonged oscillation of the blood pressure produced by change of posture in the subjects of reduced vasomotor tone which will be referred to later. It has been observed that as life advances beyond the middle period the range of postural variation in the radial pressure and calibration become, as a rule, gradually lessened, and may even be abolished. The period when restricted variation may set in is, however, a pretty wide one, and may be said to extend from the fifty-fifth to the seventy-fifth or even eightieth year. How are these normal postural variations produced? It is conceivable that gravity might play an important *rôle* in the distribution of the blood in the different postures in health were there no vasomotor system of nerves or were the function of these nerves in abeyance. But then the effect of gravity on the circulation when the posture is changed would be found to be exactly the reverse of that which obtains in a state of health; for in the erect postures the blood would collect in the capacious venous system within the abdomen and gravitate into the legs, and the vessels in the upper parts of the body would be proportionately reduced, and when the recumbent posture was assumed the blood would become more evenly distributed—the effect of gravity being then neutralised. Under such conditions the radial artery would enlarge in the recumbent and diminish in the erect posture, a result which actually does obtain when the effect of gravity is allowed to manifest itself from failure in the compensating mechanism. Therefore, in normal man the hydrostatic influence of gravity in the erect postures must be counterbalanced, and this compensation is attained by the vasomotor mechanism, and especially by the splanchnic portion of it, a fact which has been so well established by Mr. Leonard Hill.[5] This observer found that in the monkey the compensation is more developed than in rabbits, cats, or dogs, and that it is still more developed in man. In fact, in man it would seem that the adjustment of the vasomotor mechanism to gravity actually amounts to over-compensation, so that when, for example, the erect postures are assumed the vaso-constriction that immediately takes place in the terminal vessels in the splanchnic area and elsewhere is such as to raise the blood pressure throughout the whole arterial system, and when the recumbent posture is resumed that constriction passes away and the arterial fulness subsides. The predominant cause, therefore, of the normal differences observed in the blood pressure and calibre produced by change of posture is vasomotor. Notwithstanding this fact, however, there is evidence to show that gravity does still influence the blood pressure and calibration of the arteries; but the effect of this interference is comparatively insignificant. For example, the subject being recumbent a radial calibre of 1·6 mm. at the level of the arch of the aorta may become 1·7 mm. ten inches below and 1·4 mm. ten inches

[4] The Influence of the Force of Gravity on the Circulation of the Blood, by Leonard Hill, M.B.: Journal of Physiology, 1895.
[5] Op. cit.

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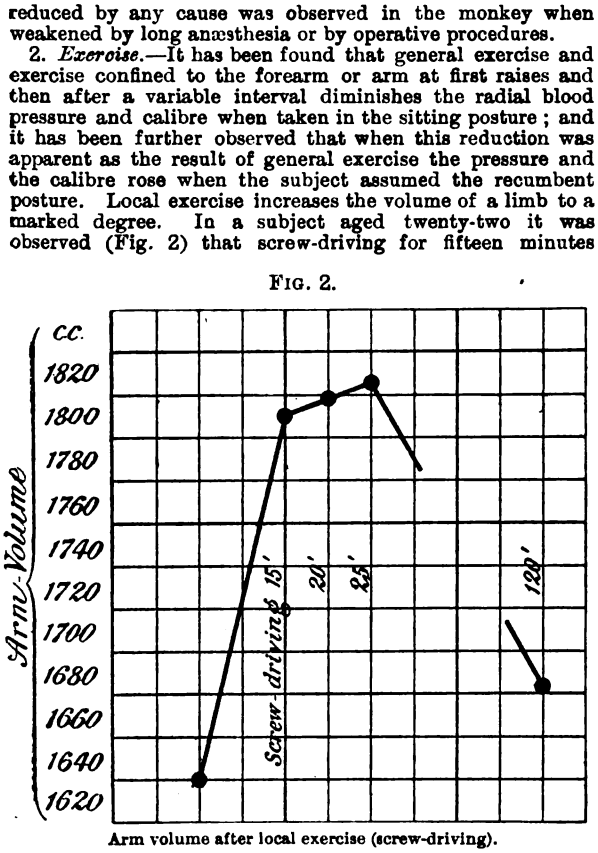
above that level. But even this slight influence of gravity is eliminated from the postural measurements by placing the wrist always at the same distance—e.g., four inches—below the level of the aortic arch. When the subject assumes the recumbent posture gravity may be made available for supplying a large amount of additional blood derived from the limbs for circulation in the rest of the body—a fact which may be observed when on putting both legs up and supporting them a radial calibre in the recumbent posture may advance in two minutes from 1·7 mm. to 2·2 mm. Such a position of the limbs may prove useful in certain emergencies, as in syncope.

The agreement between the postural variations observed in normal man and those determined in animals.—Before leaving this part of the subject it should be remarked that the leading results which have been observed in man in regard to the postural variations of the radial pulse have been confirmed by the experiments of Mr. Leonard Hill on monkeys, the two coinciding series of conclusions having been arrived at independently and by totally different methods.[6] For example: (1) the temporary hydrostatic effects frequently observed in man as the immediate result of changing the posture were recorded in the tracings of the blood pressure of the monkey when the animal was turned from the feet down to the horizontal position or *vice versâ*; (2) the postural variations of the blood pressure furnished by healthy subjects were afforded by normal monkeys; and (3) the reversal of these variations found in man when the vasomotor tone is reduced by any cause was observed in the monkey when weakened by long anæsthesia or by operative procedures.

2. *Exercise.*—It has been found that general exercise and exercise confined to the forearm or arm at first raises and then after a variable interval diminishes the radial blood pressure and calibre when taken in the sitting posture; and it has been further observed that when this reduction was apparent as the result of general exercise the pressure and the calibre rose when the subject assumed the recumbent posture. Local exercise increases the volume of a limb to a marked degree. In a subject aged twenty-two it was observed (Fig. 2) that screw-driving for fifteen minutes

FIG. 2.



Arm volume after local exercise (screw-driving).

raised the volumetric measurement of the arm from 1632 c.c. to 1800 c c., and for ten minutes more to 1818 c.c., and that after the expiration of two hours after the cessation of the exercise the volume of the arm still exceeded the initial measure by 88 c.c. How are these effects to be explained? In the first stage of exercise the enlargement of the artery and the increase of the blood pressure are obviously the result of excitation of the heart's action—of the increased discharge of blood into the arteries—and of the active determination of blood towards the muscles; and perhaps also this result is increased by muscular pressure on the peripheral vessels (arterioles and veins). But how is the reduction brought about? It has been repeatedly observed that the diminution of the radial calibre is not in the first instance the result of exhaustion or fatigue, though it undoubtedly becomes still more pronounced when the fatigue-stage of exercise sets in and that it is primarily and intimately associated with muscular effort and therefore is much longer in supervening when exercise is taken on the level than when climbing is attempted, for then it is a comparatively early event. There are probably two prominent causes which induce the reduction of an artery like the radial. In the first place the muscles for example of the arm during exercise, especially local exercise, receive an enormously increased supply of blood which is delivered to them through many branches given off between the axillary artery and the portion of the radial under observation; the blood pressure and the calibre at this point must, therefore, necessarily fall in proportion as the supply of blood to the muscles is increased, the pressure in the arterial tubing of the limb being thus short-circuited as it were throughout. Then, again, in general exercise the most actively employed muscles, such as those of the legs, will probably receive a larger proportionate share of blood; and, furthermore, at a certain stage of the exercise this deviation of the blood downwards will be increased by loss of vasomotor tone permitting gravity to determine some accumulation of blood in the lower parts. Probably all these causes contribute to the radial reduction which occurs in the active postures at a certain stage of general exercise, as in walking, and especially in climbing; but in all probability the predominant cause is the active derivation of blood into the capacious periphery of the circulation located in the muscles. This position is supported by the fact that an artery like the temporal, which is not supplied to muscles actively employed in exercise, remains persistently distended throughout a long-continued muscular effort, such as that of climbing for many hours[7]; and by the observation that the radial artery of one arm slung at rest during moderate exercise is not reduced, while that of the free arm is reduced.[8] Diminution of vasomotor tone in the second stage of exercise is probably the cause of the rise of the radial pressure and calibre observed in the passive posture (recumbency) when gravitation ceases to influence the circulation. Why should the volume of the exercised limb increase? The rapid accession of blood is obviously the cause of the immediate enlargement; but though this may be accounted for by the turgescence of the vessels which accompanies muscular contraction, I think it is somewhat doubtful if the persistence of the swelling for several hours after the cessation of all muscular action can be thus satisfactorily explained, for surely such a distension of the vessels should cease pretty soon after the muscles become relaxed, and the enlargement due to it alone would, therefore, quickly pass away. Does not the continuance of the swelling point to the supervention of some other event beyond the mere temporary distension of the vessels, such as the exudation of fluid from the blood into the substance of the muscle? There is some corroboration in support of such a view in the results of some experiments performed by Dr. Lazarus Barlow in the pathological laboratory at Cambridge in 1894 on the effects of Variations in the Volume of the Blood upon the Specific Gravity of Blood and of Muscle.[9] That observer increased the volume of the blood in two different ways: in one he anæmiated one or more limbs by the tight application of Esmarch's elastic bandages and thus forced whatever fluid, blood as well as lymph, that was in them into the general circulation; and in the other method he injected salt solution into the blood. The specific gravity of the blood and of the blood-plasma was taken by Roy's method, and that of the muscles by a modification of that method before and after the volume of the blood had been increased. The results obtained were a rise of the specific gravity of the blood and of the blood-plasma, and an invariable fall in the specific gravity of the muscle, the rise and fall being rapidly induced, the larger portion of them occurring within the first half hour. This observer, therefore, concludes that when the volume of the blood is increased the muscles take up water which is derived from the blood. In exercise the volume of blood circulating through the muscles is in all probability increased to a much higher degree than obtained in these experiments,

[6] Op. cit.

[7] Therapeutics of Circulatory Derangements, by Professor M. J. Oertel, M.D., translated by E. J. Edwards, M.D. (1878.)

[8] Pulse Gauging, p. 17.

[9] Proceedings of the Physiological Society, May, 1894. Journal of Physiology, 1894.

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and therefore a most favourable condition exists for the rapid transudation of watery fluid from the blood to the muscular tissues. During the actual muscular contraction a portion of this exuded fluid is no doubt driven onward into the lymphatics by the pressure brought to bear on the lymphatic spaces by the contracting muscular fibres; but it is quite conceivable that a large quantity of that fluid may remain in the muscles for a considerable time after all muscular action has ceased. This position is furthermore corroborated by the changes observed in the blood as the result of exercise. These will be referred to in the fourth lecture. This matter may seem to possess a merely theoretical interest; but it is conceivable that it may have a somewhat important practical side which will be touched upon when an attempt is made to explain some of the beneficial effects to be obtained from the movement cures.

3. *Digestion.*—During the first hour after a full meal as a rule the radial pressure and calibre fall very considerably in the sitting and rise proportionately in the recumbent posture. The leading cause of this alteration on the radial pulse would seem to be the increased flow of blood to the digestive tract and the large vascular glands within the abdomen, which in the erect postures reduces the blood pressure in the upper half of the body mainly through the agency of gravity, but ceases to do so in recumbency, because in that posture gravity fails to operate. Mr. Leonard Hill by his valuable experiments on animals has demonstrated that the splanchnic vasomotor mechanism occupies an all-important place in compensating for the simple hydrostatic effects of gravity on the circulation of the blood produced by changes of posture, and that where the perfection of this compensatory mechanism is impaired the influence of gravity on the systemic circulation becomes of vital importance, so that in the feet-down position the blood drains into the abdominal veins and recedes from the upper portions of the body.[10] It would seem that during the digestive act a comparatively transient impairment of the splanchnic vasomotor mechanism—probably more pronounced in some individuals than in others—does take place; but in healthy subjects it is quicky followed by complete compensation—in fact, by over-compensation—for the primary fall in the arterial pressure is succeeded by a rapidly developed rise beyond the degree recorded before the meal, and this rise, which, corresponds with the acme of fulness of the systemic arteries, gradually subsides before the next meal is taken.

4. *Fatigue.*—The ordinary effects of change of posture in the healthy subject on the radial pressure and calibre have been described—namely, an increase of both in the sitting and a decrease in the recumbent posture. Every now and then, however, these measurements are observed to be reversed; and it has been found that fatigue is a common cause of this departure from the strictly normal formula of the postural measurement of the pulse. Repeated observation has shown that the essential fact in the transitory conditions of tiredness or fatigue is a diminution of the vasomotor compensation which at other times perfectly counteracts the hydrostatic effects of gravity on the distribution of the blood. In health this is but a passing phase of vasomotor inadequacy which finds restoration in the recumbent posture. It is, however, the embryo as it were of that persistent impairment of vascular accommodation which may be observed and measured by the arteriometer in many ailments to be referred to later.

5. *Menstruation.*—Throughout the menstrual period it has been repeatedly observed that the calibre of the arteries, as exemplified by the radial, ceases to respond to change of posture. Later it will be shown that this is a sign of arterial tension. Probably, therefore, during menstruation vaso-constriction invades the arteries and extends to those of middle size like the radial. This transitory phase of arterial contraction resembles that which is quite common for limited periods in the gouty and that which always accompanies attacks of *migraine*.

Variations of arterial tension from the physiological aspect.—The fundamental fact in regard to the circulation in normal subjects is that it is a system of elastic tubing which is never at any one time and in all parts filled with the circulating fluid, so that there always exists in every part a pretty wide margin for the production of the extremes of variation of pressure consistent with health, which may be induced by alterations either in the volume of the fluid or in the size of the tubing. In the central parts of this system it is highly probable that the blood pressure varies within much narrower limits than it does in the peripheral arterial tubes, in which it may be considerably increased or diminished according to the ebb and flow of the activity of organs, and that consequently the volume of the blood and the size of the peripheral arteries are continually varying in different parts of the body. Inasmuch as the functional activity of any one part affects not merely its own blood-supply, but influences that of every other part, the peripheral blood pressure must be an ever fluctuating quantity—within certain limits. The condition of the vasomotor mechanism largely determines the order which the fluctuations follow; and inasmuch as the most delicate test of the integrity or otherwise of that mechanism is afforded by the effects produced on the radial calibre and pressure by change of posture, that test has been adopted throughout this inquiry.

[10] Op. cit.

II.—*Pathological Variations of Radial Measurement.*

Observation has shown that when the radial calibre either varies repeatedly in the reverse order to that which obtains in health or persistently ceases to vary on change of posture some pathological condition may be inferred to exist; and that such deviations from the normal formula of radial measurement when persistent group together certain morbid conditions.

1. *The postural variation is reversed.*—It has been shown that in health the reversed postural formula of radial calibration is met with as the result of the digestive act, of exercise, and of fatigue. In all these instances there exists one common cause accounting for the reduction of the radial calibre in the erect postures—namely, diversion of blood—in digestion to the abdominal organs, in exercise to the muscles, and in fatigue to the lower parts of the body from impairment of vasomotor tone. In health this is but a passing phase of the distribution of blood. In disease it is also due to a diversion of blood, which is, however, of a less or more persistent character. The blood abstracted from the arterial side of the circulation in the erect postures gravitates into the splanchnic area and (to a less degree) into the veins of the legs. So that all the cases thus grouped together are characterised by impairment of the vasomotor mechanism. Mr. Leonard Hill has demonstrated that when paralysis of the splanchnic vaso-constrictors is brought about in animals, as by anæsthetics or by operative procedures, pressure applied to the abdomen by means of a bandage at once restores the blood pressure so long as the heart is normal or is not too weak to effectually propel the increased supply of blood furnished by the compression of the abdominal veins.[11] It has been repeatedly observed that when the radial calibre is reduced in the sitting posture the application of abdominal pressure, while the arteriometer remains *in situ*, will as quickly raise it to what it attains in recumbency as was the blood pressure restored by the same procedure in Mr. Hill's experiments. Furthermore, the same result is attained, as has been frequently proved, by making the subject in the recumbent posture execute a series of from six or more slow, prolonged, and deep inspirations after forced expiration, while the abdominal muscles are contracted as in the Italian method of singing—a form of respiratory gymnastics which apparently aspirates the blood to the heart, effectually compresses the abdominal veins, and induces a stronger stroke of the heart and an increased transference of blood from the venous to the arterial side of the circulation.[12] The following is an example of this restoration of the normal balance of the blood-supply to the arteries by this means:—

—	Radial calibre.	
	Sitting.	Recumbent.
Before forced respiration	1·4 mm.	1·9 mm.
After six forced respirations	1·9 mm.	1·4 mm.

These observations indicate that when the vasomotor mechanism is impaired, as is shown by the reduction of the radial pulse in the upright postures, the blood unduly collects in the splanchnic area; in fact, a portion of the

[11] Op. cit.

[12] This procedure as a mode of treatment was brought to my notice by Dr. Edward Blake, who has, he informs me, successfully applied it for some years past in the treatment of dilated and weak hearts.

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blood is thus abstracted from the arterial side of the circulation and is transferred to the venous side. What ailments are mainly characterised by the presence of this radial sign of a damaged state of the vasomotor mechanism? Observation has shown that it is commonly met with in anæmia, in all the various forms of nervous exhaustion, in the febrile state, in convalescents, and in cardiac incompetency. It would seem that the underlying pathological condition is asthenia, and especially asthenia which springs from impoverishment of the blood or from denutrition of the nerve-centres. These are the forms of asthenia in which the reversed radial measurement is observed most frequently, and they ramify through a large group of cases, and, therefore, embrace a considerable section of clinical observation. It has been found that this radial sign of asthenia is pretty constantly present in that form of nervous debility which now passes under the name of neurasthenia and in closely allied ailments of the nervous system. It is, therefore, probable that in cases of this type a paretic condition of the vasomotor constrictors is a prominent pathological feature, which may, moreover, in a great measure account for many of the symptoms which such cases manifest. In the erect postures the reduced supply of blood to the arteries which are distributed to the upper portions of the body, and the drain of blood into the lower parts, and especially into the abdominal area, will undoubtedly favour the development of cerebral anæmia and the occurrence of various abdominal disturbances and ailments to which the sufferers of denutrition of the nerve-centres are so liable. Influenza during the past seven years has developed a large crop of these cases; and it has been an easy matter to trace the debilitating effects of this disease on the mental and physical system, so ably pourtrayed by Sir Dyce Duckworth in his recently delivered Lumleian Lectures, to vasomotor paresis the result of impaired nutrition of the nerve-centre. The gravitation of blood into the splanchnic area in anæmia and neurasthenia will doubtless foster the prevalence of digestive and intestinal disorders. In cases of vasomotor inadequacy it is not at all an uncommon observation to find the liver slightly enlarged and with a tender margin. Thirteen years ago Germain Sée[13] recorded the proneness of neurasthenic subjects to dilatation of the stomach; and in more recent years the same clinical association has been pointed out by Dujardin-Beaumetz,[14] Champagnac,[15] and quite recently by A. S. Eccles.[16] The last observer has, moreover, shown that "a large proportion of the gastro-intestinal cases successfully treated by the 'rest-cure' have been associated with neurasthenia."[17] This leads me to say a word on the value of recumbent rest in the treatment of all cases in which the maximum radial calibre is habitually present in the recumbent posture. The augmented supply of arterial blood to the tissues, and especially to the impoverished nerve-centres, which obtains in these cases when the recumbent posture is assumed, should prove remedial, and the results of observation have distinctly shown that this is the case. In exceptional cases of this type absolute rest should be adopted for a time, but when exercise is feasible the proper adjustment of it tends to accentuate the restorative value of recumbency which is enjoined between whiles. Inasmuch as the arteriometer has shown that in these cases of damaged compensation the sitting posture maintains the mal-distribution of blood, which perpetuates many of the symptoms, it is obvious that that posture does not secure physiological rest at all; it should, therefore, be abolished for a time and should be replaced by recumbency, in which the blood is fully and normally distributed, or it should be alternated with exercise under strict rule. This direction may seem to be too trivial to deserve notice. Having, however, so frequently proved the value of this physiological means of adjustment of the circulation in cases of vasomotor inadequacy I trust this passing reference to it may not be out of place.

2. *The calibre is uniform or is greatly restricted in posture.*—In health the radial calibre is very rarely free from variation on change of posture; and should such a condition be observed it is, moreover, quite transitory. In clinical observation, on the other hand, an unvarying radial calibre is frequently to be met with, and when persistent it always signifies some important pathological condition. It may come and go or it may be persistent.

(1) *Temporary uniformity* is often met with as a result of vasomotor contraction and the consequent rise of arterial tension. Good examples are afforded by migraine and by passing gouty states. When the contraction is chiefly peripheral or terminal the radial blood pressure rises; but when it involves the radial itself the blood pressure within the artery generally falls, but rises in the central arteries. Observation has shown that in chronic gout the radial calibre may be large and uniform with raised blood pressure, or it may be small and uniform with a normal or subnormal blood pressure. When the gouty state is relieved and there is no arterio-sclerosis present the uniformity of the calibration in both classes of cases gives place to variation and the blood pressure in the first falls, while in the second it may rise. Transitory attacks of high arterial tension of apparently peripheral origin (probably constrictive in nature) are of frequent occurrence in the elderly;[18] and it has been observed that throughout each attack the radial calibre becomes fixed, while in the intervals postural variation reappears. The subjects of such attacks, though they may themselves be free from the ordinary manifestations of gout, frequently belong to families in which a history of true gout exists. It has been observed that in transitory tension a rise in radial blood pressure of a little over the normal variation for posture (30 mm. of Hg.) will determine postural uniformity in the calibre and that when this excess disappears the arterial wall will once more respond to change of posture.

(2) *Persistent uniformity* characterises an important group of diseases. The predominant cause is not, as in temporary uniformity, tonic muscular constriction, but a structural change in the arterial wall. The blood pressure may or may not be increased. Observation has shown that this invariability is exceedingly common in arterio-sclerosis, either alone or accompanying chronic interstitial nephritis, angina pectoris, or chronic gout, and in acquired syphilis. In arterio-sclerosis it has been observed that even the presence of a very marked degree of anæmia, as may be met with in chronic Bright's disease, does not prevent the postural invariability of the calibre from manifesting itself, even though it is found that in such cases the blood pressure is higher in the recumbent than it is in the sitting posture. The size of the lumen of the artery is largely determined by the blood pressure; but in all cases after a time it diminishes very considerably. Acquired syphilis differs from arterio-sclerosis, however, in the fact that the calibre shrinks to a far greater degree, especially after the lapse of several years from the primary infection, and especially, too, when the disease is producing its secondary and tertiary manifestations; a reduction to one-half of the measurement, which it may again acquire after treatment by mercury, has not infrequently been observed.

III. *Radial Measurement in Experimental Physiology.*

The arteriometer has afforded useful aid in several lines of inquiry. I will illustrate this position by describing the effects on the pulse of anæsthetics, vaso-dilators, the animal extracts, massage, resistive movements, electricity, and baths.

Anæsthetics.—A number of observations made on the effects of anæsthetics on the radial calibre has shown (Fig. 3) that ether increases while chloroform reduces it. Nitrous oxide occupies an intermediate position, causing a slight rise which may be followed by a fall; the fall, however, fails to be detected when the gas is inhaled along with oxygen.[19] Oxygen, like ether, enlarges the calibre. The A.C.E. mixture reduces it, but to a less degree than chloroform. Mr. Leonard Hill has shown experimentally that the two anæsthetics, ether and chloroform, differ very markedly in their effect on the vasomotor mechanism. While chloroform rapidly paralyses compensation and damages the heart ether does not in moderate amounts impair the vasomotor mechanism, and only does so very gradually and to a limited degree when pushed in enormous amounts, and it, moreover, stimulates and maintains the heart's action.[20] This difference in the physiological action of these anæsthetics suffices to account for the reduction of the radial artery by chloroform

[13] Des Dyspepsies Gastro-Intestinales, 1883.
[14] Journal de Médecine de Paris, 1889.
[15] Gazetta degli Ospitale, Naples, 1891.
[16] The Relationship between Digestion and Neurasthenia (Dilatation of the Stomach and Constipation), by A. S. Eccles, M.B., Proceedings of the Royal Medical and Chirurgical Society, London, 1894.
[17] The Practice of Massage, p. 150.
[18] Professor Clifford Allbutt refers to cases of this type under the denomination of Senile Plethora, Brit. Med. Jour., vol. i., 1895, p. 535.
[19] Dr. Frederic Hewitt advocates the inhalation of the mixed gases. See On the Anæsthetic Effects of Nitrous Oxide when Administered with Oxygen at Ordinary Atmospheric Pressures, with Remarks on 800 Cases, 1892.
[20] Op. cit.

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on the one hand and for the augmentation of it by ether on the other. The practical application of these observations will be obvious. The position of the abdomen in relation to the head must be of much greater importance in chloroform than in ether anæsthesia; for in the former the splanchnic drain will be much increased in the vertical posture, or even when the head and shoulders are raised somewhat above the abdomen, while in the latter, unless the ether has been administered in large quantity or for a prolonged period, there is no undue collection of blood in the

FIG. 3.

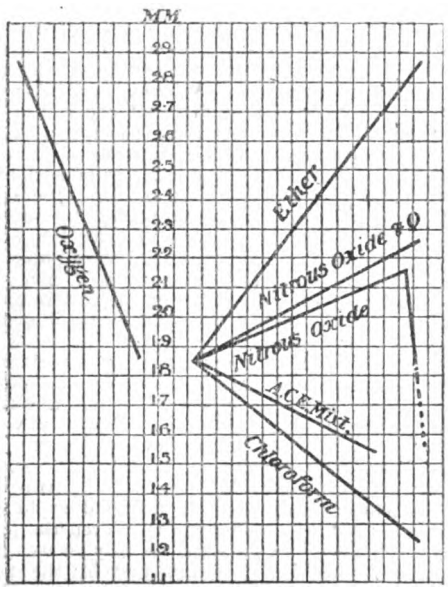
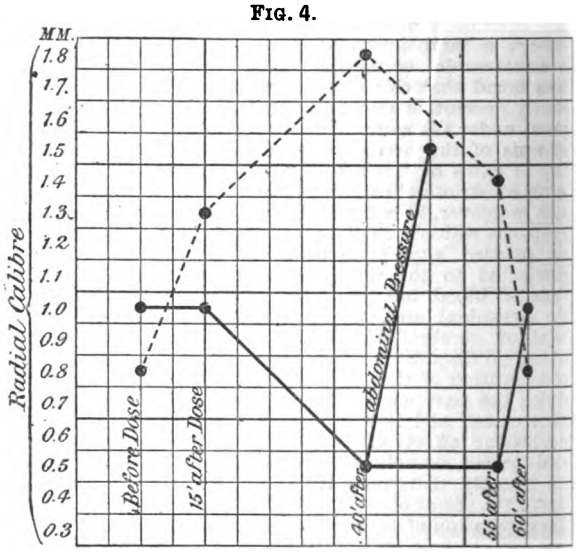


Diagram showing the average results of observations on the effects of anæsthetics on the radial calibre.

abdominal area. It has been shown that deep inspiration and also that abdominal compression reduce the veins when containing an excess of blood; hence the value of artificial respiration and of pressure over the abdomen when death is threatened by vasomotor paralysis during chloroform anæsthesia, and hence also the utility of that most favourable sign, the act of vomiting, which is a most efficient mode of abdominal compression.

Vaso-dilators.—Some few observations with the arteriometer have indicated that the nitrites and nitro-glycerine rapidly lower the radial blood pressure and calibre. Fig. 4 shows that the action of $\frac{1}{100}$th grain of nitro-glycerine is rapid and decisive and lasts but a short time; in this case not beyond an hour. Why is the calibre of the artery reduced? This result may be explained by the lessening of the blood pressure within the artery consequent on dilatation of the peripheral vessels. This fact has been proved by perfusion through excised organs, and was ably illustrated by Professor Leech in the Croonian Lectures of 1893. Inasmuch as the radial artery is but a conduit between the heart and the peripheral vessels, the blood pressure within it necessarily falls as these dilate, and the calibre of it is thus correspondingly reduced. From the observations made it would, however, seem that the vaso-dilatory action extends to the splanchnic area, so that in the erect posture a large amount of blood gathers in the capacious veins within the abdomen and largely contributes to the reduction of the systemic arteries. This position is supported by two facts: the enormous rise of the radial calibre when the subject assumes the recumbent posture and the production of a similar rise in the sitting posture by the application of pressure to the abdomen. In the Bradshaw Lecture delivered before this College in November last Dr. Bradbury ably supported the claim of the solid organic nitrates (erythrol tetranitrate and mannitol hexanitrate[21]) as vaso-dilators of more enduring action than those in present use, and therefore more likely to prove useful than they in the necessarily somewhat continued treatment of several morbid conditions associated with increased peripheral resistance. Dr. Bradbury showed as the result of perfusion experiments on excised organs and of sphygmographic observation that the vaso-dilator action of these substances was, though less energetic and slower to manifest itself, very much more prolonged than that of the nitrites and nitro-glycerine. With the view of comparing the action of the

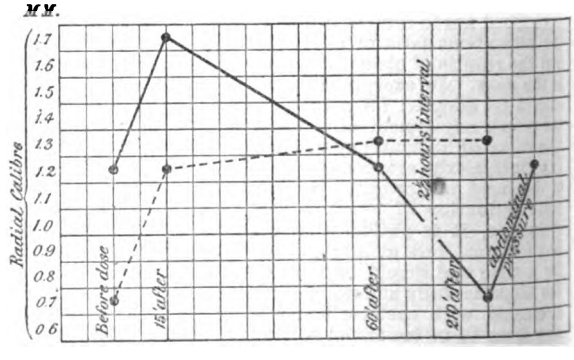
FIG. 4.



The effects of nitro-glycerine (gr. $\frac{1}{100}$) on the radial calibre. Subject, a woman suffering from Raynaud's disease. Calibre sitting = continuous line; recumbent = interrupted line.

solid organic nitrates on the arteries by the side of that of nitro-glycerine some observations were made with erythrol tetranitrate on the same subject[22] which provided the data recorded in Fig. 5, and the results obtained, though obtained by totally different methods, entirely support Dr. Bradbury's conclusions. It has been shown that the vaso-dilator effect of nitro-glycerine is already pronounced within fifteen minutes (Fig. 4); but it requires the lapse of sixty minutes

FIG. 5.



The effects of erythrol tetranitrate (1 gr.) on the radial calibre. Subject as in Fig. 3. Calibre sitting = continuous line; recumbent = interrupted line.

before it becomes established after swallowing one grain of erythrol tetranitrate, when, indeed, that of nitro-glycerine has completely passed away; and, furthermore, after the lapse of three and a half hours it is still well maintained with some probability of continuing some hours longer, though no later observation was made. The relative vaso-dilator activity of nitro-glycerine and erythrol tetranitrate are expressed in the degree of reversals of the postural

[21] These substances are obtained by nitrating the alcohols or corresponding compounds by means of a mixture of nitric and sulphuric acids at a low temperature.

[22] I am indebted to Dr. Fletcher Little for the opportunity of making these observations on a case of Raynaud's disease under his care at the Temperance Hospital.

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measurements. The reduction of the blood pressure—especially of the minimum pressure—produced by the vaso-dilators affords to the finger an illusory impression of enlargement of the artery.

Professor Leech, in his second Croonian Lecture (1893), in referring to this point, says: "How are we to account for the markedly greater distinctness of the pulse which is so often noted after nitrites and for the increased height in the upstroke (the so-called 'percussion wave') of the tracing which is almost invariably seen after small doses of the nitrites?" He refers this change in the pulse to two causes—namely: (1) dilatation of the arterioles, which induces a more complete collapse of the artery and an increased difference between its systole and diastole both to the finger and in the tracing; and (2) relaxation of the artery itself. "The difference between the calibre of the artery in systole and diastole being augmented it is felt to be more distinct and more full." This explanation accords with the results of my observations, only I am led by them to regard arteriolar dilatation as sufficient to account for all the facts of the case. The vaso-dilators afford the most satisfactory experimental evidence of the manner in which the postural formula is reversed in various pathological conditions, all characterised by a reduction of vasomotor tone which impairs compensation for gravity.

Remarks
UPON
THE PRESENT SYSTEM OF MEDICAL EXAMINATIONS.[1]

BY T. PRIDGIN TEALE, F.R.C.S.ENG., F.R.S.,
CONSULTING SURGEON TO THE LEEDS GENERAL INFIRMARY.

"That the present system of accumulated examinations and the enormous increase in the number of rejections resulting from it are not only unjust to the student, but damaging to medical education; therefore, that the time has arrived when the General Medical Council should consider (*a*) how far examinations and the occasions of rejections can be reduced in number; (*b*) how far, whilst maintaining effective examinations in those subjects which it is essential that every medical man should 'know' and 'retain the knowledge of,' it is possible to withdraw from the sphere of public examination several other subjects which it is desirable that every medical man should 'know about,' but with the details of which he need not permanently burden his mind, the 'bird's-eye survey' of such subjects being ensured by compulsory short courses of lectures with class examinations certified by the teacher."

GENTLEMEN,—The motion which stands in my name is substantially the same which was proposed at the last session of Council, the discussion of which was postponed at my request. Since the motion was placed upon the programme of business two events have happened which go some way to justify the course taken. Two subjects, which would have been occasions of rejections, have been withdrawn from their scheme by the most important examining body in the United Kingdom, the Conjoint Board for England. These subjects are the examination in elementary anatomy at the end of the first year of study and the proposed examination in pharmacology as a new and separate subject for rejections in the final examination. In proposing such a motion I am undertaking a serious responsibility, not only in raising the question at all, but also in occupying the time of the Council with what I have to say. As to the latter point members of Council—and not least the older members—will bear me out when I claim to have occupied during my twenty years of service here but little time in making speeches. On the former I wish to state views which have been forcing themselves upon my mind more and more, silence about which on my part might be blameworthy, and for the utterance of which no fit opportunity has heretofore seemed to have arisen. During the past twenty years the Council has added to the subjects which have of necessity to be examined upon, has doubled the number of examinations which have to be passed, has by its visitations and inspections increased the stringency of examinations—i.e., has caused a higher percentage of rejections—and, finally, has added one year to the medical course. All has been done with this object—that the medical practitioner may be turned out a more perfect article and that incompetent men may be excluded from our profession You may rightly ask on what evidence such opinions as are expressed in the motion are based. They are based upon: 1. The statistics of rejections as reported to this Council. 2. The fallibility of examination in respect of (*a*) the element of chance; (*b*) the inevitable hurry with which a great portion of our examinations have to be conducted; and (*c*) the unsuitable misguiding questions which appear in examination papers. 3. The interference with clinical work. 4. The probable working out in practice of the five years' course. 5. The cost to parents of multiplied rejections.

Let us take the first point, "the statistics of rejections," and inquire what lessons they teach and see what has been the attitude of the Council towards this question. On May 25th, 1876 (Minutes XIII., p. 135), it was moved by Dr. Andrew Wood and seconded by Mr. Quain and agreed to: "That the table showing results of examinations for degrees, diplomas, and licences granted in 1875 by the bodies in Schedule A of the Medical Act be referred to a committee to consider the table of results with reference to so large a number of rejections and to report thereon." And what was the large number of rejections that moved the concern of the Council? It was this, that the percentage of rejections in the final examination had risen from 12·4 per cent. in 1862 to 22·2 per cent. in 1876 and had become practically double. At the present time, twenty years later, they are 38 per cent. The committee reported on June 5th (Minutes XIII., p. 261) suggesting that the executive committee should obtain information from the licensing bodies on several points bearing upon the question. The executive committee on July 7th (Minutes XIII., p. 341) addressed a letter to the several licensing bodies on the results of professional examinations. On March 9th, 1877 (Minutes XIV., p. 277), Professor Humphry was requested by the executive committee to report upon the answers from the licensing bodies. This report (Minutes XIV., p. 64) was presented to the Council on May 16th, 1877. As an outcome of this report the Council "recommended" that there should be three professional examinations (Minutes XIV., p. 99) and that a committee should be appointed (p. 110) to consider the subjects of professional examinations to be required and the limitations of the range of the subjects by schedule. Again, in 1880, after a resolution of the Council to resume the visitation of examinations, it was moved by Professor Humphry and seconded by Dr. Rolleston and agreed to: "That it be a direction to the executive committee to instruct visitors to inquire into the causes of the rejections which appear in the annual returns" (Minutes XXII., p. 152). The percentage of rejections at the final examination had in that year risen to 28 per cent. Lastly, on May 24th, 1883 (Minutes XXX., p. 52), a resolution, moved by Dr. Heron Watson and seconded by Dr. Bruce, was carried: "That the tables of rejections of the programme, May 23rd, 1895, be referred to the Examination Committee with a view to prepare a statistical statement of the percentages reported in previous years as well as those since the passing of the Medical Act, 1886," &c. The primary object of this resolution was to find an explanation of the variability of the percentage of rejection in the several examinations. The outcome of the investigation by the Examination Committee was practically *nil*, except in one respect. A most striking table of the rejections reported to the Council from the year 1861 to the year 1892 was drawn up by our registrar, which to my mind speaks volumes, although its message seemed to fall on deaf ears in the committee. What do we find in this document? Taking final examinations only, in 1861, rejections 12·4; in 1870, 22·2; in 1880, 28·9; and in 1892, 38·9. But there is another point in all this. In 1861, with very few exceptions, the licensing boards granted their qualifications after one examination only, whereas in 1892 every board held at least three separate examinations, not to speak of subdivisions, so that we have in the year 1892, besides the 38·9 per cent. in the final, 47·1 per cent. in the second and 37·1 in the primary. Let us put it in another form. In 1892

[1] These remarks were made by Mr. Teale at the meeting of the General Medical Council on June 2nd in support of a resolution with regard to the present system of medical examinations, moved by himself and seconded by Dr. Pettigrew.

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there were 9820 examinations and 4028 rejections, affecting at the outside about 2000 students, assuming that the whole number registering went through to the final examination. And so it comes about that every student, if he took his share of plucks, would be rejected twice in his career. And this calculation takes no account of the further subdivisions beyond those required by the Council, which entail a third pluck per man. There is a still further aspect of this question, the continuous rise in the percentage of rejections. Take each fifth year: 1861, 12·4; 1866, 14·5; 1871, 16 6; 1876, 22·2; 1881, 31·0; 1886, 34·8; and 1891, 39 3. "Quousque tandem?" It reads as if the more we multiply examinations the more fatal the final examinations become. Is the quality of medical training deteriorating or are the examinations becoming more fallible as tests?

This leads me to my second point: "The fallibility of examinations." There are three aspects in which many of our examinations seem to be faulty: (*a*) in the element of chance which is more or less inseparable from all examinations, even the best; (*b*) in the inevitable hurry with which a great many are conducted; and (*c*) in the unsuitable, misguiding questions which are frequently set.

a. On the element of chance I will not delay you long, merely quoting from a scientific exponent of statistics, Professor Edgeworth, who has discussed the point in a paper, the Element of Chance in Competitive Examinations.[2] As a result of a careful inquiry, partly statistical, partly from observation and comparison of actual facts, he says, speaking of the examinations for the Indian Civil Service, the Army, and Home Civil Service: "I find the element of chance in these public examinations to be such that only a fraction—from a third to two-thirds—of the successful candidates can be regarded as quite safe above the danger of coming out unsuccessful if a different set of equally competent examiners had happened to be appointed. A corresponding proportion of the successful—from two-thirds to one-third—must be described as unsafe. A rather larger number of the unsuccessful candidates would have a chance of succeeding at a re-examination." "This question may also be asked: What number of displacements is most likely to occur in the event of re-examination? The answer in some cases which I have scrutinised proves to be about one-seventh part of the successful." Again: "It may surprise even experts to hear that, as between two examiners, A. and B., who, upon the whole, are fairly well abreast, occasionally A. is ahead of B. and B. ahead of A. to the extent of 50 per cent." "It may be added that we have taken no account of what may be called extraneous elements of chance, such as the possibility of the candidate being out of sorts on the day of examination or of the questions being unfavourable to him."

As regards (*b*) the inevitable hurry, seeing how much we have undertaken in the way of examinations, it is more or less unavoidable—an "inseparable accident," as logicians would say. But it exists in varying degrees. It is less in the bodies who examine few candidates, more in the case of those who have to deal with large numbers, until it culminates in the—what shall I call it?—of the ten minutes' passing bell of the London Conjoint Examination, a patent device for making overwrought candidates nervous and for gaining it the unenviable reputation of not infrequently rejecting good men and passing inferior ones. One may fairly ask, "How can it be otherwise considering the amount of work which has to be got through?" And what a work. Let us look it in the face. In 1892 there were 9820 examinations of individuals. In each there would be on the average, I suppose, three subjects, which means 29,460. At least half of these subjects would involve a written, a practical, and an oral examination. So we must add two functions to one-half or one function to the whole, which doubles it, making 58,920 items in one year. How can this mass of work be done properly? What an array of examiners has to be employed. How can we guarantee that they are all fit for their work? There is no known means of testing their judgment, their appreciation of what ought to be required of a candidate, their appreciation of the fact that by the questions they set they in a great measure determine the future study of those who are coming forward. Are the questions set always unexceptionable from the point of view either of testing work or of setting the standard of future work?

This suggests the consideration of (*c*) unsuitable, misdirecting questions. Let me select a few from my museum of interesting specimens. We will begin by making a study of questions set to first-year's students, and as a preface to this let me quote a passage from Sir George Humphry's Report on Rejections (Minutes XIV., p. 68): "The burdening of the memory with mere facts which have no direct or obvious connexion with science or practice—with facts, that is, unassociated with ideas or practical utility—is, on the whole, of little value educationally or otherwise, and such facts make but a transient impression on the memory. Laboriously crammed together, with efforts worthy of a better purpose, they are with difficulty held until the examination crisis and then quickly escape with little regret at their departure. Indeed, the examination in each subject of professional study should be restricted to the general principles and the more important facts of the science, and should be of such a character as to induce students in their preparation for it to observe and think for themselves more than is now commonly the case. The examinations should be regarded from an educational point of view, with reference, that is, to the influence which they are likely to exert upon the character, the education, and the mental training of the students who are to come after, as well as with reference to their being a test of fitness for admission to the Medical Register." Perhaps the choicest examples of misdirected energy are to be culled from the questions set in "Materia Medica." And please remember that they are set for first-year's students, who are supposed never to have seen a sick human being except by accident, and under our present degenerating system, as I should call it, are discouraged from entering the wards of a hospital or the operating theatre during their first two years.

Questions.—"Name six of the most important emetics. What dose of each is necessary to induce vomiting, and how is it best administered?" "What is an enema? State the composition of each of the following," naming three, of which one is "enema magnesiæ sulphatis." This examiner seems to be enamoured of "enema magnesiæ sulphatis," as he asks the question again the year following. I wonder how many of those present here ever prescribed "enema magnesiæ sulphatis." "Contrast the physical and chemical properties of castor oil and oil of turpentine." "Name the pharmacopœial preparations into which potassii tartras acida enters and give their doses. Describe the action of this drug." "Give an account of sulphur, including its origin, physical properties, official preparations, and doses." "What is 'Lini farina'? Give its source and enumerate all the preparations into which it enters." Happy "linseed meal," it will hardly recognise itself when set on such a pedestal of honour. Let us take leave of Materia Medica for first-year's students with one quotation from a report of our inspector and a visitor: "The dosage of various drugs—including picrotoxine, phenazonum, apomorphine hydrochloras, &c.—many of which first-year's students probably never heard of. The majority of the questions could not be fairly included in the subject of Practical Pharmacy, as generally understood at the first examination of a student of medicine, although perfectly legitimate at the examination for the licence of a pharmaceutical society." And this is the kind of rubbish that the elaborate and costly machinery of a public examination has to waste its energies upon. I have a few morbid specimens from the Elementary Physiology Examination of the English Conjoint Board, but, thanks to the prevalence of good sense, this examination, as well as that in Elementary Anatomy, has disappeared.

From the questions set in physiology at the end of the second year I have selected three which seem to me to be open to criticism on principle as tending to cram. "Explain the terms myopia, hypermetropia, astigmatism. How would you correct these errors of refraction?" "Describe the appearances of the interior of the larynx as seen by the laryngoscope. What changes are noticed in phonation and respiration, and how are they brought about?" "What sounds can be heard on applying the ear to the chest? Explain exactly how they are caused." For my part I do not see how these questions can be answered except by means of mere verbal cram by those who cannot have worked clinically at "refraction," "laryngoscopy," and "auscultation." It is, however, when we come to the rather fancy subjects, such as hygiene and medical jurisprudence, that we meet, in the later stages of medical education, with the most questionable questions. In hygiene, for instance: "What do you understand by the expressions 'effective population,' 'dependent population,' 'density of population'?" "What impurities of a deleterious character are found in bread?"

[2] Journal of the Royal Statistical Society, September and December, 1890.

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"How ought a hospital to be constructed in order that each patient may have an efficient supply of pure air?" "Define the word 'nuisance' according to law. Show the different statutory provisions under which nuisances may be dealt with." "How will you dispose of the house-refuse (liquid and dry) of a large urban district?" Questions such as these are suitable enough in an examination for a diploma in Public Health, but are unpardonable when set for medical students. There is one more question to which I will take the liberty of suggesting the answer: "In the event of cases of typhoid fever occurring in a family what steps should be taken to ascertain that the water-supply and sanitary fittings are in proper order." My answer is—what I should do myself in such a case—"Send for the sanitary inspector."

Then as to Medical Jurisprudence, were an examiner to restrict his questions to those parts of the subject which are really useful in practice and with which in ordinary life a medical man is brought into contact, such as making a will, giving evidence in court, dealing with the insane, or with the apparently drowned, attempted suicide, and such like, he would be almost driven to give the same questions every year. As it is he goes forth into matters which probably never come before one practitioner in 10,000, and even then, no doubt, such practitioner would be obliged to refer to his book. For instance: "What are the effects produced on the living body by intense cold? What post-mortem appearances have been observed when death has resulted?" "Describe the symptoms and post-mortem appearances presented in a case of death from starvation."

With regard to the Final Examinations in the practical subjects of Medicine, Surgery, and Midwifery, it is an interesting fact that I find but few questions to criticise, but there are one or two comments I would venture to make as expressive of my own opinion. I will quote one question from a surgical and one from a midwifery and gynæcological paper: "Mention the complications which may be associated with chronic suppuration of the middle ear and describe the operation for opening the mastoid antrum." "Describe the operation for vaginal extirpation of the uterus." Now the setting of these questions for an ordinary diploma would seem to imply that they were operations that anyone might do without any more preparation than an ordinary student would get in reading for his pass examination, whereas they ought only to be attempted by men seriously intending to do the more advanced surgery. The "conclusion" of the three Visitors in 1882 on a similar point, in reference to operative surgery in an ordinary qualifying examination, seems to me to be a sound one. "That for every 'minimum' qualification the examination in operative surgery should be confined to emergency operations such as any practitioner may suddenly be called upon to perform—e.g., amputation, deligation of arteries, catheterism, urethrotomy, tracheotomy, &c., and should for the most part exclude complicated operations not of sudden urgency, such as ovariotomy, excisions of joints, plastic operations, lithotomy, lithotrity," (Vol. XIX., Visitation Report).

Let me conclude this part of my speech with another sentence from Professor Humphry: "Every question put must be regarded as a drop in the educational current of the future, and examiners must recognise that they are not simply judges of the students who come before them, but that they are in no less degree directors of, and so responsible for, the teaching of those who will follow" (Hunterian Oration).

My third point is, "Interference with clinical work and practical training." So far we have been dealing chiefly with facts and statistics. The next point does not admit of statistical proof and is one of testimony and inference. It is an opinion several times expressed to me by clinical teachers, and confirmed by young men who have recently completed their medical education, that advanced industrious students are unable to devote sufficient time to work in the wards and to self-training because they dare not tear themselves away from the drudgery of book-work, dreading failure in the examination. As a result of this deficiency in clinical training and the want of a larger element of self-education I frequently hear bitter complaints from medical men in country places who find their newly-fledged assistants woefully deficient in their fitness and adaptability to practice. They can talk about bacteriology and recondite neurology, but they have not the capacity for simple observation of the cases that come before them, or the power of turning to profitable use the knowledge they have acquired during their career as students. Testimony such as this may not be—is not—exact evidence; but as a contribution to the evidence, though a small one, I give it for what it is worth.

On this point let me quote a hospital surgeon, Mr. Tobin of Dublin. In his Introductory Address at the opening of the Session 1895-96 at St. Vincent's Hospital he says: "It thus appears that there are two stages in the curriculum—a preliminary scientific stage and a stage devoted directly to medical problems. It is with this second stage that I, as a hospital teacher, am most concerned, and the question that I ask you to consider with me to-day is this: Does the student spend his time during this stage to the best advantage? As far as I can see he does not, for, in place of being relegated to the hospital for his training during this second period, he is obliged to attend the school for theoretic lectures in medicine and surgery and for examinations in connexion with these lectures, and these examinations so dominate his views that he spends his time in hospital, not watching the changes in his patients, but on the look-out for ready-made answers to questions. If urged to make records of cases he does so reluctantly, for he knows that, from an examination point of view, it does not pay; and if, towards the conclusion of his course, he is offered the position as resident pupil in a large and busy hospital he often refuses it, because he is going in for his 'final,' and, of course, the one thing essential is to pass. His medical education, therefore, notwithstanding a large amount of hospital attendance, is literary rather than practical." "Moreover, education as at present conducted teaches us to see with the eyes of others rather than with our own. Further, the regulations are armed with a revolver in the shape of examinations, which enforces the obedience of students. Nothing else could keep alive such a system—one which, as it were by violence, keeps theory and practice apart."

Akin to this question of impairment of clinical study, and really a part of it, is the general outcome of our present system. Let me quote from the report of our visitor and inspector on the final examination of one of our leading universities, whose candidates have gone through a three years' course in arts before becoming medical students, and who, if any, ought to show satisfactory results of medical training. The report says: "In no case was the answering of any of the six candidates we heard examined brilliant—in the majority it was poor; but they had a sufficient knowledge of clinical medicine to warrant the examiners in passing them." In an examination of a conjoint board the visitor and inspector report: "Many of the candidates appeared to have a mere book-knowledge of these subjects; and when asked to explain their answers or to give some reasons for the statements they enunciated as if by rote were unable to do so."

Sir William Stokes, in opening the session at Meath Hospital in October, 1895, made the following statement as the result of his long experience as a teacher and as an examiner; "The student, wearied and weighed down by an accumulation of courses, and with the sword of Damocles in the shape of an annual examination ever hanging over his head, has neither time nor inclination to do anything that, in student parlance, will not 'pay' in the examination. It seems to me that the outcome of most modern changes in medical education is in the direction of making students read, not few books well, but many books badly, and that the brain has been looked upon too much as an organ with an unlimited capacity for retaining, digesting, and absorbing, in a given time, every ascertained fact, not only of medicine and surgery, but also of all the sciences auxiliary to medicine. The attempt to carry out the arrangement is fraught with real injury to many, with disaster to some. I can speak with some confidence on this subject after a long experience both here and in Oxford, and I have satisfied myself over and over again that the failure of a large proportion of candidates to answer up to the required standard was due, not to want of diligence and honest conscientious work on their part, but simply to brain exhaustion from attempting to overload it with facts which were believed to be essential."

Professor Mitchell Banks, a member of Council of the Royal College of Surgeons of England, for five years a most valued colleague on this Council, and an experienced teacher and examiner, said in an address to the Yorkshire College Medical Society in October, 1895: "When I began teaching in Liverpool the primary examination of the College of Surgeons consisted of little but anatomy, the physiology required being small in amount,

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The students did a great deal of dissection and I was often surprised at the extent and accuracy of their anatomical knowledge; but for many years they have been steadily deteriorating in their knowledge, and I have been quite pained to note that when they came to be dressers in hospital their whole knowledge had vanished in a few months. It is the same as regards physiology. One department alone—that relating to the nervous system and to electrical experiments therein—is now more extensive than the entire subject was in my student days; but what is the result? Endless time is spent in galvanising frogs and making tracings on drums, whilst only the other day a physician complained that his clerks seemed to be ignorant of the simplest functions of the liver and kidney."

Dr. Haycraft, Professor of Physiology in University College, South Wales, in his introductory address in 1893, said: "In my opinion the medical student is overworked and badly worked. His examinations are in many cases foolishly detailed, entailing useless labour on his part, and any change that I should advocate would bring him less rather than more routine work." "Physiology has now become more than the rival of anatomy in the needless tax it lays upon the student's time."

We now reach the fourth point, "the five years' course." Let us consider how the five years' course will work out in practice. When in 1890 the Council added one year to the previous minimum of four years the aim of the Council, or at any rate the aim of many who were anxious to impose an additional year of study, was that this year should be a clear opportunity for clinical work at a hospital or for work partly clinical and partly as pupil to a registered practitioner, freed from the ordinary anxieties attending preparation for a bookwork examination. This fifth year so employed was to be the make-weight that was to compensate for what we have lost in the disappearance of the apprenticeship and of pupilage and the practical discouragement of clinical work during the earlier years of medical study. That it may be such a year is possible, but for most students it will have to be a sixth year, not a fifth. And why? As soon as the fifth year was added what did we do? We allowed a new subject—biology—to thrust itself into the first year, which would so occupy the time and energies of most students that they would have very little chance of passing in anatomy and physiology at the end of the second year. Hence the possibility of clearing off the medicine and surgery at the end of the fourth year being lost the fifth year must be frittered away on ordinary examinations and the clinical year becomes a sixth. The same result must happen to those who are plucked more than once—and the average student is plucked at least twice in his career, whether he be industrious or not. Some may maintain that such a result would be good, inasmuch as it would prolong their medical education and make them more fit for practice. I for one very much doubt it. Real education only begins when examinations have ceased, and I doubt whether, for the average student who is to become the family medical man, his chances of making a good practitioner do not grow worse instead of better by the prolongation of the time spent in school and hospital under pressure of examination.

The fifth and last point for consideration is "the cost to parents of multiplied rejections." This is an aspect of the question which I have never seen stated and one which doubtless in the opinion of many ought to be entirely ignored. It is worth being stated, nevertheless, and to some persons may be somewhat startling. Let us take the report on the Final Examinations in Medicine, Surgery, and Midwifery of the Conjoint Board for England of 1894. In medicine, out of 865 candidates, 365 were rejected—42 per cent.; in surgery, out of 916 candidates 388 were rejected—42 per cent.; in midwifery, out of 831 candidates 264 were rejected—32 per cent. Thus we have a total of rejections of 1017 out of 2612 examinations. Assuming that in every instance the candidate went up for re-examination, these re-examinations impose upon parents and others a cost of £4784 in one year in the final examination of one conjoint body representing two out of twenty licensing bodies. Nor is this all. Some of the rejected candidates have to take out fresh attendance tickets at their hospital, involving the expenditure of several guineas for an additional three or six months' clinical practice. And even this is not the limit of expenditure for those who come up from provincial schools. For these we must add return railway fare and the cost of living in London some five or six days. I know not how far I may have convinced the Council that under our responsibility medical education is drifting in a wrong direction, or whether I can persuade it, seeing clearly the evils that exist, boldly and with true statesmanship to face the question and find and apply the remedy. Surely our ponderous machinery, like the mountain in labour, is producing the "ridiculus mus." "Propter vitam vivendi perdimus causas." Losing sight of the end and aim of our educational machinery, we are worshipping the means and making them our golden calf. In what direction shall we look for release from this incubus? On what lines can we plan amendment? *We must decentralise.* We must unload our public examination. We must relegate to the schools not only to teach, but to examine and to certify in all secondary subjects, such as elementary biology, materia medica, pharmacy, hygiene, perhaps even chemistry, and certainly forensic medicine. Then let *all the rest* be covered by three public examinations—one in anatomy and physiology, presumably at the end of the second year of professional study; one in pathology and therapeutics at the end of the fourth year; and the clinical examination in medicine and surgery, together with the examination in midwifery (truly in midwifery, not in fancy gynæcology), at the end of the fifth year. Surely after that we may see the ten minutes' bell and all it implies abolished. The licensing bodies will be able to afford to examine more thoroughly, less hurriedly, to find out what a student really knows, and to re-examine those on the border line of pluck or pass. Then, when plucking examinations are reduced from nine[2] to three and become less matters of chance, there will be some room for calm clinical study, for self-training, for learning something during studentship of that very important and terribly neglected better half of the training of a true medical man, the knowledge and observation of a human being, that which was expressed in the wise saying of Andrew Clark, "I first attended to the man and then to the malady."

Could Brodie, or Green, or Lawrence, or Graves, or Stokes look down upon the work of this Council they would be amazed to witness how far we have departed from *their* ideals of the training of a medical man.

The Erasmus Wilson Lectures

ON

THE GENERAL PATHOLOGY OF BONE.

Delivered before the Royal College of Surgeons of England on March 16th, 18th, and 20th, 1896,

BY W. G. SPENCER, F.R.C.S. ENG.,

SURGEON TO THE OUT-PATIENTS AND THROAT DEPARTMENT, WESTMINSTER HOSPITAL; LECTURER ON PHYSIOLOGY AT THE WESTMINSTER HOSPITAL MEDICAL SCHOOL, ETC.

LECTURE II.[1]

Delivered on March 18th.

THE EFFECT OF ALTERATIONS IN THE CIRCULATION OF THE BLOOD THROUGH BONE (*continued*).

D. Venous congestion causes excessive bone formation.—Venous congestion is set up in bone apart from inflammation or as a result of chronic inflammation, the latter being of course by far the commonest cause. Simple venous congestion not due to chronic inflammation produces the clubbed fingers seen in cases of pulmonary and cardiac disease. A venous nævus in contact with bone may cause a raised patch. Indeed, it has been proposed to promote the formation of bone by artificially setting up venous congestion in a limb by means of elastic bands. This treatment has been used in tuberculous disease of the knee-joint. But it is through chronic inflammation that venous congestion is chiefly brought about—that is, by blood which stays a longer time in the capillaries than normal. There are two results of chronic inflammation which favour venous congestion. In the first place, the unstriped muscle on the wall

[2] Vide Report of the Conjoint Board for England in 1895.

[1] Lecture I. was published in THE LANCET of May 30th, 1896.

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of the arterioles is replaced by inflammatory fibrous tissue, and therefore the constricting tonus of the vasomotor nerves can no longer act, and so the dilating influence of the blood pressure is unopposed. Again, as fibrous tissue forms around the vessels and gradually contracts it will press with greater effect upon the thin-walled veins than upon the thicker-walled arteries. Thus, as a result of chronic inflammation we have a tendency to dilatation on the part of the arterioles and to constriction of the smaller veins—venous congestion or a delay in the flow of the blood through the capillaries is the result. Venous congestion in soft parts, arising from chronic inflammation, is often seen to produce overgrowth in the leg, liver, lung, &c. The venous congestion such as causes overgrowth of the soft parts of the leg likewise extends its influence to the bone beneath and excites periosteal bone formation beneath the varicose ulcer. A syphilitic node forms in the same way. It is sometimes proper to cut through the periosteum to relieve pain, and the surgeon has then the opportunity of observing the venous congestion. But much greater formation of bone may be caused when a sequestrum, primarily due to an acute inflammation, remains for a long time and keeps up chronic inflammation. A bone containing a sequestrum may become of great size and the marrow cavity almost or quite obliterated. The enlarged bone contains an unusual amount of compact bone, which may approach to the density of ivory, whilst in it are spaces containing during life venous blood. The surgeon in operating upon such a bone can himself confirm the existence of venous congestion by the dark blood coming freely from the bone, and can compare this with the arterial blood from a bone acutely inflamed. In some the sequestrum is found enclosed in a cavity, in others only the cavity remains, the sequestrum having been absorbed. It is important to take note of any cavity, even although it be empty, when inquiring as to the origin of the cases known as osteitis deformans of a single bone. Being able to form some idea as to the origin of the condition in a single bone, we can pass on to the examination of cases in which more than one bone is affected, and so by an ascending scale of complexity reach the typical cases described by Sir James Paget. The conclusion we shall thus be led up to is that the typical cases are likewise the result of venous congestion.[2] A further complication still—viz., the connexion of osteitis deformans with new growth—will be afterwards dealt with. The production of new bone is, moreover, brought about by the chronic irritation of known chemical substances: nodes occur in chronic lead poisoning; the long-continued administration of phosphorus to animals promotes osteo-sclerosis and thickening of bone; turpentine and chloride of zinc have been successfully employed for the purpose of bone formation. Bony ankylosis of joints, especially where much new bone is formed, is largely due to the venous congestion brought about by chronic inflammation. A very marked as well as common instance is seen in the coral-like outgrowths about the joints of the phalanges in the horse. In man chronic septic conditions—"chronic pyæmia"—may cause ankylosis of many joints with large masses of new bone.

NERVE INFLUENCE ON BONE.

Trophic influence.—A direct control over the structure and nutrition of bone by the nervous system—in other words, a trophic influence—is not yet proved. Supposing, however, such a trophic influence to exist, alterations in structure and nutrition would follow a disturbance or loss of the connexion between the nervous system and the bone. This influence might originate within the nervous system and be connected with the bone by an efferent nerve or it might be a reflex action depending upon an afferent connexion as well as upon the centre and the efferent nerve. An efferent trophic influence is evidently cut off from muscle and atrophy of the bone follows when a motor nerve is divided. In infantile paralysis the degeneration of the muscles and atrophy of bone are the consequences of disease affecting cells in the spinal cord from which the motor nerves arise. In hemiplegia there is no special degeneration of the muscles, but only wasting from disuse. Now atrophy of the bones takes place under both the foregoing conditions, and, moreover, when a joint such as the knee becomes fixed in such a position that the muscles cannot act, wasting of muscles and atrophy of the bones likewise take place, although in this last case the nervous system and nerves are intact. Atrophy from disuse and consequently diminution in the blood-supply suffices, therefore, to explain the changes in bone without the need of supposing a loss of an efferent trophic influence. To the occurrence of afferent impulses which have, by reflex action through the central nervous system, a trophic influence on bone, Charcot and his followers have given support by ascribing to a loss of them the changes which take place in the bones of patients suffering from locomotor ataxia. Facial hemiatrophy with morphœa affects the skin of the face in the distribution of the fifth nerve and is accompanied by wasting of the bones of the face. It has been argued against the trophic view that locomotor ataxia is essentially a wasting disease, as the alternative name tabes dorsalis implies, that the changes in the shafts and ends of the bones do not differ essentially from those occurring in arthritis deformans or osteo-arthritis, and also that they closely resemble changes following on gout, lead poisoning, hæmophilia, leprosy, and senile decay. When a number of bones taken from ataxic patients are compared with those affected by osteo-arthritis the only distinction found has been a greater tendency to absorption and less tendency to new formation of bone in the ataxic patients. But, as is well known, whilst great absorption of the ends of the bone is perhaps the most frequent, large masses of new bone may be thrown out in some cases of tabes so as to completely ankylose the joint. The shafts of the long bones are likewise affected by absorption; indeed, so much may take place as to give rise to spontaneous fracture, and some have been called cases of mollities ossium. On the other hand, an increase of compact bone and a filling of the medullary canal have been met with, and after a spontaneous fracture in an ataxic patient much callus may be thrown out. Spontaneous fractures occur in epileptics, likewise in glioma (or syringomelia) of the spinal cord, in both cases following an atrophy of the bone. Therefore, if there be a nervous trophic influence, the afferent connexions of which are disturbed in ataxia and similar conditions, the result appears in an irregularity of bone formation, either a deficiency or an excess—in fact, a trophic ataxia. Other considerations support the view that there is a general regulation of the structure of bone by means of the central nervous system.

Transformation of bone.—From a study of the skeleton in various mammals it can be clearly seen that the architecture of each bone, and, indeed, of the elementary parts of each bone, has been made subservient to function. Each bone has been modelled, both as regards its form and its internal structure, in correspondence with the particular wants of the individual. If the femur of a man be compared with that of an anthropoid ape differences are found on account of man's erect position and peculiar movements of the femur in walking and running. When the adult femur is put alongside that of an infant it is seen that small changes have taken place during growth coördinating structure with developing functions (Mikulicz). The two functions which influence the structure and form of bone are the one statical—i.e., the line along which pressure is exercised—and the other mechanical, affecting the parts of the bone pulled on by muscle and ligament and the direction in which they pull. The internal structure of the upper end of the femur is well known, the arrangement of the septa and trabeculæ form arches and buttresses on a plan evidently directed towards sustaining the weight of the skeleton. The pull of muscles is not only occasional and intermittent, induced by the exercise of the will, but there is also a constant involuntary tension kept up upon the bones by the normal tonus of muscle, each muscle being taut between its two points of attachment. Ligaments are likewise tense (Von Recklinghausen, Wolff). If the bones be active agents, the lines of transmission of force and the direction of the pull of muscles must be attended by special tissue changes in the parts of the bone involved. And such changes postulate a sufficient blood-supply. Conversely, the part of an adult bone which receives the most blood possesses the wherewithal for change not only under normal conditions, but also when abnormal ones supervene. Hence the liability of an adult bone to more frequent pathological changes in one part rather than another may often be explained by reference to its statical or mechanical functions. When the statical conditions under which a bone acts become altered its whole internal structure may undergo a transformation. When after a fracture union in a more or less oblique position has followed, then the axis

[2] A typical case of Osteitis Deformans under the care of my colleague Dr. de Havilland Hall in the Westminster Hospital was recently shown at the Medical Society. The superficial venous congestion over the enlarged bones was very well marked.

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of such a bone as the femur becomes altered, so that the lines by which force is transmitted, the way in which each one of the septa has to bear its share of the weight of the body transmitted through it, is changed. After an oblique union of the femur the septa are found to have a different direction from that existing in a normal bone. They accord with the new direction which the lines of force supporting the weight of body now take in consequence of the oblique union. Following therefore on a fracture there are two processes which go on in a bone, the formation of callus at the site of the fracture and the transformation in the direction of the septa, and this in both the distal and proximal fragment. Indeed, arches for strengthening union may stretch across the callus so as to unite the septa of one fragment to those of the other. Whilst the callus is inflammatory in origin and shows no sign of being under any nervous influence, the transformation of structure following on the altered axis of the limb must be determined by a controlling nervous influence, which coördinates and adapts the changes to special ends. A fracture is not necessary in order that this transformation may occur, the same result follows the bending of the bone from rickets. If a rickety bone be split down the middle the filling of the marrow cavity at the bend, the buttresses formed in the concavity of the curve, and the direction of the septa will be found to accord with the altered statical conditions brought about by the curvature. So, also, in the bones of the arm there occurs a transformation of the internal structure in consequence of oblique union or of rickety curvature in accordance with the change in the direction in which the muscles pull. A more striking instance still, because it involves a coördinating influence extending over many bones, occurs as a consequence of spinal curvature. In specimens of lateral curvature we find a thick buttress of compact bone on the side of the bodies of the vertebræ in the concavity of the curvature. This new bone is similar in character with that forming in the bent bones of the lower limbs, many bones being involved instead of one. In cases of angular curvature the thickening is on the anterior aspect. In kyphosis a marked formation of bone takes place at the site of the anterior common and articular ligaments, as well as ossification of the ligaments between the laminæ and between the spinous processes. These are all instances of a coördinate strengthening of a spine weakened by curvature—an adaptation of structure to altered functions. Besides the foregoing evidence concerning nervous regulation of the structure of bone, the skull, the orbit, and the lower jaw may be considered as bones which have been modelled for the brain, eyes, and teeth, which they respectively shelter. Following the shrinkage of the brain on the removal of an eye or tooth we may have changes in the bone which appear likewise to afford instances of the regulatory influence of the nervous system.

CHANGES IN BONE DUE TO AN IMPAIRMENT OF GENERAL NUTRITION.

The mineral salts of bone.—Analyses of the amount of the mineral salts of bone present some discrepancies owing to difficulties (1) in getting rid of all water without destroying the animal substance, and (2) on account of the varying amount of marrow. If dentine were to be taken as the type of dry, fat-free bone, the amount of mineral matters would be found to approach 75 per cent., whereas the usual statement is that the mineral salts form two-thirds of the bone by weight. They are chiefly composed of lime and phosphates. The amount of lime in bone increases up to puberty, as the following figures show.

In a fœtus of from six to seven months there were 59·5 per cent. of the fat-free ash; in a child two years old 65·3 per cent.; and in a child five years old 67·8 per cent. (Voit).

A young pigeon's femur contained 53 per cent. of lime, and an old pigeon's femur had 58·9 per cent. of lime in the fat-free ash.

A rabbit at birth had 53 per cent. of lime in the fat-free ash, one at one month had 58·9 per cent., one at three months had 67·7 per cent., and one full-grown had 74 per cent.

During the growing period of life there is at least, therefore, a small intake of lime for the bones. After puberty it is otherwise. Nelaton and Sappey compared the composition of the same lumbar vertebra at each period of life. They found but little variation throughout except a slight increase of organic material in old age due to senile atrophy.

Modes of taking in lime.—Lime may possibly be taken in as a hydrate, carbonate, and phosphate. Since part of the phosphoric acid can be formed in the body from the phosphorus in the albumin of animals or plants taken in as food lime will be required to combine with it. Milk is the great source of both lime and phosphates for young animals, the mother usually suckling her young until more than half of the bone has formed. A litre of cow's milk contains 1·7 grammes of lime, whereas a saturated solution of lime water has only 1·3 grammes per litre (Bunge). Milk has, therefore, the advantage of lime water even as regards lime, to say nothing of its other constituents. The ash of milk is practically identical with the ash obtained by the combustion of a suckling animal, as is to be seen in the following table.

—	Ash of dog's milk.	Ash of suckling rabbit.	Ash of puppy.	Ash of kitten.
	Per cent.	Per cent.	Per cent.	Per cent.
Lime	34·4	35·0	35·8	34·1
Phosphoric acid	39·5	41·9	39·8	40·2

No other food is such a source of lime as milk. Leguminous plants contain only one-tenth, the yolk of egg one-fifth, and bread and meat one-twentieth of the amount of lime contained in milk. But there is some evidence to show that the lime and phosphates may be absorbed in their ordinary inorganic state. If young rabbits be fed solely on oats, which are very deficient in lime, rickets is produced. When, however, chalk is added to the oats the rabbits thrive and remain free from rickets (Weiske). Experiments of this kind have been held to show that rickets may be produced by deficiency in the supply of lime salts and that an absorption of chalk can take place from the intestines. Such absorption certainly takes place in birds, who habitually seek calcareous material to form the shells of their eggs, and who lay soft eggs when deprived of lime. It is, moreover, said that young pigs confined in a stye and fed on meal, or young cattle fed solely on hay or dry pasture, may be kept from rickets or fragility of bone by the mixture of chalk or slaked lime with their food. Perhaps, also, lime can be absorbed from spring water. Calcium is the essential base. It cannot be replaced by barium, strontium, or by magnesium.

The excretion of lime and phosphate.—By far the greater part leaves by the fæces and only a comparatively small amount by the urine—it is said only 0·25 gramme of lime per diem. Of course, the absolute amount of mineral salts in the fæces will largely depend upon the amount in the food. But it can be also proved that the intestines actually excrete lime and phosphoric acid, for these substances are found in the fæces of a starving animal. A recognition of these facts makes clear that conclusions drawn from the analysis of the urine as to the escape of lime and phosphoric acid are entirely untrustworthy, not only because the major part of the mineral matter of the food always leaves by the fæces, but on account of the excretory power of the intestines. That an excess of salts should appear in the urine during the earlier stages of a rapidly progressing mollities ossium is very likely, although the same need not be the case during the later stages of the disease. But the formation of concretions in the urinary tract is no evidence of excessive excretion, but merely of precipitation owing to the alkalinity of the urine. The urine naturally tends to become alkaline when an osteomalacic patient has to take to her bed and when the deformity of the pelvis makes micturition difficult. It is impossible, therefore, to form any conclusions concerning the escape of the lime salts until the difficult analyses of the fæces shall have been more largely resorted to.

Imperfect ossification and rickets.—There seems no sufficient ground for supposing an absolute want of lime salts in the diet of a child. Any diet, however inadequate from other points of view, would contain enough of these salts. The mineral salts may not be absorbed; it has been thought that intestinal catarrh may prevent absorption. Intestinal catarrh, however, is no necessary accompaniment of rickets, and even when it exists we have no proof that an absorption of mineral salts is prevented. On the other hand, we have proof that it prevents the absorption of fat, which may be found in the fæces when there is intestinal disturbance.

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TO ILLUSTRATE MR. MALCOLM MORRIS'S ARTICLE ON ACTINOMYCOSIS INVOLVING THE SKIN, AND ITS TREATMENT BY IODIDE OF POTASSIUM.

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Indeed, there is more evidence to show that rickets occurs from want of fat than from want of mineral salts. Rickety children are generally found to have had too little fat in their food, whilst, conversely, children fed on plenty of milk, bacon, &c., remain free. Moreover, the administration of fat in the form of cod-liver oil is a most satisfactory kind of treatment. Fat, added to lean horseflesh, has prevented rickets in young carnivora, and oilcake given to ewes on a poor farm may stop the otherwise inevitable production of rickety lambs. Rickets is thus seen to be essentially due to an impairment of general nutrition, cold, damp, and deficient ventilation sharing also in the causation of the disease as instanced in the case of puppies kept in damp cellars. But, further, it is important that the animal should be fed on its proper food, and therefore an *a priori* objection may be raised to many of the experiments made on animals. The very fact of giving an abnormal diet or of withdrawing some customary article may itself disturb the general nutrition and lead to rickets. Monkeys and other tropical animals kept under artificial conditions in this country show a tendency to rickets, a disease from which they do not suffer in their wild state. Indeed, anything which impairs general nutrition, such as the delicacy of constitution produced by interbreeding, especially in dogs, tends to originate rickets. Hence also it frequently complicates the wasting diseases of children, such as syphilis. The rarity of rickets among the poor in climates warmer than our own may be due not only to the cheapness and plenty of vegetable foods, such as maize, which contains fat, as well as the more general use of milk amongst the poor, but also that not so much of the fat is required for consumption in order to maintain the heat of the body. An impairment of general nutrition, rather than the absence of any special articles from the diet, serves therefore as the best explanation of rickets. The bone-forming cells being at the time particularly active are amongst the first to suffer. In order to form bone these cells have to extract from the blood the phosphate and lime they require just as do other secretory cells—e.g., those of the mammary gland. The ash of dog's blood contains only 0·9 per cent. of lime and 13·3 per cent. of phosphates, and the ash of dog's serum 2·1 per cent. of lime and 5·9 per cent. of phosphates. Ossification clearly demands some energetic action on the part of the cell in gathering out from the blood and secreting these salts which exist in such small quantities in it. A supply of phosphorus in some form must be constantly necessary for that element is an essential characteristic of nucleo-albumin, and it is upon its nucleus that the activity of a cell depends. The causes of the various forms of late rickets are similar in principle to those giving rise to the earlier variety, such as want of food, a lack of fat in the diet, cold, damp, bad air, and exhausting diseases. Girls suffer the most, perhaps owing to menstruation and anæmia. One girl was dying from phthisis and another from exophthalmic goitre when the bones were attacked. Special cases in boys about puberty have been attributed to bad habits (Lucas). But there are two other phenomena met with in some cases of rickets which are not due to delayed ossification. There may be rapid absorption of bone or, on the other hand, an excessive bone formation.

Bone absorption in rickets.—Rapid absorption of bone in consequence of an increased supply of arterial blood happens in severe cases of rickets. There may be external signs of inflammation—viz., redness, heat, pain, and excessive sweating—and this not only in the neighbourhood of the epiphyses, but also in such flat bones as the skull. The ends of the long bones become of a much more cancellous structure, whilst the skull may be rendered as thin as paper, or at least much more porous than normal. The older the patient the more striking is the fact. After a child has long learnt to walk it may be attacked by rickets, and bending may still occur. But as the cases become older and approach puberty multiple fractures happen instead or take place along with the curving.

Bone formation in rickets.—On the other hand, in the later stages of rickets or where the disease progresses but slowly an excessive formation of bone takes place. This may be seen as a great thickening of the skull and as osteo-sclerosis in the long bones. I have already brought forward the fact that excessive formation of bone is due to venous congestion, whether arising from chronic inflammation or not. This excessive formation of bone takes place both in men and animals. The shafts of the long bones undergo marked osteo-sclerosis—they become heavy and very hard. The skull may be thickened by porous bone (Briscoe), but even still more marked thickenings of the skull are seen in animals. In monkeys and lions dying in the Zoological Gardens Sutton has described such extreme thickenings of the skull as to cause death by pressure on the central nervous system. It will be noted that these tropical animals are liable in this country to both early and late rickets, although they remain free in their wild state. I have already noted a parallel instance in man—viz., the absence of rickets from India as compared with this country.

Senile changes.—In all the changes of bone taking place in the decline of life we must recognise as one of the factors the gradual failure of general nutrition. It may be an important factor in some cases, in others only one among others. With diminished muscular use will come a diminished vascular supply, and so a smaller formation of bone in the parts of the bone pulled on by muscles. This may be combined with small disturbances of the regulating control of the nervous system without any nervous disease.

ACTINOMYCOSIS INVOLVING THE SKIN, AND ITS TREATMENT BY IODIDE OF POTASSIUM.

[WITH COLOURED ILLUSTRATION.]

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ALTHOUGH actinomycosis in the human subject is probably not so rare as till lately it has been supposed to be, it is still met with, or at any rate recognised, infrequently enough to make it worth while to report cases in which there has been an opportunity of studying its evolution and clinical manifestations and the effect of treatment. The following case which I have recently had under observation appears to me to be important as an illustration of the therapeutic action of iodide of potassium in this disease, more especially as the efficacy of this remedy in actinomycosis seems as yet to be imperfectly appreciated in this country. For the notes of the case I am indebted to my clinical assistant, Mr. J. W. Skevington.

A single woman aged fifty-nine years came under my care at St. Mary's Hospital on Nov. 18th, 1895, with a large swelling over the lower jaw on the left side. About Oct. 10th she first noticed a small nodule behind the ramus; it was just underneath the skin, and in about seven days began to discharge. It was very painful and continued to increase until she came to the hospital. The patient had for the greater part of her life been in service as a housemaid, but for about a year before the beginning of her illness she had made her living as a needlewoman. She stated that she had never lived over a stable, and had nothing to do with horses, cows, or other animals, nor with grain, hay, or straw. There was no history of a blow or other injury and she could throw no light on the origin of the disease. Her record of previous illnesses showed nothing that could be interpreted as having any bearing on her condition, nor was there anything of significance in her family history. She had a large dark red nodular tumour with a sharply circumscribed edge on the left side of the face. It extended from the angle of the lower jaw forwards to the corner of the mouth, upwards to the zygomatic arch, and downwards over the sterno-mastoid for about two inches. Here and there on the surface there were small scars, and the skin, especially at the lower part in the neck and about the corner of the mouth, was drawn into folds by cicatricial contraction, giving the swelling a puckered appearance about the edges. On the most prominent part, in the temporo-maxillary region, the surface of the mass was irregularly raised into nodules varying in size from a split pea to a small bean, each having a small opening at the top, the position of which was marked by a yellow bead of pus. On squeezing the nodules a little sero-purulent matter escaped. In this discharge were found firm yellowish-grey granules which microscopic examination showed to be masses of actinomyces or ray fungus. The skin over the whole mass was brawny and reddened. To the touch the swelling at first gave the impression of cartilaginous hardness, but on firm pressure between the fingers it was felt to be elastic. There was no

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fluctuation. Narrow spurs of infiltration also extended upwards behind the lobe of the ear and backwards to the posterior border of the sterno-mastoid. A hard lump of the size of a large hazel nut could be felt under the buccal mucous membrane. The structures forming the cheek were infiltrated and firmly fixed to the jaw, especially towards the angle, but the bone itself was not implicated. There were no teeth in either jaw except the left superior external incisor and canine. No enlargement of glands, either concatenate or supra-clavicular, could be felt on the left side of the neck, and there was no evidence of secondary growths. There was no trismus, but the patient complained of great pain, particularly on mastication, and the nodules were tender on pressure. She had a poor appetite and slept badly, but otherwise there was no disorder of the general health. How the infection was conveyed in this case there is no evidence to show, but of the nature of the disease there was no doubt. The microscopic examination was conclusive; apart from this, however, the situation and appearances of the swelling (see coloured plate) were characteristic. The internal administration of iodide of potassium was begun on Nov. 21st, when the following mixture was ordered to be taken three times a day: Potassii iodidi 15 gr., spiritus ammoniæ aromatici 20 minims, decoct. cinchonæ ad ℥i. For the first three days after the commencement of treatment the pain was worse and the discharge was profuse, but after that the good effect was soon manifest. The pain abated, the swelling became paler and softer and began to shrink. After ten days of the treatment only slight traces of the fungus could be discovered in the discharge, which was very scanty. The patient was exhibited to the Dermatological Society of London on Dec. 11th, and at that time the growth had diminished to half its former size, and was much softer in consistence while the pain was very slight. On the 16th the dose of iodide of potassium was increased to 20 gr. and on Jan. 27th, 1896, to 30 gr. three times a day. The improvement continued, and, in short, the history of the case from the time the patient was brought under the influence of the iodide was a record of uninterrupted progress towards cure. Together with the retrocession of the local process appetite and sleep returned and the woman felt better than she had done for a considerable time. At the beginning of February the swelling had nearly disappeared, the sinuses had healed up, and only a trace of the disease was left. When last seen (May 28th) the patient was well, but was still taking the iodide.

There can be no doubt that actinomycosis has often been mistaken for gumma or other manifestation of syphilis, and the erroneous diagnosis must have appeared to receive confirmation from the beneficial effects of iodide of potassium. In other cases the disease has been looked upon as tuberculous or has been taken to be a malignant growth—generally sarcoma, to which, indeed, it sometimes bears a close resemblance. It is generally easy enough to recognise actinomycosis when one is alive to the possibility of meeting with it in a given case; but the appearances are certainly very puzzling when such a contingency does not happen to be present to the mind. As actinomycosis, even when liberal allowance is made for errors in diagnosis, is not a common disease, and as there must be many members of the profession in this country who have never seen a case, it may not be amiss to give a short account of it in its ordinary manifestations. I have no pretension to be able to add anything to what is already known about the disease, but I have lately had occasion to look through the recent literature bearing on the subject, and as even the most modern English text-books and special treatises give only a few lines to the description of the disease so far as it attacks the skin, I may, perhaps, be excused for trying in some measure to fill the gap at least provisionally.

Actinomycosis is a parasitic disease, the lesions being the result of a reactive process caused by the presence in the tissues of a living irritant, the actinomyces or ray fungus. This was first described as it occurs in the so-called osteo-sarcoma of animals by Rivolta in 1868 and more fully and more accurately by Harz and Bollinger[1] in 1877. It was Harz who gave the disease caused by the parasite the name of "actinomycosis." In man it was first definitely recognised by J. Israel.[2] The parasite had been seen and drawn by von Langenbeck[3] in 1845, but its nature was not understood by that great surgeon. Three cases were described in 1853 by Robin and Laboulbène[4] which appear to have been instances of actinomycosis, and four years later the characteristic granules were noticed in pus from an abscess of the chest wall by Lebert,[5] who, however, was unable to give an opinion as to their nature. The parasite had also been drawn independently by Mr. T. Smith[6] when examining the tissues of an obscure case for Sir James Paget about 1855. In 1879 Ponfick proved that the disease as it occurs in man is pathologically identical with that met with in animals.

Actinomycosis may attack almost any part of the body; but there are three principal points of invasion, the neck, the chest, and the abdomen. The cervico-facial region is the most frequent site of the disease; it has been estimated that some 55 per cent. of all cases have this localisation, but the proportion is probably higher than this; thus of thirty-eight cases published in France up to the latter part of 1895 the disease was in this region in thirty-five. The lung and abdominal viscera come next. The limbs suffer comparatively seldom. Cases are, however, recorded in which the disease attacked the hand by Bertha[7] and Müller[8] and the lower limbs by Marten,[9] and Pringle.[10] Crookshank and Kanthack[11] maintain that one variety of the affection of the foot familiar to Indian practitioners under the name of "madura foot" or mycetoma is in reality a form of actinomycosis caused by a variety of the ray fungus, but this theory must be considered as yet "not proven." The points of difference between the fungus of actinomycosis and that of mycetoma have been fully described by Surveyor and Boyce.[12] The skin is extremely seldom primarily attacked by actinomycosis, but it is very often secondarily invaded by extension of the process from the underlying tissues.

In this paper I am chiefly concerned with actinomycosis as it affects the skin, and in the following description I will take the temporo-maxillary form of the affection as the type. The most common situation of the disease is the space roughly limited behind by the ramus of the jaw, below by the body of that bone, and above by a line from the temporo-maxillary joint along the zygoma. This localisation is doubtless due to the fact that the fungus as a rule finds its way into the tissues through the mouth, the point of entrance being a carious tooth or an erosion of the mucous membrane. Bertha[13] reports two cases of direct inoculation of the skin of the hand by means of grain. Sometimes it gains access through a breach of the skin surface caused by injury; what appears to be an instance of this mode of invasion has lately been reported by Guillemot.[14] A man was struck on the face by a piece of wood and a few weeks later an actinomycotic swelling developed on the exact site of the blow. Müller[15] has recorded a case in which a woman ran a splinter of wood into her finger and two years later a swelling formed in the same situation which was proved by microscopic examination to be of actinomycotic nature; the chip of wood was found imbedded in the diseased tissues. Although there are no precise data by which to estimate the period of latency I find it difficult to believe that it can be as long as two years; it appears more probable that inoculation took place through the wound. In animals the fungus is mostly conveyed into the body by the food, and in man the fungus is no doubt sometimes introduced by tiny pieces of grass, hay, corn, &c., which are chewed or unwittingly swallowed. The most common habitat of the fungus is the surface of certain vegetable substances, especially grass and cereals, particularly in the dry state. A piece of straw may be at once the means of conveying the fungus into the mouth and the instrument of inoculating it in the tissues by making a tiny scratch on the mucous membrane. Thus Poncet[16] reports a case in a woman who was accustomed to carry in her mouth wisps of straw for

[1] Centralblatt für die Medicinischen Wissenschaften, No. 27, 1877.
[2] Virchow's Archiv, Band lxxiv., 1878.
[3] Ibid.
[4] Besse: De l'Actinomycose Cervico-faciale, Lyons, 1895, p. 69.
[5] Ibid.
[6] A. A. Kanthack: St. Bartholomew's Hospital Journal, January, 1896.
[7] Wiener Medicinische Wochenschrift, 1888, No. 35.
[8] Bruns: Beiträge zur Klinischen Chirurgie, Band iii., Heft 3, p. 356.
[9] THE LANCET, Jan. 12th, 1895.
[10] Transactions of the Royal Medical and Chirurgical Society, vol. lxxviii., 1895.
[11] Journal of Pathology and Bacteriology, vol. i., 1892. Vandyke Carter suggested in 1886 that some forms of mycetoma are produced by a fungus akin to actinomyces.
[12] Proceedings of the Royal Society of London, 1893.
[13] Loc. cit.
[14] Lyon Médical, Jan. 26th, 1896.
[15] Loc. cit.
[16] Gazette Hebdomadaire, April, 1895.

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tying up vines; and another[17] in a man who had a habit of chewing bits of grass and straw; Dubreuilh and Frèche[18] report a case in a man who used to pick his teeth with straw, with which he sometimes made his gums bleed; Monestié[19] relates one in a girl who was in the habit of chewing straw; and Besse[20] one in a man who was accustomed to chew grain. Guermonprez and Augier[21] have recorded a case in which a man wounded his gum with a piece of cornstalk; eight days later a hard, painless swelling, which proved to be of actinomycotic nature, appeared in the exact situation of the scratch. There is some evidence that the actinomyces may be introduced into the system in meat from animals that have suffered from the disease, in vegetable substances such as cereals, potatoes, &c., and even in milk.[22] The disease may also be transmitted directly from animals to human beings or from the latter to each other. Baracz[23] has placed on record a case in which it was communicated by a man to a woman by kissing, and cases in which it has been transmitted from animals to human beings have been reported by Poncet, Mayde, Bulhoes-Hartman, and others.[24]

As regards the etiology there is little more to be said; neither age nor sex can be regarded as a factor except in as far as they have any connexion with occupations exposing to the risk of infection. That the soil has an influence, favourable or unfavourable, on the growth of the parasite in the tissues is obvious, not only from the very different degrees of severity of the disease, but from the very marked differences of type in which we meet with it clinically. Of the causes of these differences, however, we know nothing. The published literature might suggest that the disease is far more frequent in some parts of Germany and particularly in Austria than elsewhere, but this is probably in large measure due to its being more carefully looked for in those countries. It is significant that whereas France used to be thought to be exempt from actinomycosis, no fewer than twenty-four cases have been recorded in that country since 1894; it is still more significant that of that number twelve have occurred in Lyons, nine of them in the practice of one surgeon, M. Poncet.[25] It appears a fair inference, therefore, that actinomycosis will be recognised more frequently the more carefully it is looked for. In many cases, as in the one reported above, the mode of infection cannot be precisely determined. According to M. Arloing,[26] the spores are scattered about in nature in considerable abundance, being generally present in greater or less numbers on organic substances in course of becoming mouldy. These spores may penetrate by inoculation into the tissues and they may also gain entrance through the respiratory passages, spreading thence into various parts of the organism by the bloodvessels. As the mycelial tubes have no distinct sheath such as is found in ordinary moulds, they are easily broken up and may be scattered about to great distances. I give these facts on the authority of M. Arloing, a man not given to uttering base scientific coin; the wonder, therefore, is not that actinomycosis should often develop without traceable cause, but that it is not a much more common disease than it is.

The fungus having found its way into the economy after a period of incubation not less than four weeks sets up an inflammatory process, the exact course and results of which are dependent on the nature of the tissues in which it is embedded. The essence of the process is that a development of granulation tissue takes place round the fungus; a nodule is thus formed, the interior of which soon breaks down into a thin liquid containing tiny granular bodies. By-and-bye the neighbouring nodules coalesce into a tumour-like mass, hard and solid at first, but before long suppurating in different places and giving rise to small abscesses, which may run together and form cavities of considerable size. The skin covering the swelling is at first red and brawny; as tension increases it becomes livid and soft and finally gives way, generally in several places. Through the openings there escapes a thin serous or sero-purulent discharge, containing yellowish grey or whitish granules, which to the finger feel firm and resistant; these are masses of spores of the ray fungus. The openings of the sinuses closely resemble those leading to diseased bone, but on probing no bare bone is struck. The sinuses have soft, fungating walls and are often partly filled with broken-down tissue; they communicate with cavities lined with similar material in which the characteristic yellowish granules are present in greater or less abundance. For a considerable time the process is confined to the soft tissues, especially to the subcutaneous cellular tissue, muscles, &c. The periosteum may also be thickened, but the bones are very seldom attacked, and then only secondarily. In some rare cases, however, the process invades the bones almost from the first; thus Poncet[27] has recorded a case in which the bones of the upper jaw and the corresponding half of the hard palate were completely destroyed in five months, the soft parts of the cheek remaining unaffected. It is a curious fact, of which I have seen no explanation, that in animals the bone is always invaded, and, in fact, is generally the starting-point of the process, whereas in man the general exemption of the bone is one of the characteristic features of the disease. On the other hand, suppuration, which is the rule in the human subject, never occurs in animals. The suppuration caused by the actinomyces itself in man is of a peculiar character, the pus formation being extremely scanty and the pus itself generally thin, though very sticky. As the process continues, however, pus-cocci gain access and set up active suppuration, the ravages of which extend wide and deep, destroying the temporal, masseter, and pterygoid muscles and not sparing the bone. In this stage the characteristic features of the disease are lost in a mass of inflamed and disintegrating tissues, fungating here and there through the skin, which is riddled with sinuses and fistulæ intercommunicating with each other in an inextricable labyrinth.

The appearances of actinomycosis as it affects the skin in other parts of the body have been well described by Pringle[28] in the case of a boy under his care in the Middlesex Hospital in whom the primary seat of disease appears to have been the respiratory tract. The skin lesions were situated on the back. "The most striking feature of the eruption is constituted by enormous livid, fleshy, sarcomatous-looking outgrowths of mottled purplish and yellow colour. ..... All the growths feel pulpy and fluctuating and are not tender; each growth presents at least one, usually several, small crateriform ulcerative openings, from which a clear, rather sticky fluid constantly exudes. ..... In each of these ulcerative surfaces there is an accumulation of purulent fluid of pale sulphur-yellow colour, which is seen to contain innumerable tiny granular specks." Over the part of the chest there were deep brown pigmented sunken cicatrices, the marks of lesions similar to those on the back, which have discharged their contents. Over the great trochanter are three similar pigmented scars, which still show some signs of activity.

Actinomycosis may run an acute course, but as a rule the process is chronic, sometimes with occasional exacerbations. The typical form, that which affects the parts about the angle of the jaw and the temporal region, often begins with pains about the back molar teeth, which may be decayed, or in the temporo-maxillary joint itself, where the pain is sometimes so intense as to suggest arthritis. Another symptom which not infrequently precedes the appearance of swelling is trismus, the closure of the mouth apparently being due to reflex spasm of the masseter and temporal muscles caused by the irritation of the parasite. The trismus is often so severe as to make feeding a matter of great difficulty. The swelling usually first shows itself at the angle of the jaw and spreads upwards along the ramus, infiltrating the temporal region and the cheek and sometimes the part behind the ear. From the slight degree of redness of the skin covering it and from its indefinite outline and nodular surface the swelling is in its appearance at first more suggestive of a new growth than of an abscess. To the finger it feels solid like cartilage or even wood, but yet elastic. As Poncet says, an actinomycotic swelling gives to the touch a sense of something unfamiliar, its consistence being between that of a hard tumour and of inflammatory œdema; the impression given to the finger is, as he expresses it, as if the connective tissue in the affected region had been infiltrated with some coagulating substance. Diffused through the mass of the swelling nodules of varying

[17] Mercredi Médical, June 19th, 1895.
[18] Annales de Dermatologie, September, 1895.
[19] De l'Actinomycose Cutanée. Thèse de Paris, 1895.
[20] De l'Actinomycose Cervico-faciale, Lyons, 1895, p. 67.
[21] Gazette des Hôpitaux, Feb. 11th, 1892.
[22] Besse: loc. cit., p. 37.
[23] Quoted by Besse: loc. cit., p. 37.
[24] Ibid.
[25] Besse: loc. cit., p. 71. According to a more recent communication by Poncet (Bulletin de l'Académie de Médecine, April 14th, 1896), the number of cases recorded in France up to that date was between forty and fifty. Of these, twenty were observed in Lyons.
[26] Lyon Médical, Dec. 22nd, 1895, p. 571.
[27] Gazette Hebdomadaire, April, 1895.
[28] Loc. cit.

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size can be felt. On passing the finger into the mouth the swelling can be felt projecting into the cavity; the mucous membrane is sound and the mass can be felt lying outside it, smooth and dense as on the face. Pointing as a rule takes place towards the exterior, not towards the mouth. Waring[29] has, however, recorded a case in which the swelling burst into the buccal cavity. After a variable time slight fluctuation may be perceptible at one or more places, and the skin in those spots becomes livid and thin and finally breaks, giving issue to a little fluid in which are seen the granular masses containing the parasites. Squeezing causes the escape of more yellowish bodies, but not, as a rule, of any amount of pus. Long sinuses are formed from which matter containing the yellowish granules of the fungus is discharged from time to time. When the contents have been completely got rid of the opening heals up, and when there are several such small "extinct volcanoes," if I may call them so, the contraction gives rise to the puckering in the swelling which is one of the most characteristic appearances of the disease. There is seldom any enlargement of neighbouring glands, the fungus being too large to make its way along the lymphatics. When, however, suppuration runs riot and the original disease has become complicated by the invasion of pyogenic microbes the glands may be involved in the general conflagration. Secondary foci of the disease may develop in neighbouring parts, as the neck, the cheek, the temple, &c., the fungus burrowing its way along in the loose connective tissue, under fasciæ and in the sheaths of blood-vessels and muscles. The evolution of these secondary swellings is similar to that of the original mass.

In the ordinary chronic form actinomycosis in the earliest stages, when the lesions are purely local, is not accompanied by any particular derangement of the health, though much suffering may be caused by pain and the patient is weakened by want of sleep and inability to take food; if the process continues his strength is further drained by prolonged suppuration; and if the larynx, œsophagus, lungs, nervous system, &c., be attacked corresponding symptoms will be produced. The disease if left to itself tends to spread both by continuous extension and by metastasis. It may extend downwards in the subcutaneous tissue in the front of the neck or at the side along the sterno-mastoid, reaching the supra-clavicular region or passing into the axilla, and fixing the whole neck from the chin to the sternum in a rigid casing;[30] or passing below the superficial cervical fascia it may spread downwards into the anterior mediastinum, perhaps ulcerating into the air passages on its way, and finally attacking the lungs and the heart; sometimes it extends upwards to the base of the skull, attacking the meninges and the brain, or it invades the spinal cord. In any of these lines of extension the mass may erode the walls of blood-vessels with consequent formation of fresh foci in the viscera. Death may occur from exhaustion, amyloid degeneration of the liver, &c., or septicæmia. In certain rare cases actinomycosis runs an acute course, beginning suddenly with high fever and great swelling of the neck, sometimes spreading to the floor of the mouth, the tongue, and the pharynx; the affection in such cases strikingly resembles angina Ludovici and death may occur in less than a week from the onset.

Fortunately, actinomycosis is fairly amenable to treatment if taken in time, and if properly dealt with the formidable complications that have been alluded to can often be prevented. It must be borne in mind, however, that actinomycosis, particularly in the temporo-maxillary form, is of two very distinct types—one comparatively mild, in which the affection is easily controlled or may come to a standstill or undergo spontaneous cure, and another in which it has in it an element of malignancy which simply defies treatment. There can seldom nowadays be any difficulty about the diagnosis, except in the initial stage, before the skin has given way and allowed the characteristic granular bodies to escape. The yellowish-grey bodies can readily be identified with the naked eye when once they have been seen, but reliance must not be placed on such perfunctory inspection; masses of cholesterin crystals have been taken for actinomyces, and a microscopic examination should be made in all cases. Even with the aid of the microscope the characteristic bodies are not always easy to discover. Microscopically the granular bodies consist of rounded masses of leptothrix filaments surrounded by a fringe of club-shaped bodies radiating from the centre. The morphology and life-history of the parasite will be found fully described in the writings of Ponfick,[31] Israel,[32] Crookshank,[33] and Kanthack,[34] to which I refer the reader. Poncet, who has given great attention to the subject, holds that the diagnosis can generally be made from the symptoms alone. The signs on which he lays stress are: (1) the character of the pain, which is not continuous, is mostly worse at night than in the day, is not tensive like that of an abscess, and is often not relieved by incision; (2) the early occurrence of trismus not dependent either on pain—since it is present in cases where there is little or no pain—or on swelling; this symptom according to Poncet is pathognomonic; (3) the situation and peculiar wooden feeling of the swelling; and (4) the respect for the bony structures generally shown by the process. The absence of glandular enlargement is another distinctive feature. Actinomycosis might possibly at the very outset be mistaken for periostitis due to dental caries; in the latter condition, however, the bone is pretty sure to be attacked, in any case the decayed teeth would have to be extracted and the progress of events would speedily clear up the diagnosis. The prognosis may be gathered from what has been said in describing the course of the disease and the different types which it may assume. In general terms it may be stated that the acuter the onset the graver is the outlook; and, on the other hand, the slower the course and the more localised the process the more likely is the disease to yield to treatment. Besse's figures show that in the ordinary cervico-facial form the average mortality is about 8 per cent., but when the upper jaw is the seat of disease the fatality is much greater. Of 16 cases of this description under Poncet 8 died. Jirou gives the following death-rates for the different forms of actinomycosis: of face and neck, 11 per cent.; thoraco-pulmonary, 83 per cent.; abdominal, 71 per cent.; and cerebral, 100 per cent.

Actinomycosis can often, as in the case which forms the basis of this communication, be cured by the internal administration of iodide of potassium alone. It is remarkable that the use of this drug, which is now known to be almost as certain a specific in actinomycosis as it is in tertiary syphilis, should still be unfamiliar to English practitioners. It is not mentioned at all in some recent works on diseases of the skin, including my own, and it is referred to only in the most cursory manner in text-books of surgery published within the last twelve months. It was first used in veterinary medicine by Nocard[35] in 1885, and also by Thomassen[36] of Utrecht. In Chicago, out of 185 oxen suffering from the disease, 71 were cured by iodide of potassium.[37] In the human subject it seems to have been first used by Netter.[38] It was soon afterwards successfully employed by Buzzi and Galli-Vallerio.[39] In Holland instances of cure by means of this remedy have been recorded by Van Itelson of Leyden, Salzer of Utrecht, and others. In France it has been successful in the hands of Meunier,[40] Gaube,[41] Jaboulay,[42] Dubreuilh and Frèche,[43] Legrain,[44] Monestié,[45] and Duguet;[46] and Poncet and his pupils Jirou and Besse bear emphatic testimony to its value. Rydygier[47] of Warsaw also speaks favourably of its use; in Denmark it has been used successfully by Schon;[48] and in America it has been tried with excellent results by Van Arsdale.[49] Milton[50] cured a case in the Kasr-el-Aini Hospital in Egypt, the first recorded in that country, with large doses of iodide. In this country Pringle[51] has obtained very encouraging results in one case with the

[29] THE LANCET, May 25th, 1895.
[30] Choux: Archives Générales de Médecine, April, May, June, 1895.
[31] Actinomycose des Menschen. Berlin, 1882.
[32] Actinomycose des Menschen. Berlin, 1885. See Microparasites in Disease. New Sydenham Society, 1886, p. 463 et. seq.
[33] Transactions of the Royal Medical and Chirurgical Society, 1892.
[34] Loc. cit.
[35] In a communication to the Société Centrale de Médecine Vétérinaire. Quoted by Pringle, loc. cit.
[36] Journal of Comparative Pathology, 1892.
[37] Pringle, loc. cit.
[38] Tribune Médicale, No. 46, 1893.
[39] See Therapeutic Gazette, 1894, p. 35.
[40] Bulletin Médical, July 17th, 1895.
[41] Union Médicale du Nord-Est, March, 1894.
[42] Besse: Loc. cit., p. 67.
[43] Annales de Dermatologie, September, 1895.
[44] Ibid., July, 1895.
[45] Loc. cit.
[46] Bulletin de l'Académie de Médecine, Dec. 31st, 1895.
[47] Wiener Klinische Wochenschrift, November, 1895.
[48] Ugeskrift for Læger, 1895, No. 50.
[49] Annals of Surgery, September, 1895.
[50] THE LANCET, Nov. 11th, 1893.
[51] Transactions of the Royal Medical and Chirurgical Society, vol. lxxviii., 1895.

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iodide, although he did not give it in full doses. Iodide of potassium has also been used with success by Ward of Leeds.[52] I have heard privately of a few other cases in which the treatment has been successful in some London hospitals, but they are still unpublished.

The mode of action of the drug in actinomycosis is not yet clearly understood. It does not seem to kill or even injure the parasite. Nocard found that a solution of 1 per cent. of iodide of potassium did not check the growth of cultures in an artificial nutrient medium. Netter believes that the remedy has a specific action on the anatomical elements, increasing their power of resistance and thus strengthening the organism in its struggle against the disease. However this may be there can be no doubt of its influence for good. It causes a rapid subsidence of the tumours and nodosities, the parasites are discharged through the sinuses or are absorbed, and ulcerated surfaces heal. In the case above recorded the therapeutic effect was even more striking than that of the drug in tertiary syphilis. The earlier the administration of the iodide is begun the surer and speedier is its action. In order to get the full effect it must be given in full doses. Beginning with ten or fifteen grains three times a day, it should be steadily pushed to twenty, thirty, forty grains, and even larger doses if necessary. The more active the disease the more energetic must be the medication. As a rule the drug is well borne, but if it comes to be what may be called a struggle for life between the remedy and the disease any inconvenience likely to be caused by the former is preferable to the almost certainly fatal effect of the latter. Poncet usually combines local applications of iodide of potassium with its internal administration. He injects a 1 in 100 solution into the sinuses and fistulæ or inserts pencils of the iodide resembling those often used for the application of iodoform. Others, as Rydygier, combine interstitial injections of a 1 in 100 solution into the mass with internal medication by iodide of potassium. The average duration of treatment by the internal administration of iodide of potassium is from six weeks to two months. Although the drug may almost be considered a specific it must not be accounted infallible. Poncet records three cases under his own care in which the disease went steadily on to a fatal issue, apparently uncontrolled by the remedy. Dr. D. N. Knox[55] has quite recently reported a case in which the drug was equally useless. On the other hand, in estimating the therapeutic efficacy of the iodide it must be borne in mind that there are cases of benign type which have a natural tendency to end in cure. Arsenic has been used alone or combined with iodide of potassium in cases of abdominal actinomycosis (perityphlitis actinomycotica) by Ammendorp[54] and Tscherning,[53] both of Copenhagen. In a case under Darier's care, in which the affection was limited to the soft parts of the face, a cure was effected by electro-chemical treatment applied by Gautier;[56] a solution of iodide of potassium was injected into the diseased tissues, and a current was then passed through so as to decompose the substance and thus utilise the antiseptic power of iodine in its nascent state. Tuberculin was used successfully in one case by Billroth,[57] and Ziegler[58] has had good results with the same remedy. Thyroid extract has been employed by Pringle in two cases; one[59] improved remarkably under the treatment; in the other[60] the remedy did good at first, but had to be discontinued on account of the untoward symptoms caused by it. In many cases the internal medication must be supplemented by surgical measures. Suppurative foci must be laid open and drained; the walls of chronic sinuses and cavities must be curetted and purified and necrosed bone must be removed; ulcers and wounds must be dealt with on ordinary antiseptic principles. It is hardly within my province, however, to go into details on this subject.

A word or two respecting prophylaxis may not be out of place. Arloing recommends that all animals suffering from actinomycosis in however mild a form should be slaughtered. If this measure is considered too drastic at least the meat from such animals should be carefully inspected, and the same precautions should be adopted in the cooking of it as are enjoined by Dr. Woodhead[61] relative to tuberculous meat. Milk from animals with "lumpy jaw" or "wooden tongue" should be boiled before use. A word of caution may be added as to the danger of chewing bits of grass or straw, as many people besides ostlers and Lord Palmerston (see Leech's caricatures of that statesman *passim*) are in the habit of doing. As for picking the teeth or clearing out carious cavities with straw—a procedure I have known to be adopted—it can only be described as flying in the face of Providence.

[52] THE LANCET, Jan. 26th, 1895.
[53] Glasgow Medical Journal, May, 1 95.
[54] Hospitals-Tidende, Band i., p. 518.
[55] Ibid., p. 520.
[56] Annales de Dermatologie, 1891, p. 449.
[57] Wiener Medicinische Presse, 1891, p. 350.
[58] Münchener Medicinische Wochenschrift, 1892
[59] British Journal of Dermatology, January, 1896.
[60] Transactions of the Royal Medical and Chirurgical Society vol. lxxviii., 1895.

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THE SYMPTOMS AND TREATMENT OF DISEASES OF THE ATTIC (UPPER PART OF THE MIDDLE EAR).

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BEFORE discussing this important subject it would, perhaps, not be out of place to explain and describe a few of the terms used. The attic—also called recessus epitympanicus, or aditus ad antrum, or Kuppelraum—is the upper part of the middle ear and contains the head of the malleus and the greater part of the incus. The tegmen tympani forms the roof and Shrapnell's membrane and a ridge of bone above it form the outer wall. It is divided into several cavities by the ligaments of the malleus and the incus and by folds of mucous membrane, which connect the ossicles with the walls of the attic. These vary to a considerable extent. Shrapnell's membrane is the upper part of the membrana tympani. It is thinner than the lower part or pars tensa, as it consists only of two layers (integumentary and mucous) and lacks the middle or fibrous layer. The attic plays a very important part in connexion with the diseases of the middle ear and mastoid antrum, partly because of its position, as it is practically the connecting link between these two cavities, and partly because of its contents and the arrangement of the same. Inflammation of the middle ear can very readily spread into the attic, and when it has once got into the various cavities it rarely heals spontaneously. This explains why the ossicles and walls of the attic are so frequently diseased. Often there is an accumulation of thickened exudation or pus, or we may find a genuine cholesteatoma. Wall found caseous matter in the attic in forty-four out of sixty-five cases of perforation of Shrapnell's membrane. My own experience quite agrees with these figures. It is difficult to localise the exact seat of the disease. The position of the perforation, however, helps us

[61] See Report of Royal Commission on Tuberculosis.

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to some extent. If it is over the short process of the malleus then the head of the malleus is affected; if behind, the long process of the incus; whereas if the walls of the attic are diseased there is a large perforation in the upper part of Shrapnell's membrane. In all cases of perforation of the lower part of the membrana tympani, in which ordinary treatment (removal of granulations, local applications, &c.) has failed to effect a cure in a few months, we can be nearly sure that the attic is diseased—especially in adults—and perhaps also the mastoid cells. In adults we nearly always find that if the mastoid cells are affected the attic is also diseased. This is of great importance in the surgical treatment of the diseased mastoid process. It is the reason why Schwartz's original operation is frequently so unsuccessful: because we do not lay open and treat the diseased attic. This naturally keeps up the otorrhœa and often causes recurrence of the mastoid disease.

The symptoms of disease of the attic are chiefly objective. We in most cases find perforation of Shrapnell's membrane or of the pars pensa with or without granulations. We can have simple accumulation of pus, or a cholesteatoma, or caries of the ossicles or of the wall of the attic. Frequently granulation tissue projects through the perforation of Shrapnell's membrane and may attain large dimensions. Often we find a small, dark crust which covers the perforation and which is often mistaken for cerumen. These cases are frequently overlooked, and yet it is of great importance that they should be diagnosed, as the crust naturally causes retention of pus. It very readily re-forms when removed. We can have disease of the attic without perforation of the membrana tympani. In my experience these cases are not at all uncommon. The patient complains of pain in or above the ear, of a feeling of fulness, not always of deafness. We find redness and slight bulging of Shrapnell's membrane or of the upper part of the external meatus. Frequently in chronic cases there is swelling above the auricle, extending forwards and backwards, often as far as the apex of the mastoid process, and thus simulating disease of the antrum. I have recently operated on a man aged thirty years who for twenty years has had discharge from the right ear. On three occasions he had Wilde's incision performed for mastoid abscess. I was much surprised to find the mastoid process apparently normal and a large cholesteatoma of the attic.

Pain, of course, is a common symptom and it varies with the nature of the disease. I have seen several cases in which the only symptoms were frequent attacks of dull, aching pain, with slight bulging of Shrapnell's membrane, with no marked deafness. I incised, found caseous matter, and scraped and syringed out with excellent results. Often there are shooting pains which radiate chiefly upwards and forwards. In all cases of mastoid disease with pain above and in front of the ear, especially if there is any swelling there, we should carefully examine the attic. As regards treatment, I think that we should be guided by ordinary surgical principles: enlarge the perforation, excise part of the membrana tympani (if necessary), remove any granulations and caseous matter by the curette and the syringe, and apply chromic acid, iodoform, aristol, &c., taking care, of course, that the perforation be kept well open. If the malleus or incus is diseased and loose they can easily be removed. If they are firmly attached or difficult to find, it is best to wait awhile before attempting to remove them. We then do not incur the great risk of damaging the stapes or the facial or semicircular canals. I use Delstanche's or Hartmann's or Milligan's irrigator for washing out the attic and Delstanche's new curette for removing the malleus. I believe that if these simple methods of treatment were more thoroughly carried out we should not hear so much of the wonderful operations for removing the ossicles under chloroform or of opening up the attic. Out of forty-two private cases of perforation of Shrapnell's membrane I have only twice removed the ossicles under chloroform and opened up the attic in ten cases. In the remaining thirty cases free incision, syringing, and scraping effected a cure. The incus is often dislocated or absent.

If these ordinary methods and the removal of the ossicles fail to effect a cure, or if the external meatus is too narrow to apply local treatment, we must open up and explore the attic. I make a long incision behind and round the top of the ear down to the tragus, cut through the external meatus, and pull the whole of the ear downwards. The wound is dressed from above and allowed to heal from below. There is very little deformity, and a much better view is retained of the diseased parts during the period of healing. If a permanent fistula has to be retained it is for obvious reasons much more desirable that this should be above and not behind the ear. I always remove the outer wall of the attic and the posterior wall of the external meatus with the chisel. Macewen, Barr, and others recommend the use of the burr and dental engine. I have not yet been able to find burrs which bite properly on the hard bone, and the operation thus becomes very tedious. We frequently find a number of mastoid cells on a level with the attic. In all operations these should most carefully be looked for, and if necessary opened up and scraped. If they are overlooked the disease is sure to recur.

The after-treatment is often very tedious. I have generally kept the outside wound open for a month or two, and if necessary allowed a permanent opening to form. In a few recent cases I have adopted the method of incising the external meatus and forming it into a flap or flaps, or of excising part of the meatus. A very large external meatus is thus obtained and the diseased parts can easily be watched through it; apply remedies locally, and thus allow the outside wound to heal up at once. I apply iodoform for a few days after the operation and then use aristol or europhen. Iodoform has a tendency to cause increased growth of granulation tissue, which blocks up the field of operation.

The facts to which I should have liked to draw particular attention are: (1) that localised disease of the attic is very common—more so than is generally supposed—and that it may occur without perforation of the membrana tympani; (2) that in cases of chronic otorrhœa which have for some time resisted the ordinary methods of treatment, and in disease of the mastoid antrum in adults, the attic is nearly always affected; (3) that in all cases of disease of the attic we should adopt ordinary simple surgical treatment before removing the ossicles under chloroform or opening up the attic; (4) that in opening up the attic we should prolong the incision over the top of the auricle downwards to the tragus and treat the wound from above; (5) that in suitable cases the external meatus should be partly excised or incised, and flaps formed and the outer wound allowed to heal up at once; and (6) that we should always remove the outer wall of the attic and the posterior wall of the external meatus and carefully look for any mastoid cells which may be on a level with the attic.

Bradford.

OPERATION FOR THE CURE OF VESICO-VAGINAL FISTULA.

BY J. RUTHERFORD MORISON, F.R.C.S. ENG.,

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So far as I know two operations are performed for the cure of vesico-vaginal fistula—(1) the ordinary operation, and (2) Mr. Lawson Tait's operation. In the latter the edges of the fistula are split all round, the bladder edges turned forward and the vaginal edges backwards, and the raw surfaces between the two are brought into apposition by sutures limited to the freshened areas. The description of both operations is as simple as the execution of them is difficult. The chief risk of both is that one or more sutures may be left projecting into the bladder, and there are several objections to either. To bring linear surfaces into such accurate contact that no leakage can occur is too much to expect from an ordinary operator; and if this difficulty is overcome the sutures are apt to cause trouble from the dragging to which they are subjected by the normally tense vaginal wall. Then the thick unyielding vaginal wall, the larger size of the opening on the bladder side, and the depth of the bladder wound make satisfactory closure of the fistula in the bladder without perforation almost impossible. Some leakage into the wound from the bladder side is more than likely to occur. My notion is that to operate in these cases with the greatest probability of success the same principle must be applied that has revolutionised the treatment of intestinal fistula. The opening of the bladder must, like that in the intestines, be freely exposed, and in the former, as in the latter, complete closure of the visceral opening should be regarded as the key to a successful result. There are two anatomical points which may be noticed as bearing upon my operation: (1) that the

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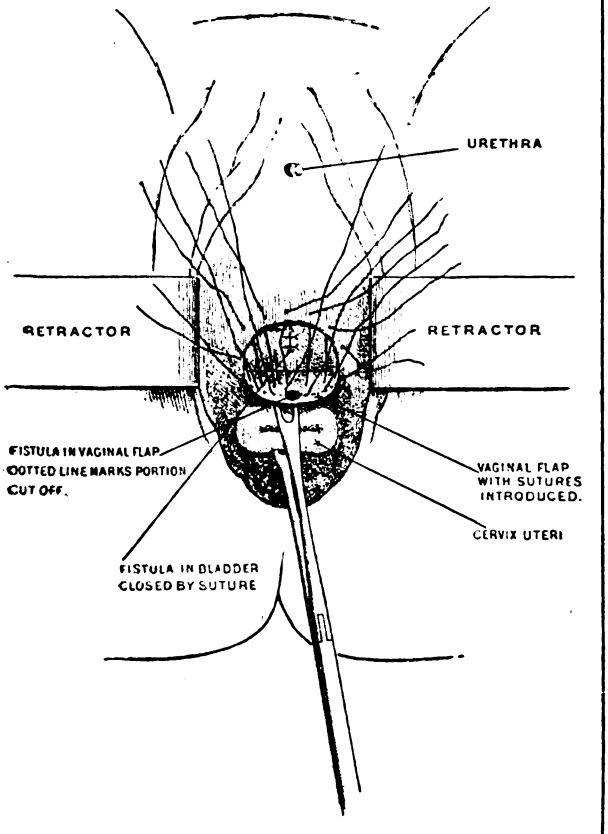
thick-walled vagina is separated from the thin-walled bladder by a layer of cellular tissue, usually so friable that a finger suffices to separate one from the other; and (2) that the blood-supply comes to the vaginal walls from every quarter, so that flaps with a good base may, without fear of sloughing, be reflected in any direction convenient.

CASE 1.—A woman twenty-four years of age was placed under my care by Dr. Proud of Maryport in August, 1895. Her history was that on April 15th, 1895, she was delivered by instruments after a hard labour lasting twenty-four hours and that the child was dead. After her confinement she noticed that she had no desire to micturate unless she coughed, but this caused her no alarm, for she did not know that anything was wrong. When she began to move about her urine constantly dribbled away, but when she was in bed about two ounces could be retained. In a letter which I had from Dr. Proud he said that the fistula was discovered by injecting milk into the bladder and watching it escape through the vagina. This device, although old, is so ingenious and easy of application that it is well worth remembering. On examinination the vagina at the upper part was found to be narrowed by cicatricial bands, especially behind. The cervix was small and eroded. About three-quarters of an inch from the cervix, in the centre of the anterior vaginal wall, was a rounded opening about the size of a split pea, which opened directly into the bladder. The operation was performed on Aug. 5th, 1895. A horseshoe-shaped flap was marked out on the anterior vaginal wall (see 1). The toe of the horseshoe included the fistula, and the heel which formed the base of the flap pointed to the cervix (1). The vaginal mucous membrane was divided with a knife,



the flap peeled off the bladder wall, and the opening into the bladder was fully exposed (2). All this separation was carried out with a finger and the blunt, closed ends of a pair of scissors, excepting round the fistula, where cicatricial tissue made the union between the bladder and the vagina very firm. The opening in the bladder was now closed by a fine continuous silk Lembert's suture, holding the muscular coats only (3). An ordinary surgical needle and needle-holder served for the purpose, being easy to apply, for the bladder wall was slack and there was no tension on the suture. The bladder was now tested by injection and proved to be water-tight. The operation was completed by cutting off the tip of the vaginal flap, including the fistulous opening into it, and adjusting the flap to the raw surface, where it was held by interrupted catgut sutures (4). The vagina was packed with iodoform gauze and a self-retaining catheter left in the bladder. The dressings and catheter were left undisturbed, except that the bladder was washed out thrice daily for the first week. On the eighth day the vaginal plug and catheter were removed. From beginning to end the patient had no trouble; the vaginal wound healed by first intention, the catgut sutures being absorbed, and she went home cured on the eleventh day. The opening in the vaginal flap in this case was cut off, but if it had been larger closure of it with a continuous catgut suture before replacing the flap would have been the better method of treating it.

CASE 2.—This was a woman forty-two years of age, mother of nine children, and a patient of Dr. Hume, to whom I am indebted for leave to publish the case and for the notes of it. Her trouble began after a bad confinement six years ago. She had been constantly wet since. A year before operation her last child was born. On examination a small fistulous opening was discovered in the anterior vaginal wall close to the cervix. On Nov. 18th, 1895, the operation described for Case 1 was performed by Dr. Hume. The opening in the bladder was closed with silk, the vaginal flap sutured with catgut, and the vagina plugged with iodoform gauze. The after-progress of the case is as follows. A catheter was used every four hours for the first five days. Afterwards the patient micturated unaided. She was discharged cured on Dec. 7th, 1895.

Note for reference to lettering in illustration.—1. Vaginal flap with sutures introduced. 2 and 3. Fistula in bladder closed by suture. 4. Fistula in vaginal flap; dotted line marks portion cut off. The figures refer to the figures in the text.

Newcastle-on-Tyne.

PULSATING EXOPHTHALMOS.

BY WALTER RIVINGTON, B.A., M.B. & M.S. LOND., F.R.C.S. ENG.,
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THE LANCET of Jan. 27th, 1894, contained an interesting address on "Pulsating Exophthalmos—a Plea for Early Ligature," by Mr. George Edward Walker, F.R.C.S. Eng. In this address Mr. Walker advanced some opinions on the pathology and treatment of the affection with which I cannot entirely concur, and referred to a case of my own. At the time the paper appeared circumstances prevented me from taking notice of it, and I have been obliged to defer commenting upon it until I had leisure to refer to the full details of the other cases on which Mr. Walker relied for the support of the views which he enunciated. Pathologically Mr. Walker's main contention appears to be that, with the exception of some traumatic cases caused by the perforation of the carotid artery within the cavernous sinus by a stab with a pointed weapon or a splinter of bone, these cases of pulsating exophthalmos are due to aneurysms (I do not know whether he means circumscribed or fusiform aneurysms or both), and that such aneurysms before they have become ruptured are adequate to produce all the characteristic symptoms of intra-orbital aneurysm. Now this, I believe, is exactly what a circumscribed or a fusiform aneurysm of the internal carotid artery in the cavernous sinus is incapable of doing so long as it remains entire. It is not until the artery or the aneurysm ruptures and the arterial blood from it is pumped into the sinus and so driven along the veins of the orbit that the characteristic symptoms of "intra-orbital aneurysm" commence. An aneurysm of the internal carotid in the cavernous sinus or of the ophthalmic artery at its origin may produce pressure symptoms affecting particular nerves (third, fourth, fifth or sixth), symptoms of obstruction to the return of venous blood such as œdema of the lids and conjunctiva, hazy ulcerated cornea, or injection of the sclerotic and conjunctiva, but not the typical symptoms of intra-orbital aneurysm. After the most careful examination of the evidence afforded by all the published cases known to me I stated the conclusions at which I had arrived in my article in Heath's "Surgical Dictionary" (1886) as follows:

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"1. Beyond question the great majority of the traumatic cases have been instances of endocranial arterio-venous communications due to wound or rupture of the internal carotid artery in the cavernous sinus. 2. Beyond question the great majority of the idiopathic cases have been instances of endocranial arterio-venous communications due to a rupture of an aneurysm of the carotid or of an atheromatous carotid in the cavernous sinus. 3. The occurrence of a circumscribed aneurysm of the ophthalmic artery or one of its branches, as a cause of the same symptoms as were exhibited in the cases of arterio-venous communication, rests at present solely on the laconic report of Guthrie. Moreover, aneurysm of the ophthalmic artery in the orbit is a very rare affection." The first two conclusions have been accepted save by Mr. Walker by surgeons and writers who have published cases since my paper was written. The third, so far as evidence is concerned, now requires some modification, because on Sept. 18th, 1886, Dr. Dempsey of Belfast published an extremely interesting and instructive case in which, combined with a fusiform aneurysm of the carotid artery in the cavernous sinus, there was an immense saccular aneurysm on the upper part of the ophthalmic artery capable of holding a mandarin orange. The carotid artery was tied, but the aneurysm of the ophthalmic artery burst into the eyeball and profuse hæmorrhage from the cornea and secondary hæmorrhage from the ligatured artery proved fatal on the forty-first day.

The cases adduced or referred to directly or indirectly by Mr. Walker in his address are twelve in number and may be briefly summarised.

CASE 1.—A female forty-two years of age under Mr. Walker. She fell into a deep cellar on Aug. 19th, 1893. The accident was followed by noise in the right ear, venous congestion, and protrusion of the right eye. Great impairment of vision and bruit. The right common carotid artery was tied by Mr. Puzey on Sept. 19th, 1893. The patient recovered and was cured of the aneurysmal affection, but the sight was not improved.

CASE 2.—A female thirty-three years of age under Mr. Walker. She had received a blow on the left ear from a man's fist and was seen on June 6th, 1878. The symptoms were similar to those in the last case, the eye being on the cheek and the cornea opaque. The left common carotid artery was tied on July 23rd. The patient was cured completely, sight being fully restored.

CASE 3.—A boy aged fifteen years under Mr. Walker. He had sustained a fall in Feb., 1886, and was seen by Mr. Walker on Aug. 2nd. There was protrusion of the right eye with aneurysmal symptoms. The parents refused assent to operation and consulted some London surgeons, who concurred in this decision. The local conditions remained stationary until Jan. 20th, 1887, when, going to a theatre, he got into a crush and was much alarmed and almost fainted. The pulsation and murmur ceased and did not return.

CASE 4.—A man aged thirty-seven years under Mr. Puzey[1] and seen by Mr. Walker. He fell off his horse in March 1888. Aneurysmal symptoms supervened on the left side. Digital compression failed. He would not submit to ligature till May, 1889, when the swelling in the left orbit was of the size of a Tangerine orange and there was marked pulsation in the branches of the ophthalmic vein. The result was similar to that in Case 1, the aneurysmal symptoms being removed, but sight not being regained. The cornea gave way in a month's time and the iris became adherent. Mr. Puzey quoted my views on the pathology of the affection with approval.

CASE 5.—My own case,[2] a fracture of the base of the skull followed by the symptoms of intra-orbital aneurysm and undoubtedly due to arterio-venous communication. Some comments of Mr. Walker on the case I will discuss presently.

CASE 6.—Dr. Dempsey's case,[3] already referred to as a case of aneurysm of the ophthalmic artery in the orbit.

CASE 7.—A male aged fourteen years under the care of Mr. T. Richard Williams and Dr. Robert Jones.[4] The patient received a kick on the left temple. This was followed by the usual symptoms of "intra-orbital aneurysm." The case was diagnosed as one of arterio-venous communication. The carotid was ligatured and a cure resulted.

In the discussion on this case at the Ophthalmological Society some other cases were referred to.

CASE 8.—A male under Mr. Wherry for fractured base of the skull followed by aneurysmal symptoms. The diagnosis was arterio-venous communication. Ligature of the carotid was performed; paralysis resulted, but the aneurysm itself improved, the bruit and proptosis being removed. The paralytic symptoms were attributed to the sudden cutting off of the blood supply from the damaged area of the brain.

CASES 9, 10, and 11.—Three cases under Mr. Tatham Thompson, two being traumatic and in children, and *intra-orbital not intra-cranial* arterio-venous communication being diagnosed. In one case the exophthalmos and bruit entirely disappeared after electrolysis and in the second there was a partial recovery after repeated electrolytic operations. The third case was that of a female aged forty-two years. Eleven months previously a sudden shock or "crashing noise" had occurred in a protracted fit of vomiting during pregnancy. The patient complained of distressing noise, especially when lying down. The bruit was well-marked over a considerable area and a distinct thrill was felt on palpation. Pressure on the carotid lessened the bruit. Vision was reduced to a perception of light. The patient would not agree to ligature of the carotid, and when last seen the condition remained unchanged. The diagnosis was arterio-venous communication in the cavernous sinus.

CASE 12.—A case referred to by Mr. Adams Frost, which he had shown to the Ophthalmological Society in 1883. Here there had been pulsation *in both orbits*, but it disappeared from one. The man was still able without difficulty to follow the occupation of a wheelwright.

The foregoing cases certainly lend no kind of support to Mr. Walker's view that ordinary aneurysm of the carotid artery in the cavernous sinus and not arterio-venous communication is the usual cause of the group of symptoms known as "intra-orbital aneurysm." He does not adduce the results of post-mortem examinations to prove his contention, but relies entirely upon arguments which in the face of the sudden onset of the symptoms, often with noise in the head, and the venous pulsation, and in the face of the pathological evidence in our possession demonstrating traumatic arterio-venous communications and in idiopathic cases, ruptured aneurysm, or aneurysm of the ophthalmic artery in the orbit, and one or two instances of venous obstruction I do not think it necessary to follow for the purpose of further refutation. But before concluding I must correct one or two misconceptions with regard to my own case contained in Mr. Walker's valuable address. For instance, Mr. Walker erroneously states that in this case "electrolysis (I suppose of the distended orbital vein) was used twice." On the contrary, it was not used at all. Owing, I suppose, to the misplacement of a comma by the printer—the comma being placed after the word "unsuccessfully" instead of "cases"—Mr. Walker has mistaken the remark which I made on this point for acceptance instead of rejection of the procedure. "Galvano-puncture, tried twice unsuccessfully in other cases, did not appear to be a suitable remedy for this form of aneurysm." The tone of Mr. Walker's remarks in regard to the injection of perchloride of iron is not so judicial as one could wish, and he has misconceived the bearing of my observations in one or two particulars. For instance, he says: "Acute cellulitis of the orbit set in and became so alarming that on the 15th, *after the propriety of a second injection had been considered*, the carotid artery was tied and, as a matter of course, things straightway began to mend. The failure of the perchloride of iron to cure is said to have been due to the fact that only five minims were injected instead of fifteen, but this hardly tallies with the fact that the lesser quantity seems to have started panophthalmitis." Why these italics, unless they are to emphasise the misconception involved in Mr. Walker's statement that the propriety of a second injection was *considered?* The proper course to alleviate the unexpected symptoms was reviewed in my own mind and I selected ligature of the carotid, whilst in my paper I simply stated *for the reader's information* why a second injection would not have been advisable. I object, therefore, to the italics, to the statement itself, and to the assumption of superiority involved in the phrase: "As a matter of course things straightway began to mend." Neither is there any incompatibility between my view that the injection of a few more minims of perchloride might have produced a better effect on the aneurysmal affection when cellulitis supervened after the injection of the smaller quantity. Anyone can understand that the injection of a few more minims of perchloride might have effected sufficient coagulation to stop the pulsation and bruit. Had the

[1] See THE LANCET, Feb. 14th, 1891.
[2] Transactions of the Medico-Chirurgical Society, 1875.
[3] Brit. Med. Jour., Sept. 18th, 1886.
[4] Transactions of the Ophthalmological Society, 1891.

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vis a tergo thus been removed the severity of the cellulitis which I am inclined to attribute to a leakage through the puncture in the vein would certainly not have been increased and with prompt and complete coagulation inside the vessels might not have occurred at all.

Mr. Walker does not understand how pulsation of the globe could only last a few days and then disappear. The explanation seems to me to be that the first effect of the arterial blood being admitted into the ophthalmic vein and its branches was to produce pulsation of the globe, but as the blood passed more readily through the main channels of the vein and its external branches pressure on the globe was diminished and the pulsation became evident in the branches of the vein between the eyeball and the orbital margin instead of in the eyeball. There is one other observation of Mr. Walker in regard to my case to which I must allude. He speaks of temporisers resting their case on mine, but he omitted to mention the fact that I wrote strongly in favour of ligature and never advocated delay. From my own experience and the consideration of other cases I am disposed to agree with Mr. Walker—although not on the pathological grounds which he advances—that early ligature is, as a rule, the best treatment. Sight may not always be restored after ligature, but I think it will in the generality of cases and that early ligature offers the best and surest method of preventing impairment of vision. Leaving the case to itself may occasionally be followed by a spontaneous or accidental cure or some diminution in the severity of the symptoms, but generally the condition either remains stationary or becomes exacerbated with great impairment or loss of sight. Whilst objecting, therefore, to Mr. Walker's pathological doctrines, which appear to me to be heretical in the extreme on this subject, I am glad that I am in the main in accordance with him on the cardinal topic of the best form of treatment. Since the time of Mr. Nunnely, who did so much to advance our knowledge of the pathology of this interesting form of aneurysm, no one has had so large a clinical experience of cases exemplifying it as Mr. George Walker, and I cannot but heartily congratulate him on the fact that the successful results of his operations have prevented him from having the opportunity of seeing for himself that his view of the pathology of the affection is entirely unsupported by the actual conditions demonstrated by post-mortem examination.

Wimpole-street, W.

IMPACTED URETHRAL CALCULI.

BY ARTHUR COURT, M.B., B.C. CANTAB.

THE following cases of impacted urethral calculi seem to me to present sufficient interest to justify their being recorded.

CASE 1.—This patient was a girl seven years of age who was brought to me three years ago suffering from pain in the abdomen and frequency of micturition. The urine being alkaline and containing muco-pus she was treated for cystitis. One day she was seized with retention and I found an oblong phosphatic calculus impacted at the meatus. It was easily removed and the cystitis was soon better. The stone weighed nine grains. Last January she had another attack of retention and on passing a catheter I could not feel any calculus, but a few days afterwards she again suffered from retention and this time another calculus was removed from the meatus. It consisted of oxalate and phosphate of calcium with a soft core of the same materials intermixed. Sounding failed to reveal anything further and the girl is at present in good health.

CASE 2.—This patient was a man forty-seven years of age and married, his youngest child being nineteen years old. When quite a young man he had an attack of gonorrhœa, but was otherwise healthy up to nineteen years ago, when he met with an accident to the buttocks and perineal region and was for nine months unable to work. He states that no blood was lost from the urethra, but that a catheter was required to relieve the bladder. He cannot remember whether he had any difficulty in micturition previously to the injury. From time to time he had had a discharge of thick fluid from the urethra, a teaspoonful or so coming away on each occasion, and there had been great and increasing difficulty in micturition. Two years ago he was treated for piles. In the beginning of May, 1894, he indulged in large quantities of beer and the retention became almost complete, the pain on micturition being severe and the necessity frequent. When I saw him for the first time on May 19th his pulse was quick and his temperature normal. There was no discharge from the urethra and when he was requested to pass urine only a few drops escaped. It was clear, acid, and free from albumin and sugar. There was a distinct thickening in the perineum behind the scrotum, and the prostate gland as felt per rectum was slightly enlarged but not tender. The introduction of a No. 8 catheter was attempted, but it was arrested at a point corresponding with the thickening felt externally, and all the smaller-sized instruments were subsequently tried, including a No. 1 silver catheter, but nothing could be guided through the stricture without using undue force. A hot bath, a dose of opium, and a mixture of sulphate of magnesia and henbane were ordered, and on the morning of May 20th the patient's condition was much the same, the urine dribbling away when he strained, but in the evening the retention was complete and was attended by great pain. No elastic instrument could be passed, but after persevering for some time a No. 1 silver catheter went through the stricture and a rough grating sensation was communicated to it when overcoming the obstruction, so that I feared a false passage had been made; after the catheter was withdrawn about four drachms of thick muco-pus escaped. On May 21st the catheter was passed again and was retained all day, the same grating sensation being experienced. On the 22nd the No. 1 catheter was passed and was kept in. On the 23rd three small calculi came away, together with a large quantity of muco-pus; a No. 2 elastic catheter was introduced and retained for four hours. On the 24th three more calculi were expelled and a No. 2 catheter was tied in, but withdrawn on the 25th. On the 26th, as the patient had passed no urine since the previous day, a No. 2 catheter was passed through with some difficulty, the same grating sensation being felt as before. On the 27th a No. 3 catheter was passed and kept in for four hours; nine calculi followed the first attempt at micturition after its withdrawal. On the 28th a No. 3 instrument was passed, but no grating was felt. On the 29th a No. 3 bougie was retained for two hours and five more calculi followed its withdrawal. On the 30th the patient had retention all day and a No. 3 catheter was passed in the evening; about two ounces of muco-pus and three more calculi came away on the first attempt at micturition after its withdrawal. Between May 31st and June 6th bougies Nos. 4, 5, and 6 were passed. On June 6th while the patient was passing urine the stream suddenly ceased and he felt confident that another calculus was caught in the stricture, but I could feel nothing with a No. 5 bougie. On the 7th Nos. 5, 6, and 7 bougies were passed, but no calculus was felt, nor was there any grating. On the 8th a calculus was passed weighing a little over two grains. The stricture was subsequently dilated up to No. 12, although not without several relapses, and no more calculi were seen. The twenty-four calculi which were voided weighed twenty-six grains and are all similar in appearance and composition, being a mixture of calcium carbonate and phosphates.

CASE 3.—This patient was a pit lad aged eleven years. His father died from vesical calculus, and a sister is now under my care with renal colic and hæmaturia. Three years ago his mother noticed blood in his urine. He had typhoid fever in September, 1894, but he had not since then suffered from any pain or hæmaturia, and was quite well until midday on March 8th, 1896, when he found that micturition had become impossible. He was brought to me on the following day, not having passed urine for nearly twenty-four hours, and an oblong calculus (fixed transversely across the urethra) was then presenting at the meatus. It was easily removed with forceps, and immediately behind it was another calculus firmly fixed, which could not be removed until it had been broken up. Free urination promptly followed, and no other calculus could be detected in the bladder. The one which was removed entire weighed three grains. It was formed of uric acid with a nucleus of blood-clot.

Cases 1 and 3 are instances of the position in which calculi are most frequently arrested when they enter the urethra of children, and consequently they call for no further comment; but Case 2 is interesting because it is unusual for a man to have a stricture for nineteen years without permanent damage being done to his bladder or kidneys. The

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grating felt on passing the catheters was no doubt due to their coming in contact with the calculi. The man had never before passed a calculus, and they seem to have been formed primarily in the prostate and then to have found their way into the pouch behind the stricture. The smaller stones came through the stricture first, and last of all the largest stone, which was evidently impacted in its first attempt at escape.

Staveley, Derby.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF RUPTURE OF THE UTERUS.

BY S. WILKINSON, M.R.C.S. ENG., L.R.C.P. LOND., L.M.S., L.M. COOMBE HOSPITAL, DUB.,
HONORARY SURGEON TO THE BIRKENHEAD LYING-IN HOSPITAL AND LADIES' CHARITY.

ON April 11th I was called to a woman whom I found in the following condition. She had very severe hæmorrhage, but no pains. The os admitted four fingers. She had placenta prævia centralis; the presentation was a vertex one and the head was very large. I separated the placenta as far as I could and in the meantime sent for an assistant to administer chloroform. Under the anæsthetic I easily obtained possession of a foot by separating one side of the placenta and brought it down through the os. As there were no pains I made traction on the foot with a cloth for about twenty minutes or half an hour. As the bleeding continued and there were still no pains I brought down the second foot and left the body for a little while in the os. I was then able to bring down the arms at short intervals, and, finally, after another wait, I delivered the head with face posteriorly and to the right. The hæmorrhage then ceased, and as I felt the placenta loose in the vagina I removed it with my fingers. Chloroform was given only at intervals and was ceased before the delivery of the head. Six drachms were given. The patient rallied, took some ergot, and assisted us with the placing of the binder and asked if all was over. She then became restless, and after about twenty minutes we saw that death was threatening and informed the friends. The restlessness had brought on fresh hæmorrhage. More ergot was given and ice was placed in the vagina, and the uterus felt for from the outside. Owing to the abdominal fat, however, it could not be felt. The pulse was 96 and hardly to be perceived, partly on account of the super-imposed fat. The patient died two minutes after we had informed her friends. No transfusion apparatus was at hand. The friends, supposing that she had died under chloroform, charged us with her death, and, becoming maniacal, assaulted us. They seized the ornaments and attempted to strike us. The midwife (who sent for help immediately on seeing the case) was seized and would have been hurt but for our interference. At last we were obliged to send for the police to assist us to recover our belongings, and extricate the midwife from the corner of the room where she was penned up. It was reported to the police and to the whole neighbourhood that we had murdered the woman with chloroform. On this account I thought it best that an inquest should be held; otherwise I should have given a certificate.

At the necropsy a rupture of the cervical and uterine tissues was found four inches in length and opening into the right broad ligament. The extravasated blood separated the layers of this, and I believe that during the subsequent restlessness the peritoneal covering burst, as was found. The immediate cause of death was hæmorrhage. The delivery took me about an hour and a half to accomplish, during which time bleeding continued at intervals. After the arms were brought down I felt the os and it was then intact. The rupture, which I did not suspect, must have been caused by the passage of the large head, probably by the face (which was born first) passing over that site. The papers had the case reported as "Death under chloroform," but the resumed inquest entirely relieved me from this charge, though the report has certainly done me harm.

Birkenhead.

*** Mr. Wilkinson's case affords a very good example of the reckless allegations which get into the public press concerning the use of anæsthetics. To report this death as one of "death under chloroform" was entirely unjustifiable. Looking at the facts of the case it may be questioned whether, having brought the leg down, it would not have been better to have waited, giving ergot meantime, until pains came on, which must have happened sooner or later.—ED. L.

THE LOCAL TREATMENT OF DIPHTHERIA WITH SODIUM HYPOSULPHITE.

BY HENRY A. WICKERS, L.R.C.P. LOND., M.R.C.S. ENG.

I HAVE for some time been using a solution of sodium hyposulphite as a local application in diphtheria and have been well satisfied with the results, three or four applications having generally been sufficient to clear away the false membrane. The solution is prepared for use by mixing equal parts of pure glycerine and a saturated solution of hyposulphite of sodium in water and is applied with a brush to the exudation and inflamed fauces once or twice daily or as often as may be deemed necessary. The glycerine by its adhesiveness keeps the solution longer in contact and also by its well-known local action helps to relieve that engorgement of the mucous membrane which seems especially favourable to the growth of exudation. It is probable that the hyposulphite has a continuing action as a germicide in the following manner: chemical decomposition is first set up by contact with the acid secretions of the mouth and throat, sulphur and sulphurous acid in a nascent state being set free; the latter being gradually converted by oxidation into sulphuric acid would in the same manner decompose further portions of unchanged hyposulphite, and so on until the hyposulphite was exhausted. Of course, this local treatment will not interfere with the general treatment, which must be adapted to the necessities of each individual case.

Upper Tollington-park, N.

A CASE OF ANTIPYRIN ERUPTION.

BY H. W. WEBBER, M.D. LOND.

THE patient was a woman aged fifty-three years who had two months previously undergone supra-vaginal amputation of the cervix uteri for cancer. On Dec. 7th, 1895, I found the entire surface of her body covered with a copious eruption exactly resembling in appearance that of a severe case of measles; the face and eyelids were also swollen. The temperature was 101·4° F. and the pulse 102. She had been taking ten-grain powders of antipyrin twice daily for the previous three weeks for the relief of pain extending down the right thigh. These had produced no ill effect, but it appeared that on the evening of Dec. 5th she had eaten some unwholesome food, the results of which no doubt interfered with the proper elimination of the drug. Three grains of calomel and a mixture of ammonium acetate were prescribed, and the next morning the skin was almost free from eruption, the swelling of the face had subsided, and the temperature had fallen to 98°. The antipyrin was omitted and pills containing a quarter of a grain of morphia were substituted. Finding, however, that these did not relieve the pain so well as the antipyrin had done, after a few days the patient re-commenced taking the powders. After the second dose swelling and redness of the face came on and she had again to leave them off. No symptoms of cardiac depression appeared to be produced by the drug in this case.

Plymouth.

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A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

NORTH-EASTERN HOSPITAL FOR CHILDREN.

A CASE OF UNILATERAL BRONCHIECTASIS TREATED BY RESECTION OF A RIB AND PARACENTESIS.

(Under the care of Dr. W. A. WILLS.)

THIS case is one which serves well to draw attention to the peculiarities presented by some cases of bronchiectasis and the not unusual difficulties encountered in their treatment whether by medical or surgical means. There are such obstacles at times to the formation of an exact diagnosis during life that it is possible some surgeons have taken too favourable a view of the advantages of pulmonary incision and the insertion of a drainage-tube. In this division of surgery, as in others, very much depends however on the selection of the case and the medical attendant's judgment as to the best time for operation. There is sometimes, perhaps, too great a tendency to postpone operation. The questions which suggest themselves on perusal of the case are fully discussed by Dr. Wills whose remarks we commend to the attention of our readers. For the notes of the case and the report of the post-mortem examination we are indebted to Mr. G. M. Edwards, M.B. Cantab., late house physician.

A thin, miserable-looking boy nine years of age was admitted into the North-Eastern Hospital for Children, Hackney, on March 13th, 1895, for chronic cough accompanied by profuse and offensive expectoration. The family history gave no record of phthisis on either side. Both parents at that time were alive and healthy. The boy was stated to have been "wasting and coughing" for about two years, for the last few months of which his breath and expectoration had been so offensive that his mother could hardly bear to be in the same room with him. He had had measles when two or three years old, but no other illnesses. No history of any inhalation of a foreign body was obtainable.

On his admission to hospital the patient was found to be a pale, emaciated boy, very dirty, with several impetiginous sores about his body. The ends of the fingers and toes were of a bluish colour and markedly clubbed. The temperature was 99·2° F. The chest was thinly covered and markedly deformed, the sternum being unduly prominent and the lower ribs much flattened laterally. The two sides were symmetrical. The respiratory movements were much modified, elevation being excessive, and expansion almost absent. The percussion-note over the whole of the left chest was hyper-resonant. On the right side, in front from the clavicle to the fourth rib, the percussion-note was absolutely dull, but over the remainder it was impaired. Posteriorly there was impaired resonance over the upper half and absolute dulness over the lower half of the same lung. On auscultation the breath sounds over the upper half of the right lung, both in front and behind, were tubular in character, and accompanied by numerous coarse râles heard both with inspiration and expiration. In the upper part of the axilla the sounds were almost cavernous and the râles very numerous, some bubbling and some metallic in character. Over the lower half of the lung the breath sounds were very weak and distant, and at the base posteriorly they were inaudible. Over the apex anteriorly and in the upper part of the axilla there was well-marked whispering pectoriloquy. Breathing over the left lung was everywhere harshly vesicular and free from adventitious sounds. Cardiac dulness was absent; impulse could not be felt. The heart sounds were normal in quality and position, and the pulse was 84 and regular. The breath was very offensive, but the tongue was fairly clean. The bowels were regular and the appetite was fair. The abdomen was rather prominent; the liver was enlarged, its edge being three fingers' breadth below the costal margin, and the spleen was slightly enlarged. The urine contained a large quantity of albumen, The patient was ordered a mixture of carbonate of ammonia, ether, oil of turpentine, and chloroform water; and also to wear at intervals a respirator charged with creosote.

On the 20th, seven days after admission, the breath was slightly less offensive. The sputum was very profuse and offensive, coming up in large quantities after a paroxysm of coughing. These paroxysms occurred five or six times in the twenty-four hours. In the intervals between these the boy was comfortable. There was no night sweating and the patient was bright and cheerful, The temperature kept about normal. On the 30th the patient's general condition remained unaltered. The sputum averaged from eight to ten ounces in the twenty-four hours. After standing it separated into three layers, the lowest being almost pure pus, the middle a fairly clear fluid, and the uppermost frothy and fermenting. Beyond slight variations in the extent of area over which whispering pectoriloquy was obtainable the physical signs remained unaltered. At the beginning of April the temperature ran a somewhat higher course, averaging about 99·0°. On April 16th, the physical signs continuing unchanged and pointing apparently to the presence of a cavity in the upper part of the right upper lobe, and there having been no diminution in the fœtor or quantity of the sputum as a result of the treatment, and tubercle bacilli being apparently absent, Dr. Wills asked Mr. Bilton Pollard to see the boy with a view to attempting drainage by surgical means. On the 18th it was decided by Dr. Wills and Mr. Pollard to try operative measures. The temperature at that time ranged daily between 98° and 101°. For a week daily observations were taken and marked on the boy's chest as to the situation and extent of the supposed cavity, this being mapped out as occupying the second and third interspaces in front and extending outwards to the upper part of the right axilla. On the afternoon of the 27th the boy was taken to the operating theatre, and anæsthetised. Mr. Pollard then resected a portion of the third rib in the axilla and found the visceral and parietal layers of the pleura adherent at this point. With a trocar and cannula a number of exploratory punctures were then made into the lung in the direction of the supposed cavity, and finally into different parts of the affected apex; none of these punctures, however, resulted in the discovery of any cavity, nor did any pus appear in the cannula. The wound was then lightly packed with iodoform gauze, and sal alembroth gauze and wool dressings being applied the patient was sent back to bed. During the whole operation the boy was kept lying well on the affected side to obviate the flow of pus from the diseased lung into the bronchi of the healthy lung. Care was also taken to keep him in this position until he had quite recovered consciousness. Throughout the operation an almost continuous stream of horribly offensive pus trickled from the mouth and nose, this towards the end of the operation being blood-stained. The boy took the anæsthetic (chloroform) well. On the 28th the temperature in the morning was 99·8°. The sputum was brightly blood-stained. The patient seemed none the worse for the operation. On the morning of the 29th he was not quite so well. The pulse was 108 and the temperature 101·2°. The wound was healthy. There was no discharge. On May 1st the temperature was 101·2°, the pulse 112, and the respirations were 30. The sputum was rusty. The cough was frequent and the patient was decidedly worse. During the following night the temperature reached 103·4°. On the 2nd the morning temperature was 100°, the pulse 128, and the respirations were 40. The boy was much worse and was evidently sinking. Early in the morning of the 3rd he became delirious, the temperature being 101·8° and the pulse 140. Death took place at 4.30 P.M.

Necropsy.—The body was found to be emaciated. There was a surgical wound in the right axilla leading to an opening through the chest-wall into the lung. This opening was formed by the resection of a portion of the third rib. The right pleura was adherent generally over the upper half of the lung, but fairly free below. The right lung was small and shrunken, dark reddish-brown in colour, and of a tough leathery consistence, sinking in water and quite airless. On section it was found to be consolidated from apex to base; the distinction between the lobes was quite lost. The bronchial tubes were all dilated and had thick, tough walls; the dilatation was regular and no tendency to

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sacculation was seen anywhere, the result being a series of branching tunnels varying in size from a crowquill to that of the little finger. The tubes in the upper half of the lung contained fluid pus, but towards the base the contents became thicker and thicker, the lowermost being blocked up with a thick, cheesy, and excessively fœtid material which could hardly be squeezed out of them. The left lung was large and showed marked emphysema, but was otherwise quite normal. The liver and kidneys were extremely fatty. The brain was not examined.

Remarks by Dr. WILLS.—I have reported this case of operation on a patient suffering from bronchiectasis for two reasons—first, because even now the number of recorded operations is not very great; and, secondly, because it well illustrates the difficulty of diagnosis which seems to be ever present in persons suffering from this complaint. In this instance the mistake in diagnosis consisted in the conclusion that there was a single definite cavity which could be reached surgically, whereas there was general bronchial dilatation, but no specially dilated bronchus to which the term cavity could be applied, and the physical signs of a cavity had been produced by consolidated lung surrounding a series of branching bronchial channels. Why the signs of excavation should have been localised to a spot at the upper part of the axilla, where the conditions giving rise to such physical signs appear to have been present throughout the lung, I confess I cannot now understand. That the boy was suffering from bronchiectasis and not phthisis was tolerably clear from the unilateral nature of the physical signs—the character of the sputum, the manner of its expulsion, and the absence of tubercle bacilli and to some extent from the history of the onset. There seemed no reason to suppose that the affection originated from a foreign body inhaled into the lung, as there was no account of such an accident having occurred, and the part of the lung apparently most affected being above rather than below the level of the main bronchus also made it unlikely that the cause was of this nature.

That there is often much difficulty in coming to a correct conclusion as to the exact condition present in the chest of patients with symptoms such as those above described is well shown by the discussion which took place on the paper by Dr. C. T. Williams and Mr. Godlee describing two cases of bronchiectasis treated by tapping and drainage,[1] which is referred to again shortly. Dr. Goodhart described a case of unilateral general bronchiectasis and localised empyema secondary to the inhalation of a pea into the bronchus, which he mistook for pleural effusion. In another case the side affected with bronchiectasis was thought to be the seat of pneumonia. Dr. Percy Kidd quoted a case where bronchiectasis was thought to be present in only one lung, but where it was afterwards proved to be double. He referred to the difficulty in deciding the existence of pleural adhesions. Dr. Cayley emphasised the importance of the existence of solid lung surrounding the cavity and its probable association with pleural adhesions. He also remarked on the liability to abscess of the brain in these cases. Dr. Bies thought the danger from septic poisoning so great that an operation should always be considered. Dr. Barlow and Dr. Coupland quoted similar cases to Dr. Goodhart's and Mr. Gould referred to the difficulty of determining the relation of the cavity to the spot where the physical signs are most marked, stating that he thought preliminary aspiration was a necessary step in diagnosis. These remarks appear to me to show very clearly how great are the practical difficulties the physician meets with when attempting to decide if a particular case is a suitable one for operation and in selecting the most suitable spot for the operation.

Surgical proceedings have been undertaken now in a sufficient number of cases to enable one to appreciate the advantages and disadvantages of such treatment. It may be interesting to shortly summarise a few of these cases. Dr. C. T. Williams[2] describes a case of bronchiectasis affecting the right lung generally, but with one specially large saccule in the lower and sternal part of the upper lobe. This was tapped after making a skin flap. Diminution of expectoration occurred for a few days, but then symptoms of pyæmia came on, and death occurred about six weeks after the operation. Dr. Williams and Mr. Godlee report two cases.[3] In one, a man aged sixty-seven years, the disease was quite localised and the result very satisfactory; in the other, a woman aged twenty-one years, the bronchiectasis was more generalised, and here the surgical treatment was more difficult and the effect less successful. Another case was also mentioned of a boy aged thirteen years with unilateral but somewhat extensive bronchiectasis, where a cavity was reached by puncturing to a depth of about four and a half inches. The result two years later was fair. Two other cases under Dr. Williams were also referred to in which death occurred shortly after the operation. His conclusions are that the operation is indicated—(1) where antiseptic treatment had failed and death from septic pneumonia appeared imminent, and (2) where the bronchiectases are confined to one lung, are in the lower lobe, and the overlying pleura is adherent. Dr. Douglas Powell[4] relates the case of a man aged forty-nine years with several bronchiectatic cavities in the lower lobe of the right lung. Mr. Lyell opened the lowest of these after finding pus by exploration in the eighth intercostal space. The patient was *well turned on the opposite side* during the operation. There was free drainage for a time and much improvement, but afterwards great difficulty in maintaining drainage. The man got gradually weaker, pleuro-pneumonia (? infective) affected the other lung, and he died. Post mortem it appeared that the lowest of several intercommunicating bronchiectatic cavities had been tapped, and that as the lung contracted the drainage had been interfered with. In the remarks on this case stress is laid on the difficulty in diagnosing between bronchiectasis and empyema, and Dr. Powell emphasises the importance of bulging of the chest-wall and distension of the interspaces in empyema as against flattening and retraction in bronchiectasis. He considers it desirable to operate over the centre of the physical signs, not over the lowest point. With regard to apex cavities Dr. Powell says the advisability of operating is doubtful, as from their position the drainage from them is efficient without operation, but he admits that the symptoms are sometimes ameliorated. It seems likely that this improvement is due to the absence of irritation of the neighbouring bronchi by the fœtid secretion in its course towards the main bronchi previously to its expulsion by coughing. Dr. Biss[5] reports a similar operation on a man aged thirty-two years, suffering from multilocular bronchiectasis of the right lung. In this case, also, the patient was turned on to the left side "as far as could be done without embarrassment to his breathing." There were firm pleural adhesions and much pleural thickening. The cavities contained a quantity of mortary, fœtid material; one of the largest cavities was tapped. The cardiac apex was displaced one inch to the left, and for the first fortnight the patient was under observation the physical signs were those of fluid. For a time there was considerable improvement in the lung symptoms, but death occurred a month after the operation from infective brain abscess and meningitis. Mr. Rickman Godlee, in a series of lectures on the Surgery of the Lungs,[6] quotes a very similar case to mine, where the physical signs were clearly those of a cavity beneath the fourth right intercostal space in front. A puncture was made with a trocar, but no pus was found. However, an incision was made, but no cavity or pus was found. The patient was lost sight of after the wound was healed. Mr. Godlee mentions the importance of thoroughly exploring before proceeding further. He also quotes several successful cases of draining basic cavities, probably resulting from pneumonic abscess. The conclusions drawn by Mr. Godlee are that bronchiectatic cavities when single (rare) will be cured by operation, when multiple (common) they offer but small chance of relief by our present surgical methods. An attempt, however, may be made to open the main cavity, if such can be found, but only if the pleura be adherent. Tuberculous cavities should only be opened in cases where the cough is harassing and the cavity single. Sonnenburg[7] describes operations performed on tuberculous cavities, combining this treatment with injections of tuberculin. He obtained fairly satisfactory results from the operation enabling the diseased tissues to be thrown off when affected by the tuberculin reaction, and a granulating cavity left. But he considers that the disease should be local and not chronic and stationary, as such cases are better left alone. Five cases are reported, three of which

[1] Transactions of the Royal Medical and Chirurgical Society, vol. lxix., 1886. [2] THE LANCET, Dec 30th, 1882.
[3] Transactions of the Royal Medical and Chirurgical Society, vol. lxix., 1886.
[4] Ibid., vol. lxiii., 1880.
[5] Ibid., vol. lxvii., 1884.
[6] THE LANCET, March 5th, 1887, et seq.
[7] Deutsche Medicinische Wochenschrift, 1891.

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were nearly well at the time of the lecture; but this was soon after the operation, and it seems difficult to believe that cases can be found where the tuberculosis is so strictly localised that a single operation would reach all the foci. Obviously the later history of these cases is wanted before a judgment can be formed on this method of treatment.

Admitting the desirability of surgical treatment in such cases as may be suitable, as I think all the evidence fairly justifies us in doing, there then remain certain points which have to be considered before coming to a conclusion on the matter. I will now enumerate them. Determination of (1) the existence of a cavity, or whether the symptoms and signs are due to pleural effusion or pneumonia; (2) the locality of the cavity or cavities; (3) the number of cavities and their depth, and the presence or absence of general bronchial dilatation; (4) nature of the cavity, whether tuberculous or bronchiectatic; (5) whether the cavity be in the lung or the symptoms be due to an empyema which has burst into the lung; (6) the presence or absence of a foreign body; and (7) the existence of adhesions. There are also certain more surgical points to be considered—namely, the best position of the opening for drainage, and in the case of apex cavities especially, whether it is possible to establish by operation better drainage than the natural drainage into the main bronchus which already exists. This natural drainage is, however, often not so good as one might expect from the relative position of the cavity and the bronchus. It will not, perhaps, be out of place to emphasise here the importance of not turning the patient over on to the sound side during operation and after anæsthetising, on account of the very real danger of the flow of pus from the affected side into the bronchi of the sound side. If this should take place, death, either from immediate suffocation or from infective pneumonia occurring during the next few days, is an almost certain result. The determination of the points mentioned above must be left to the acumen of those concerned with the case, but if a mistake is made in diagnosis and consequent treatment they have at least the satisfaction of knowing that they are in very good company, and that similar mistakes have been made, and probably will continue to be made, by even the most skilful practitioners of the healing art.

Medical Societies.

HARVEIAN SOCIETY OF LONDON.

Exhibition of Specimens.—So-called Vitiligo.—Some Cases of Syphilis in Children.—Psychroæsthesia.—A Case of Cretinism.—Left Hemianæsthesia with Paralysis of the Left Side of the Palate.—Chronic Rheumatoid Arthritis.

A MEETING of this society was held on May 21st, Dr. GOW being in the chair.

Dr. TRAVERS SMITH showed for Dr. Macevoy a man aged fifty-seven years whose Skin had lately become generally Pigmented, the parts most deeply pigmented being the face, the shoulders and backs of the arms, the external aspect of the legs, a narrow line running over the spine, and a broad belt spreading from over the scapulæ to the front of the thorax and passing underneath the axillæ, where, by contrast, the skin appeared quite pale. The darker areas, with the exception of the thin line over the spine, were more or less thickly studded over with circular or oval white patches, varying in size from that of a hemp-seed to that of a split-pea. On the legs most of these spots were distinctly below the level of the surrounding dark skin and were anæsthetic. The man complained that for the last six months his appetite had been flagging and that his skin had been irritable. He denied having had syphilis or small-pox, or, indeed, any eruption, but said that he heard that when a child he had had the "cow-pox."—Dr. T. D. SAVILL expressed the opinion that the case presented the concluding stage of prurigo, by which he meant a disease attended by severe itching accompanied by small papules and erythematous blotches. Such cases were frequently followed by considerable pigmentation around the seats of the original skin lesions, and the diagnosis was in this case supported by the history and the irritation from which the patient still suffered, which were absent in vitiligo. The position across the shoulders and its characters here favoured the idea that the prurigo in this instance had been originally initiated by pediculi.—Mr. JACKSON CLARKE observed that the lesions in this case were not scars, but due to pigment atrophy as in leucoderma or vitiligo. In several particulars the case differed from average cases of leucoderma. In the first place the lesions were smaller and tended to run in streaks; then the patient was much older than was usual at the commencement of the disease, and then again the affection was attended with marked pruritus, which was not the rule.

Mr. JACKSON CLARKE showed three cases of Syphilis in Children. The first patient, a little girl aged three years, had probably acquired the disease after birth, seeing that the mother was treated for a hard sore when the child was three months old, and that when she first came for treatment, at the age of twelve months, she had a general superficial eruption. She had done well on mercury inunction. The second case was that of a healthy-looking girl aged twelve years. Three years ago she had small gummata of the tongue. These ulcerated, and had left fissures and a superficial glossitis. There were typical Hutchinsonian teeth. When first seen the child was almost blind from interstitial keratitis, though at the present time the corneæ had a normal appearance and the patient could see well. She had been kept steadily on iodide. The third case was that of a baby aged ten months, who had been under treatment for three weeks. When first seen she was extremely asthenic and anæmic and there were mucous tubercles at the anus. There was no enlargement of the liver and spleen. Half a drachm of mercury ointment had been rubbed in over the lower part of the abdomen every night and she had gained greatly in strength.

Mr. HUBERT C. PHILLIPS showed a girl twenty-five years of age suffering from Cretinism. The patient was in good health until she was six, when she moved from Kent to London. It was a typical case. The weight and measurements had much diminished since the commencement of treatment by thyroid tabloids, of which she is now taking fifteen grains a day. Coarseness of the skin and hair is much less marked and strength is increased, the only objectionable symptom during treatment being cephalalgia. The patient is 3 ft. 10 in. in height.

Dr. LEONARD GUTHRIE showed a man aged fifty-two years suffering from Psychroæsthesia (Silvio's). The symptoms were of four years' duration and dated from the occurrence of a loose cartilage in the right knee-joint. They consisted chiefly of constant subjective sensations of extreme and painful cold affecting the whole of the right lower extremity at first, but recently extending to the right arm and left leg to a less degree. The right thigh and leg were somewhat wasted. There was no local tenderness or anæsthesia over the course of the nerves. The electrical reactions were normal, but he showed a remarkable tolerance to strong faradaic currents. Tactile sensations were perfect and also appreciation of heat and cold. The application of heat relieved whilst that of cold intensified the symptoms. There was no actual loss of temperature in the limb and no œdema. The knee-jerks were normal and muscular sense was perfect. He regarded the case as possibly one of early syringomyelia.—Dr. SAVILL thought the case was one of extreme interest and that its features had been most lucidly brought before the society. He agreed with the diagnosis of syringomyelia. Although the symptoms of this disease usually begin in the arms, he had seen a case which had started and predominated, as this one had done, in the lower extremities. The patient was a female aged twenty-nine years, who was admitted under his care into the Paddington Infirmary for paraplegia. The symptoms had started with a numbness and weakness of the feet, followed later by numbness and weakness of the hands. The paresis always predominated in the legs, though the patient could walk a few steps on admission. A few weeks after admission she suddenly fell back in bed and died. At the necropsy the central canal of the spinal cord was found to be dilated from end to end and surrounded in the upper half by a small-celled gliomatous new growth, which by its extension into the medulla had produced sudden death.—Dr. CAGNEY congratulated Dr. Guthrie on the very admirable summary of clinical facts he had given the society. The inference which Dr. Guthrie based upon these facts—viz., the diagnosis of early syringomyelia—was, after all, but matter for speculation, since the early symptoms of that disease, he submitted, had not been adequately observed. It was equally true that the interesting case before the

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society did not closely conform to any clinical type at present recognised in text-books, but was doubtless one of a very large class with which riper experience would make us familiar. He was not himself disposed to assign a special cause to the symptoms. He pointed out that the wasting paralysis was approximately hemiplegic in character. Extensive, albeit unusual, sensory change was a combination suggestive of cerebral disturbance. He did not suppose that in such a case any change would be found post mortem.

Dr. LEONARD GUTHRIE also showed a woman aged twenty-eight years suffering from Hemianæsthesia and Hemianalgesia of the Left Side of the Head, Face, Neck, and Chest to the level of the third rib, and of the whole of the left upper extremity. She had also double rotatory nystagmus, with marked restriction of fields of vision, the left being most affected. These symptoms were of about three months' duration. Within the past month she had suddenly developed paralysis of the left side of the palate with regurgitation of fluids through the nostril and markedly nasal voice. There was no history of sore-throat, no other motor paralysis, and the knee-jerks were normal. Painless bullæ had appeared from time to time on the fingers of the anæsthetic hand. The symptoms were regarded as functional, but he thought that they might be forerunners of disseminated sclerosis.

Dr. KNOWSLEY SIBLEY showed two cases of Rheumatoid Arthritis successfully treated by the hot-air method. The first, a woman sixty-six years of age, came under his care at the North-West London Hospital in 1892, having previously been under treatment at another hospital. At this time she had considerable enlargement of all the fingers of both hands. These were quite fixed and very painful. The movements of the wrists were also very limited; so also was the right elbow. The knees and shoulders were also enlarged and painful. The patient attended for many months, and although a large number of drugs and remedies were tried she gradually became worse and had to give up her occupation. Then she was unable to dress and finally unable to feed herself and was becoming more hopeless every day. At this time, Aug. 1st, 1894, one of the Tallerman-Sheffield hot-air cylinders was brought to the hospital and this new treatment was prescribed. After the first application the pain was considerably relieved and the joints showed some improvement. After the fourth application the patient, who had been unable to follow her business for many months, was again able to use her needle. After the eighth application with the exception of the right index finger all the others could be flexed without much difficulty. On Aug. 24th, after the ninth operation, the patient reported she had resumed her occupation and she was able to walk up and down stairs without pain. The patient continued under this treatment till Sept. 13th, having then had twenty baths, when she considered herself practically cured, but as the apparatus was still at the hospital she had an occasional bath up to the end of October, 1894. From that date to November, 1895, she continued at her work and with the exception of minor ailments suffered no inconvenience from her former trouble. At this time she again complained of pain and stiffness in the right hand, so three more baths were prescribed; she again rapidly improved, and from that time to the present has continued much as she now is and has not relapsed. The other case was a woman aged sixty-nine years. For some years her hands had been painful and the joints enlarged. She first came under Dr. Sibley's care at the hospital on April 22nd, 1896. Her knees and ankles were somewhat stiff and painful, but the hands were chiefly affected; all the finger-joints were much enlarged; she also suffered much from bronchitis and asthma. This patient had now had fifteen baths, with the result that her knees and ankles were much less painful and her hands much less swollen; so, also, her cough and general nervous condition had greatly improved. Dr. Sibley explained that the treatment consisted in placing one limb, usually the most affected one, in a cylinder heated to about 150° F., and this temperature was gradually increased up to about 240°. The limb was allowed to remain in for about forty minutes. During this time the patient usually perspired freely from the limb, and, in fact, from the whole body. The temperature as taken in the mouth rises one or two degrees, and the frequency of the pulse is also increased. About a quarter of an hour after the limb is removed the temperature returns to what it was before the treatment. The pain in the affected and other parts was greatly relieved, and the patient experienced a considerable feeling of relief generally; especially it was noticed that the bronchitic condition, which so often accompanies this affection, was also much benefited.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Notes on Ovariotomy.

A MEETING of this section was held on **May 1st**, Sir W. THORNLEY STOKER, President, being in the chair.

Sir WILLIAM STOKES read a paper on Ovariotomy based on the results of the last twelve cases he had operated on, ten of which were brought to a successful issue. After pointing out that in the modern evolution of abdominal surgery ovariotomy stands out in boldest relief and referring to the early cases of Clay, Spencer Wells, and Baker Brown, he described the treatment preparatory to operation and quoted with approval the views of Professor Ashton of Philadelphia on this subject. He then discussed several points in connexion with the *technique* of the operation, such as the question of a free or a limited incision, the mode of dealing with adhesions and with the pedicle, the variety of ways in which the ligature may be employed and in which sutures may be inserted, and, lastly, the rules that should be observed in the subsequent treatment. He concluded by remarking that the operation ought not to be regarded as belonging exclusively to the limited province of the specialist, but might be undertaken with confidence in the great majority of instances in a general surgical hospital.

Mr. TWEEDY did not think that general surgeons should perform the operation of ovariotomy. Was the general surgeon prepared to operate on a fibro-myoma in which there might be extensive adhesions to the intestine, bladder, and ureter? Was he aseptic enough? A general surgeon meets every day with septic cases and has his hands bathed in pus. As regards the operation for ovarian tumour there was generally no difficulty in it when once it was diagnosed. The only way to diagnose an ovarian tumour was to feel the pedicle and the round ligament. The person who diagnosed the case should operate on it. The necessary asepsis could only be obtained in a room wholly set aside for abdominal surgery, and not in an ordinary operating theatre.

Mr. WILLIAM THOMSON said that Sir William Stokes had rightly claimed that these cases should be operated upon by the general surgeons. Mr. Tweedy's claim was for the gynæcologist, but when it came to a question of septic hands the gynæcologist was at no advantage in that respect after his morning's examination of his cases. If a general surgeon was unfit to open a serous cavity because of the state of his hands, then he ought not to operate at all or touch a wound; but, in spite of this supposed inability to have aseptic hands, septicæmia had been practically banished from general hospitals. Mr. Tweedy claimed that the case ought to belong to the person who diagnosed it—meaning the gynæcologist. But this assumed that no one else could diagnose an ovarian tumour and that a gynæcologist was necessarily able to operate. This claim was an impossible one. The gynæcologists had been taught by the general surgeon, to whom were due the splendid developments in abdominal surgery.

Dr. WINIFRED DICKSON said that a gynæcologist did not meet with much pus because the general rule was that the patient was douched before being examined. The vagina did not generally contain streptococci or staphylococci, and the gonococcus was not particularly dangerous in the peritoneum. If a case was suspected to be one of cancer it was not examined on the day of an operation. As a general rule gynæcologists operated early in the morning before going round the hospital. She thought nobody used Spencer Wells' trocar now. One point about the after-treatment not mentioned by Sir William Stokes was that the sooner purgatives were begun the more quickly the patient seemed to recover. A great many operators gave a purge twelve hours after the operation.

Mr. LENTAIGNE said that in cases of laparotomy the shock could be lessened by avoiding injury to the peritoneum by a foreign fluid. He now always douched and irrigated with sterile normal saline solution. In suturing the wound he first sutured the peritoneum and then the layers of the abdominal wall with silk, and, lastly, the skin with catgut. He then sealed up the wound with celloidin and used no

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ressing except to prevent it from being rubbed by the edclothes. The wound could be seen through the transarent celloidin. The celloidin was a great improvement in he treatment of strictly aseptic wounds. He thought it ıade no matter whether a man was a general surgeon or a ynæcologist; if he was a good surgeon he should do ovariotomy all right. The best method of rendering the hands septic was to use oxalic acid. If an operator opened the ıtestine it might easily be as bad as if he had touched some ıs, still he could make his hands clean and finish the peration. He could not altogether agree with Dr. Dickson's inion that the gonococcus is not dangerous.

Sir WILLIAM STOKES, replying, said that Mr. Tweedy tated that unless the pedicle could be felt an ovarian tumour ould not be diagnosed. A considerable number of ovarian umours, however, had no pedicle at all.

Reviews and Notices of Books.

Naturwissenschaftliche Einführung in die Bakteriologie. Von Dr. FERDINAND HUEPPE, Professor der Hygiene an der Deutschen Universität zu Prag. Mit 28 Holzschnitten im Texte. Wiesbaden: C. W. Kreidel's Verlag. (*Scientific Introduction to Bacteriology.* By Dr. FERDINAND HUEPPE, Professor of Hygiene at the German University, Prague With 28 Woodcuts in the Text. Wiesbaden: C. W. Kreidel.) 1896.

DURING the last few years the numerous text-books on ıacteriological technique that have been placed on the ıarket have rendered it impossible for the student to protest hat he has no opportunity of gaining a book knowledge ıf bacteriology. Unfortunately, however, a book knowledge s not all that is required, nor is it absolutely necessary that ı great amount of thought should be expended either in the ;ompilation or in the working through of such books. We ıave now before us, however, a scientific introduction to ıacteriology by Professor Ferdinand Hueppe, in which that ıuthor is found at his best. Those who have already followed Professor Hueppe through his "Methods" and through his 'Forms of Bacteria" will be quite prepared to find here philosophical treatment of bacteriology such as has eldom been attempted; in place of a mere repetition of ıethods and enumeration of species Professor Hueppe has rappled with the fundamental questions concerned and ıas in clear language given a cogent, philosophical, and cientific account of bacteria and their relation to the processes with which they are said to be associated.

In the first chapter the author deals with the forms nd structure of bacteria, and the description given ı certainly the best that has yet appeared, as, although ; is extremely concise, it contains a *résumé* of the est work that has yet been done on this subject, ütschli's and Alfred Fischer's work on the structure f bacteria receiving special attention. The chapter n the Vital Manifestations and Relations of Bacteria ı in many ways extremely suggestive, especially that ortion relating to their nutrition and the formation f their products. A short description of the Organisms pecially Associated with Specific Infective Diseases followed by a chapter on the Causes of Disease, ·eated historically up to the point at which infection and ontagion came to be recognised as due to the action of ıcteria. The latter part of the book deals with the ost interesting questions of immunity, vaccination, pro·ctive inoculation, and curative inoculation; in connexion ith the latter the production and use of antitoxins are ıniidered and the antitoxic and bactericidal bodies of ıe blood. The question of the Specificity of the Action f Serum in Curing Disease is carefully gone into and we ıve in this chapter one of the most interesting that has ɜt been written on this subject. It is pointed out that even the normal serum of healthy warm-blooded animals has an antitoxic effect on specific poisons; the blood of healthy persons in many cases paralyses or antagonises the poisons of diphtheria, typhoid fever, and cholera, although it appears to exert no effect upon tetanus and snake poisons and abrine. It has been objected, however, that in the case of diphtheria, at any rate, the patients may have undergone a slight attack of diphtheria resulting in the formation of antitoxin in the blood; this, however, can scarcely hold in the case of the other diseases. Specific antitoxins produced in the blood act *in vitro* upon certain poisons different from those by which they have been produced; these, however, do not act and inter-act with one another in any very regular manner; for example, anti-venine antagonises the poisonous action of abrine, but not that of diphtheria, tetanus, or ricine; abrine antitoxin exerts its action against snake poison, diphtheria, and ricine, but not against tetanus toxine; tetanus toxine, which is active against venine, has no effect on ricine and abrine; anti-rabic serum exerts an influence on venine, but none on diphtheria or the poisons of tetanus, ricine, or abrine, whilst streptococcus serum, which certainly appears to exert some effect against snake poison, is inactive against all the others; cholera serum antagonises snake poison, but has no effect upon any of the others, whilst diphtheria antitoxin is inactive against venine, the poison of tetanus, ricine, and abrine; the antitoxic serum of "Rothlauf" and typhoid fever are also inactive against the whole of these toxines. Many of the antitoxic serums exert a similar active effect even when the mixture takes place in the body and not in the test tube. Some, however, which act when the mixture is made *in vitro* have no effect when the two substances are introduced separately into the body, and others again which do not antagonise one another *in vitro* still set up a protective action when injected into a living body, an example of this being given in the case of anti-rabic serum when prepared in the rabbit. This serum does not protect against rabies in the dog, but it has the peculiar property of immunising the animal against a dose of cobra poison.

These actions and inter-actions are exceedingly interesting and may be studied with great advantage. Professor Hueppe concludes as the outcome of all this that the specificity of the action of "anti-körper" is not necessary in order to produce an antitoxic action. However, we must refer our readers to the original for further information on this subject, as our space is too limited to allow of further excerpts being made from this interesting chapter.

Chapters on the prevention of disease and the history of bacteriology, though condensed, are exceedingly interesting, and the book as a whole is well worth a most careful reading by every student of bacteriology. It is the work of a master of the subject, who is not only a scientific man in the sense of being an observer, but also in the sense of having a truly philosophic mind.

The Diseases and Deformities of the Fœtus: an Attempt Towards a System of Antenatal Pathology. By J. W. BALLANTYNE, M.D., F.R.C.P. Edin., F.R.S. Edin., Lecturer on Midwifery and Gynæcology and on Diseases of Infancy and Childhood, School of Medicine, Edinburgh. With Plates. Vol. II.: *Congenital Diseases of the Subcutaneous Tissues and Skin.* Edinburgh: Oliver and Boyd, Tweeddale-court. London: Simpkin, Marshall, and Co. 1895

THIS the second instalment of the author's work on "An Attempt Towards a System of Antenatal Pathology" has been delayed in its appearance by unavoidable causes. The author appears to have found his task of greater magnitude than was originally anticipated. He has had to choose between undertaking to embody a consideration of all the

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remaining maladies of the fœtus within the original limits he had prescribed for himself and discussing all the divisions of the subject in as much detail as in the first volume. He has decided to choose the more arduous alternative, and we think with good reason, for few will differ from him in his opinion that it is better to discuss fully part of a subject than to present the whole of it imperfectly. The present volume deals with the Congenital Diseases of the Subcutaneous Tissue and Skin. The author has evidently devoted to the portion of the subject considered in the volume before us the same laborious industry which distinguished the first instalment of his work. The historical notes must have involved considerable research. It is interesting to observe that sclerema neonatorum has no written history prior to the commencement of the eighteenth century, though, perhaps, we can hardly agree with the author in considering the fact surprising on the ground that it is impossible to doubt its occurrence in earlier times. Modern medical literature, surely, affords almost innumerable instances of diseases that have only been recognised comparatively recently, though as regards many or most of them we may be sure of their having existed in ancient times. The book is illustrated by several excellent plates and there is a copious list of the authorities consulted.

A Pictorial Atlas of Skin Diseases and Syphilitic Affections, from Models in the Museum of the St. Louis Hospital, Paris. London: The Rebman Publishing Company, Limited, 11, Adam-street, Strand.

THE reproductions made for this Atlas are photo-lithochromes, and there are also explanatory woodcuts and text by Besnier, Fournier, Tenneson, Hallopeau, Du Castel, members of the staff of the hospital, with the coöperation of Feulard, the curator of the museum, and Jacquet the secretary. These names are a guarantee of the judgment with which the models for reproduction will be selected and of the interest of the descriptive letterpress. The translation is edited by Dr. Pringle, who points out and explains the differences between English and French nomenclature and gives references to English text-books and monographs.

Those who have visited the museum of the Hôpital de Saint Louis are aware that it possesses a unique series of wax models of diseases of the skin beautifully executed by Baretta and the publication of this Atlas renders this museum to a large extent accessible to all the world. The process of reproduction by photo-lithochrome is necessarily faithful as to the outline, while the colouring is also good on the whole, but the result is less pleasing than chromo-lithographs from drawings of the living subject, as the wax model has necessarily a corpse-like appearance and the artistic accessories are limited to the frill of white cloth round the model. The actual area of disease represented, though of life-size as far as it goes, is small—nine and a half by seven and a half inches—just sufficient to take in the face, and the representation of the characters of the lesion rather than the distribution is therefore the chief aim. If, however, an actual case is compared with a plate a very little imagination will compensate for these slight drawbacks, and recognition of the nature of the eruption will rarely be hindered thereby.

Each part, of which the price is 10*s.* 6*d.*, contains four coloured plates and a liberal allowance of woodcuts in the text, and the enumeration of the subjects of the plates in the three parts now before us will give the best idea of the scope of the Atlas, although the number of parts which the complete Atlas will contain is not stated. Part I. comprises Lupus Vulgaris of the Face; Dermatitis Herpetiformis on the Wrist and Hand (an excellent plate); Chancre of the Vulva; and Purpura Hæmorrhagica of the Thigh. The contents of Part II. are Lupus Erythematosus of the Face; Hypertrophic Rosacea (interesting from its imi tion of the leonine appearance of leprosy); Circinate Pap squamous Syphilides on a profile; and Xanthoma Planum Tuberosum (two figures representing the orbit and palr Part III. represents Four Syphilitic Tongues; Dermati Herpetiformis in Concentric Circles on a Portion of t Trunk; Syphilitic Gummata of the Thigh; and Disseminat Epithelioma of the Face of Sebaceous Origin in Two pro Figures. All of them convey an excellent idea of t disease represented.

Diagnostique et Traitement des Tumeurs de l'Abdomen et Bassin. Par J. PÉAN, Membre de l'Institut de Médecin Chirurgien des Hôpitaux. Tome troisième, avec Z Figures intercalées dans le Texte. (*Diagnosis and Tre ment of Tumours of the Abdomen and Pelvis.* By J. PÉA Member of the Institute of Medicine, Surgeon at t Hospitals. Third Volume, with 228 Figures in the Text Paris: G. Masson, Éditeur, Libraire de l'Académie d Médecine. 1895.

IN this volume, which consists of over 1000 pages, t author deals with the diagnosis and treatment of tumours the uterus, of the Fallopian tubes, of the ovaries, of t round and broad ligaments, and of the pelvic peritoneum a cellular tissue. He has evidently used the word "tumo in a broad sense, so as to include every form of swellin whether produced by an actual growth, innocent o malignant, or by inflammatory processes. Thus, while w should, from the title of the work, naturally expe to find an account of fibroid tumours of the uterus and cancer of the uterus, we are, perhaps, not quite prepared t find an account of chronic metritis and of syphilitic affe tions of the cervix. There is an interesting table of thirty four cases of extirpation of the uterus for cancer, from which it appears that four deaths only resulted from the operation but as regards recurrence, the cases, with one or two excep tions, had not been watched for a sufficiently long period t enable any conclusion to be reached as to the remote effects of the operation. The volume before us contains a great deal of information that cannot fail to prove valuable t those interested in the subjects of which it treats.

JOURNALS AND REVIEWS.

Science Progress.—The May number of this monthly review contains some very interesting as well as opportune papers. The first is by Dr. Frankland on The Past, Present, and Future Water-supply of London, being the discourse delivered by him at the Royal Institution on Feb. 21st. Dr. Frankland, as is well known, takes a very optimistic view of the future of London's water-supply. He concludes the present article in the following glowing terms: "Nevertheless, by means of storage, by utilising springs, by sinking deep wells, and by such comparatively simple means, we have, in my opinion, every reason to congratulate ourselves that for half a century at least we have at our doors, so to speak, an ample supply of water which for palatability, wholesomeness, and general excellence will not be surpassed by any supply in the world." In a paper on Atomic Weights by Alexander Scott, M.A., it is pleasant to learn "that that type of worker of whom we regard Stas as the chief is not yet extinct. In spite of the prevailing view that one must publish as many papers as possible in the least possible time before one can be said to engage in 'original research.'" Part 2 of this Stellar Theory is continued by A. G. Tansley, B.A., and Part 2 of The Present Position of the Cell Theory by G. C. Bourne, M.A. The volume concludes with a short paper on Ferns, Aposporous and Apogamous, by C. T. Druery, F.L.S.

Hospital Sunday Hymn. By the Rev. W. SMALE, M.A., Vicar of St. Philip's, Kensington. The music by WARD

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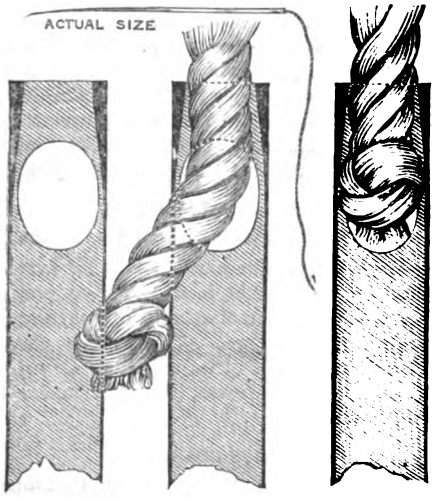
DENNIS. London: Novello, Ewer, and Co., Berners-street. Price 2*d*.—To those in need of a special hymn for the approaching Hospital Sunday services we can commend this. The music and words are well suited to each other and their theme.

New Inventions.

SURGICAL NEEDLE DESIGNED TO HOLD A SINGLE THREAD.

THE accompanying illustration shows a diagram of a section of a round needle, characterised by a central conical canal having its apex directed upwards, situated in the head beyond the eye. Fig. 1 shows the conical canal, Fig. 2 the knotted silk in process of threading, and Fig. 3 the knot *in situ*. To thread the needle. (*a*) Tie a simple knot in the silk as tightly as possible and cut off the loose end beyond the knot *flush with the knot*. (*b*) Thread from the eye towards the head. (*c*) Pull the silk until the knot is concealed within the central canal. The knot becomes wedged in the canal and cannot slip either up or down; it can, however, be easily pushed through the eye transversely with the point of a needle. There is no difficulty in threading with silk of a suitable size. The design has been carried out with great skill by Messrs. Lawson and Sons of Old Steyne, Brighton. The sizes[1] made are

FIG. 1. FIG. 2. FIG. 3.



from Size 6 of an ordinary sewing needle. This sized needle can take either fine silk or a horsehair; in the latter case the hair should be wetted and the thicker end passed through a flame to produce an olivary bead, which answers all the purposes of a knot. My object has been to produce a round needle especially adapted for peritoneal and cosmetic surgery. The advantages claimed are: 1. A single instead of a double thread. 2. The needle cannot slip off the thread. 3. Diminution of bulk at the eye, thereby producing the minimum of disturbance of the parts during the passage of the loaded needle through the serous coat or other delicate tissue. After use the needles should be dipped in hot water and put away threaded with dry silk.

W. D. CALVERT, M.R.C.S. Eng., L.R.C.P. Lond.
Brighton.

A SOUND-POST STETHOSCOPE.

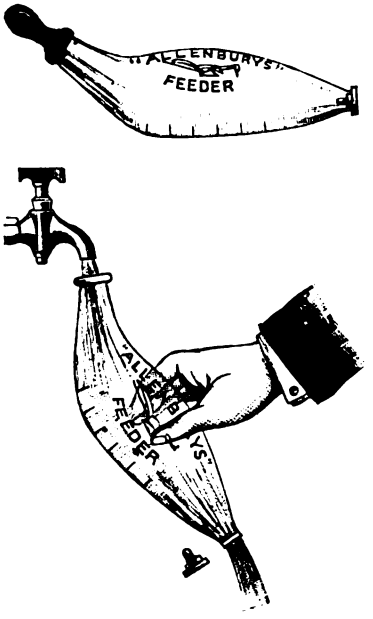
MESSRS. ARNOLD AND SONS of West Smithfield have made for me a stethoscope which I think conveys sounds from the patient's chest to the physician's ear more distinctly than the ordinary tube. This stethoscope is made on the principle of the sound-post which unites the belly and back of the violin represented by discs of wood or other material placed near the ends of a stethoscope tube; these vibrate and so convey

the pulsations which are ordinarily conveyed by the column of air. This stethoscope can be made at a price little exceeding that of the ordinary ones.

Fellows-road, N.W. H. FLY SMITH, M.B. Oxon.

THE "ALLENBURYS" FEEDING-BOTTLE FOR INFANTS.

MESSRS. ALLEN AND HANBURYS, Limited, of Plough-court, Lombard-street, E.C., and Vere-street, Cavendish-square, W., have recently introduced an improved form of infants' feeding-bottle, which embodies several important advantages. The object of the designers has been to provide a bottle which shall admit of being easily and effectually cleansed in every part, and thereby freed from any suspicion that souring of the milk and digestive troubles on the part of the infant have been due to minute portions of milk inadvertently retained in some crevice. Perfect cleanliness was almost unattainable with the narrow glass tube, indiarubber tube, bone shield and teat of the old-fashioned bottle, but the present model, being open at both ends, can be easily washed at an ordinary water tap and thoroughly wiped or brushed inside. When in use one of the ends of the bottle carries the nipple, which is of smooth indiarubber and can be readily turned inside out for better cleaning. The other end of the bottle is closed by an indiarubber stopper containing a valve, which admits of air being sucked in behind the food as fast as the infant sucks the food out, so that the infant is not forced to strain in sucking and the teat has no tendency to collapse through the external pressure of the air. This bottle is said to be an improvement on one which is very widely used throughout the United States and also in France.



THE YORKSHIRE BRANCH OF THE INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH.—The annual meeting of this branch was held on June 2nd at Leeds, when Mr. W. H. F. Ramsden presided. The report showed that last year there were sixty-five members of the branch, of whom forty-eight were members of the parent society. During the session twenty members and two associates were elected, making a total membership of eighty-seven, which, however, is still but an inadequate representation of the health officers of so large an area as Yorkshire. In the evening a complimentary dinner was given to Dr. Whitelegge, late medical officer of the West Riding District Council, who has recently been appointed to the office of Her Majesty's Chief Inspector of Factories.

[1] This figure of the actual size in printing comes out much too bulky, being in reality about half the size.

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Analytical Records
FROM
THE LANCET LABORATORY.

TABLOIDS OF (1) EFFERVESCENT BITARTRATE OF LITHIA; (2) EFFERVESCENT CITRATE OF LITHIA; (3) PANCREAS SUBSTANCE; AND (4) MAGNESIUM SULPHITE.

(BURROUGHS, WELLCOME, AND CO., SNOW HILL-BUILDINGS, E.C.)

IT is evident from the important additions that are made from time to time that new remedies are not meant to be excluded from the "tabloid" list. The above are examples of recent useful additions. The first (bitartrate of lithia) have been prepared with the view of providing a convenient and reliable means of administering the bitartrate which it is suggested increases the alkalinity of the blood, eliminating uric acid. The fate of bitartrates in the organism or other organic salts, as citrates and malates, is similar, of course, to that when these salts are burnt, a residue of carbonate of the alkaline metal is obtained. Effervescent lithia citrate tabloids are prepared with a similar object in view. They are agreeably effervescing, and it is suggested also that they may prove useful when dissolved in an ounce of water as an external application to gouty swellings. Pancreas substance tabloids represent, it is stated, the whole substance of the gland in a pure reliable form, and contain the active principles in an unchanged state. They are keratin-coated to ensure the passage of the pancreas substance through the stomach unchanged to the alkaline digestive tract. Pancreas substance, as is well known, has been administered with marked benefit in diabetes mellitus, an effect which is "produced by the artificial supply to the blood of a principle (produced by the epithelioid tissue of the pancreas) which profoundly modifies the carbohydrate metabolism of the tissues." Magnesium sulphite was suggested some time ago as of service in disinfecting and destroying the membrane in diphtheria. In the form of tabloids it may conveniently be sucked, the salt gradually decomposing, giving rise to free sulphurous acid (which is very obvious in the mouth) and probably hydrated magnesic oxide.

COFFEE AND CHICORY ESSENCE.

(BROMLEY AND CO., BLOOMSBURY WORKS, LEEDS.)

This is avowedly a mixed extract, its solution in hot water possessing a good rich aroma and "body." Distinct evidence of its genuineness and value was afforded in the fact that on suitable treatment crystals of caffeine, the important stimulating principle of coffee, were extracted from it. It is free from objectionable admixtures.

PEARL OLD IRISH WHISKY.

(MARGRAVE BROTHERS, BRIDGE-STREET, LLANELLY.)

The general characters of this manifestly pure spirit give evidence of skill and experience in blending. It possesses the taste and aroma peculiar to Irish whisky, and presents on analysis the composition of a well-matured product. The results were as follows: alcohol, by weight 39·80 per cent., by volume 49·13 per cent., equal to proof spirit 82·59 per cent.; extractives, 0·37 per cent.; mineral matter, 0·005 per cent.; acidity reckoned as acetic acid, 0·024 per cent. It is a wholesome spirit and practically free from acidity.

MEDICINAL TOKAY WINES.

(ERN. STEIN, AGENCY, W. BEST AND SONS, 22, HENRIETTA-STREET, CAVENDISH-SQUARE.)

The well-known Tokay wines of Hungary have long been accredited with peculiar properties. They do not appear to disturb the digestive functions as is the case with wines containing a marked amount of astringent substances, while their very distinctive flavour, thin, sweet, and delicately aromatic, is an attractive feature. According to our analysis and examination this is true of the specimens before us, which are undoubtedly genuine and pure. The following results were obtained:—Medicinal Tokay Sweet (2*s.* 9*d.*): extractives, 18·94 per cent.; mineral matter, 0·32 per cent.; alcohol, by weight 13·69 per cent., by volume 16·89 per cent., equal 29·60 per cent. proof spirit. Medicinal Tokay Dry (3*s.* 3*d.*): extractives, 16·84 per cent.; mineral matter, 0·24 per cent.; alcohol, by weight 12·92 per cent., by volume 15·96 per cent., equal to proof spirit 27·97 per cent. Medicinal Tokay Sweet, extra fine (4*s.* 6*d.*): extractives, 27·26 per cent.; mineral matter, 0·46 per cent.; alcohol, by weight 12·15 per cent., by volume 15·02 per cent., equal to proof spirit 26·33 per cent. Medicinal Tokay Red, sweet (3*s.*): extractives, 7·78 per cent.; mineral matter, 0·1 per cent.; alcohol, by weight 13·85 per cent., by volume 17·08 per cent., equal to proof spirit 29·92 per cent. They are all excellent types of this peculiar wine, the properties of which render it of especial value in suitable cases.

SAVAR'S COCA WINE.

(EVANS, LESCHER, AND WEBB, 60, BARTHOLOMEW-CLOSE, E.C.)

This is a concentrated and permanent spirituous solution of the leaf of erythroxylon coca, which is useful for the extemporaneous preparation of coca wine. It may be taken in dessert-spoonful quantity in half a wineglassful of water or wine before meals, and after a time in double quantity. Each large bottle is stated to contain the active principles of about 2000 leaves, so that a quarter of an ounce would be the equivalent of twenty-five leaves. The wine is marked by the peculiar leafy flavour of the plant and yields an abundance of cocaine when suitably extracted. It is evidently a reliable and a standard preparation, which enables the practitioner to prescribe with confidence an exact dose of the restorative principles of the plant.

LIEBIG'S MALTED FOOD.

(W. M. BELL, 2, MALVERN-ROAD, WEST KILBURN.)

Treatment both by malting and cooking has evidently been the process by which this food has been prepared. It contains a large proportion of soluble carbohydrates including dextrine and malt sugar. The taste is pleasant, and there can be little doubt of its nutritious as well as of its digestible character. Moreover, it contains an excellent proportion of mineral food.

MAGGI'S CONSOMMÉ.

(COSENZA AND CO., 95 AND 97, WIGMORE-STREET, CAVENDISH-SQUARE.)

Apart from the convenience of the form of this preparation, consisting of concentrated meat essence contained in gelatin tubes enclosed in gelatin capsules, it possesses real nutrient as well as stimulating properties. Alcohol gives an abundant precipitate of peptoniferous matter, whilst the crystalline meat principles are found in solution; albumin also occurs to an important extent and is thrown down on boiling the solution of the contents of the cartridges after the addition of a few drops of acetic acid. Each tube makes three-quarters of a pint of nearly clear broth of good beefy flavour with a *soupçon* of spice and salt, which add to its palatability. The capsules should prove of great service and convenience in the invalid's dietary, whilst affording also an easy means of extemporising a really good *consommé*.

ROYAL BAKING POWDER.

(WRIGHT, CROSSLEY, AND CO., 17, NORTH JOHN-STREET, LIVERPOOL.)

It is sufficient to record that this powder on analysis was found to be free from objectionable ingredients, and especially alum. On moistening a copious evolution of gas was given off. It is therefore a good and wholesome yeast substitute.

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THE LANCET.

LONDON: SATURDAY, JUNE 6, 1896.

IN entering to-day upon a second decade of Special Supplements in support of the Metropolitan Hospital Sunday Fund we feel that we may dispense with the language of apology which was appropriate to our earlier issues of this kind. We address ourselves in this chapter to a body of readers wholly outside the circle of those to whom, as a rule, we submit our weekly issues. But it is by this time well understood on the part of our readers, both medical men and laymen, that we make this departure from our custom in the interest of a cause which is the common cause of all alike; in the interest of a great work of charity which, as being directed to the relief of the ravages occasioned by personal accident and by disease, is in a peculiar sense dependent upon medical support, but which, by reason of the magnitude upon which its operations are conducted, goes much beyond the power of any particular class in the community, and demands and receives the support of the great public, including rich and poor, great and small—everybody who can help with a pecuniary contribution or with personal service. We mention personal service in this connexion because, although pecuniary aid is in a special sense the form which charity takes on Hospital Sunday, it would be less than charity if the personal element were wanting which mere pecuniary support can never replace. Of the many thousands who on Sunday next will testify to their interest in hospital work by larger or smaller contributions to the Hospital Sunday Fund collection a very small percentage only will be capable of contributing anything but money to the great work. And yet those whose personal service is one of the wings upon which this great charity supports its flight will by no means be found to hold aloof from the voluntary tax to be then decreed by an unqualified universal suffrage upon Londoners. From the hospital physician to the hospital drudge every class and grade in the ministry of the hospitals will be found represented in the congregations of the metropolis and contributing in proportion to its means to the pecuniary support which constitutes the second wing of medical charity. The blessedness of giving in this most literal sense of the word is a delight for which those whose chief blessedness is in doing will be in no sense backward to compete. But the gifts of money must chiefly come from those who have nothing else to give, and the fact that they are thus shut up to this one form of helping the great work forward should act, and will act as we believe, as a powerful incentive to generosity.

In the statement which we to-day issue—a statement which rests more than some others that we have submitted upon the purely public aspects of the question—we have endeavoured to show in some detail how the existing organisation of the Fund supplies the want of a coördinating and governing body among the voluntary medical charities of the metropolis, and to display the extent, as measured by pecuniary support, to which the individual members of the public interest themselves in this annually recurring function. To many, perhaps to most, of our readers both of these views of the subject will disclose some very striking facts. It will scarcely be less than a revelation that the churches of the metropolis, upon this, the occasion when they make their supreme effort in the cause of philanthropy, cannot secure so much by way of contribution as a farthing a head from Londoners all round. It will be perhaps equally surprising, but in a more agreeable sense, to learn how much is done quietly—so quietly that it may fitly be said to be without observation—to secure the vital objects of economy and efficiency in connexion with hospital administration. At a minimum of cost for official work, with a minimum of trouble and offence to the institutions whose work comes under review, the control of the Council is exerted over practically the whole medical charity of London. Two great hospitals, monuments of the piety of an earlier day, are able to maintain their work without subventions from the Fund, and a few obscure institutions are not able to qualify for a share in its distribution, but these are the most notable exceptions to the rule that through the instrumentality of this great institution the influence of the church is brought to bear upon the work of medical relief with what are, upon the whole, the most beneficent results.

This popular control is not, it must be admitted, wholly without its drawbacks. But nothing is; and the worst that can be said about the spontaneous Hospital Sunday movement is that it has given occasion to a few mistaken people to thrust their views very unpleasantly forward in a singularly unprofitable or even mischievous way. We have ourselves become involved within the past week or two with certain people quite unknown to us who, probably with the best intentions, have sought to turn this collection into an occasion of strife concerning the ethics of physiological experiment. This, like many other questions of morals, is one upon which it is quite possible to be mistaken, and we do not for a moment question the integrity of those persons who, entertaining strong views, assail with unmerited vituperation the leaders of physiological research. To be misunderstood and misrepresented has been the fate of those who have led the van in every work of charity, from the Founder of Christianity downwards through all the ranks of the benefactors of mankind. He would be unworthy of the position of a pioneer in any department of human progress who was not prepared to face misrepresentation at the hands of those who know ill though they mean well, and to encounter the unreasonable hostility of good but uninstructed people. The pathologist who knows what momentous issues in the way of the mitigation of suffering and the saving of life both to men and brutes lie in the successful modification of a bacterium, or the production of a benignant amœboid growth, cannot possibly desist from his work of mercy merely because some of his neighbours, whose good opinion he would gladly enjoy, mistake him for a monster of cruelty. He cannot justify himself to their judgment for the same reason for which the ordinary practitioner could not, if he would, justify to his patient his treatment of a particular disease. Practical experience has taught people gifted with common sense that in order to discuss a

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medical question with profit a preliminary medical education is necessary, and they act accordingly. They place their personal interests unreservedly in the hands of some medical man in whose knowledge and integrity they have confidence, and they say to him: "Treat us according to your lights; the details we leave to your better judgment." The position of the pathologist is analogous. He occupies himself with the larger interests of classes and populations and species rather than with those of individuals, and therefore his methods differ from the methods of the general practitioner; but in this case, no less than in the simpler case where the individual is alone concerned, whosoever would profitably discuss the mode of procedure must be prepared to submit first of all to the preliminary scientific education. Apart from this condition it must be matter of pure chance whether his conclusions be sound or unsound, for his mind is not accessible to the only relevant arguments.

It is, therefore, the necessity of the case and not pique which makes us refrain from the attempt to vindicate our character against the aspersions which have been cast upon us in connexion with the work of physiological research. That this patient endurance of misrepresentation and obloquy must injure us in the eyes of some among our neighbours we fully recognise; but though we regret the fact, we recognise that such regrets are futile, for it cannot be helped. It is the result of invincible ignorance.

But very different considerations arise when we find that an attempt is being made to make the region of medical charity the battlefield of this polemic. A circular to which we drew attention last week has, by suggesting that the hospitals might be placed in a difficulty, which would soon become intolerable, if a concerted movement were set on foot to make the suppression of physiological research a condition of the churches' contribution to their funds, has placed the matter in a very different light. We quite admit that if any section of the charitable public chooses to press a point with fanatical insistency it can make coöperation impossible, and that the multiplication of such grounds of difference would very speedily dissolve the great organisation which the patient labour of the past one-and-twenty years has so happily built up. That views, mistaken views, strong views, should be entertained does not surprise us; we do not complain that they should be bitterly expressed. All this, though unwelcome, is but wholesome human nature. But when one set of conscientious people denounce another set of people equally conscientious with the unmeasured violence of the circular, and in furtherance of the views they chance to hold would stay the hand stretched out to tend the sick and succour the dying—and this *in order that the cry of the suffering poor may become unendurable—then* our patience gives way. Then it becomes our duty to cry to them "Hands off!" and to denounce them to all honestly charitable folk as people whose misguided conscientiousness is itself of the nature of a vice, since it cloaks and gives respectability to conduct purely mischievous—conduct which would, if it went unchecked and attained its ends, accomplish the most cruel and enormous harm.

But this will not be. In the work of collecting and administering the Hospital Sunday Fund the churches have shown an unprecedented—may we not say an unsuspected—power of sinking points of difference and subordinating to the ends of practical charity all the influences which tend to hamper or to frustrate their coöperation. The results of this most beneficent concert have furnished us with the theme of our Supplement to-day, and we have confidence alike in our fellow workers and our cause—a confidence which forbids us to entertain any misgiving on this point or to doubt that, having once joined hands and forces in such a sacred cause, the churches of the metropolis and those who represent them in this matter will suffer anything to distract their attention from the great body of suffering which it is their special function to relieve, or to paralyse their efforts by fruitless bickerings and unprofitable discussion.

Upon a comparison of the diagrams showing the growth of London during the past five years with the article which appears in another column upon the results of the recent census, it will be seen that the figures adopted in the Hospital Supplement article are not perfectly correct. New London is made to represent a population of 221,000 instead of 199,528, as it should have been. The article in question was written and the blocks were prepared in advance of the publication of the figures, and being partly based on estimates have turned out a little wrong. The error, although considerable enough to demand mention, is not of a magnitude to affect the argument in any way, or even visibly to alter the dimensions of the figure which represents New London in the woodcut.

NEVER perhaps before in the course of history has a more pathetic and awful example of the aphorism *memento homo quia pulvis es* been recorded than in the news received recently from Russia. Amid all the pomp and majesty by which the blend of Orientalism in the Russian character is so marked the young Emperor had been inducted into the full possession of his sovereignty. The Church had declared the Divine blessing upon his head and from all parts of his vast Empire had come elders, heads of tribes, and deputies of all kinds to testify by one act their rejoicing and their willingness to be his men. Everywhere was pleasure, gratitude, and joy. Two days after "all was in the dust," and in place of rejoicing there was mourning.

That even the humblest classes might say that they had had a share in the general distribution of presents and gifts a dole had been arranged for consisting of sausage, cake, sweets, &c., and these were to be distributed on the Khodinsky plain. A row of wooden booths with barriers had been erected and from this centre the distribution was to be made. The crowd began to assemble upon Friday night, and upon Saturday morning one of those uncontrolled and blind impulses by which crowds are sometimes affected if left to themselves came upon the mass of people. They pushed irresistibly forward, and when the foremost ranks were checked by the barriers the hindmost continued their advance, with the result that some two thousand persons were crushed to death. There is no need here to go into the horrors of the scene or the heart-rending incidents which have already been fully reported in the daily press. Suffice it to say that the gloom which

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the disaster has cast over the land is unparalleled, for such a catastrophe, lamentable at any time, becomes doubly so when we contrast it with the circumstances which in a way led up to it. With whom the responsibility rests is not very clear and probably will never rightly be known. It is always easy to blame, especially after the event, and presumably the authorities were not so much wilfully careless as worn out. A crowd as large as this was—for though the numbers vary in different accounts it obviously was enormous—is almost impossible to control after it has collected. It must be broken up during the process of aggregation and kept moving. Stagnation means pressure and pressure means death. If twenty or thirty different distribution centres had been arranged, and if the crowd had been broken up as it was collecting all would probably have been well.

That a crowd should assemble in such numbers and should become so out of hand for so small a dole as a sausage, a cake, and a tin mug may seem extraordinary, but to anyone who knows the Russian character the course of events will appear plain. The gifts were the gifts of the Czar; the tin mug has his portrait upon it, and the absolute devotion of the Russian peasant to the "Little Father" is a thing that no one who has not seen it could believe. To the peasant the Czar is everything. He is the head of the Empire, the head of the Church, the father, friend, and protector of his people. In every cottage his portrait hangs and is looked upon with almost the same reverence as the sacred "Eikon," and it was this feeling that urged the vast mass to what proved to be the death of many. For the relatives of the dead we grieve; with the officials whose duty it was to control the crowd we deeply commiserate; but especially for the young ruler whose position, responsible and burdensome at all times, has had added to it an additional sorrow by the death struggle on the Khodinsky plain, our sympathies are of the deepest.

THE sixtieth session of the General Medical Council commenced on Tuesday last in the new council chamber. The time of the first day was largely occupied by an address from Mr. T. PRIDGIN TEALE urging his colleagues to consider the present condition of medical examinations. His speech in support of his resolution will be found printed at length at the commencement of this issue, p. 1547. We have so frequently urged that our medical examinations are too numerous and often unjust in their incidence on the candidates that we are pleased to see that the General Medical Council has considered the matter from a practical standpoint. No one is better qualified than Mr. TEALE as a teacher, inspector of examinations, and practical surgeon to urge the importance of this matter. Practically we have to admit that the students who are studying for an entrance into our profession are over-examined, and that many of the examinations are so conducted that they cannot possibly do justice to the individual candidate. The greater the number of examinees the greater is the certainty of such injustice. With a time-limit this injustice is absolutely assured. If examinations are increased in number the injustice becomes more pronounced in a strict ratio to the sub-divisions of the various examinations.

There are only two really substantial reasons for examining a medical student or any other professional student, and these should always be most held in view by the authorities who have charge of his professional education. The first of these is to see that he is sufficiently well acquainted with the subjects of preliminary education to enable him with advantage to pass on to the study of the technical requirements necessary for him to practise the daily work of his profession. The second is, of course, to see that he has learned his work sufficiently well to enable him to practise with benefit to the public. With regard to the first, is the present guarantee in preliminary education a sufficient one? We allow that the standard has been much improved in recent years by the insistence on the passing of the preliminary subjects *en masse* instead of in detail, as was formerly the case; but even now the standard could be raised with advantage. It is at this end that the unfit should be stopped. The student who is bound to extend a five years' education into one of seven, or even more, years should be peremptorily barred. A proper course of education extending over four years is amply sufficient for a well-educated man to become conversant with the theory and practice of medicine, surgery, and midwifery, and, therefore, to take his place in our ranks as a properly qualified medical practitioner. As Mr. TEALE shows, this does not now take place, and even after a five years' curriculum some 30 to 40 per cent. fail to pass. The multiplicity of examinations in different subjects to which every individual student is subjected, and for which, as well as for the preliminary education, the General Medical Council is responsible, is the main reason for their heavy percentage of rejections. It is to this question that Mr. TEALE has devoted his attention, and his speech and his suggestions for decentralisation must have every consideration from the teachers and examiners as well as from the members of the profession in general. In 1861 medical students were rejected at the rate of 12·4 per cent.; in 1892 at a rate of 39·3. Meanwhile, the standard of medical preliminary education has steadily advanced. Do these statistics mean that the present medical student is to the extent of more than one in three inferior in professional knowledge to his predecessors of thirty years ago? Unquestionably not. But what they demonstrate is that the sub-division of examinations has increased more than threefold the chances of his failure at some part of his career. (Is it to be wondered at that with these statistics the main idea of all is to "get through," and to secure this event by "cram, cram, cram"?) The clinical examination of the students is, by most examining boards, the least considered and the least thorough. The plan which Mr. TEALE suggests for the improvement of the present mistaken system is one of *decentralisation*, and we are glad that he has not only attacked existing evils, but has suggested a remedy which seems to us fairly adequate. "We must unload our public examination," says Mr. TEALE. "We must relegate to the schools not only to teach, but to examine and to certify in all secondary subjects, such as elementary biology, materia medica, pharmacy, hygiene, perhaps even

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chemistry, and certainly forensic medicine. Then let *all the rest* be covered by three public examinations—one in anatomy and physiology, presumably at the end of the second year of professional study; one in pathology and therapeutics at the end of the fourth year, and the clinical examination in medicine and surgery, together with examination in midwifery (truly in midwifery, not in fancy gynæcology) at the end of the fifth year. Surely after that we may see the ten minutes' bell and all it implies abolished. The licensing bodies will be able to afford to examine more thoroughly, less hurriedly, to find out what a student really knows and to re-examine those on the border line of pluck or pass. Then, when plucking examinations are reduced from nine to three and become less matters of chance, there will be some room for calm clinical study, for self-training, for learning something during studentship of that very important and terribly neglected better half of the training of a true medical man, the knowledge and observations of a human being."

We are almost entirely in accord with Mr. TEALE in his recommendation. In our opinion examinations in elementary biology, chemistry, and physics should be left to general and not professional examining bodies. The student should be registered on entering on the study of either of them and be allowed one year out of the five on passing these subjects, which should not be allowed to hinder his purely medical routine. It would be the duty of the General Medical Council to schedule in official manner the examining bodies whose certificates in these subjects would be considered adequate. In the other four years, which should be strictly devoted to a technical curriculum, the student cannot do better than follow Mr. TEALE'S advice, to which we refer him, and the sooner the examination system is altered on the lines of his remarks the better will be the training of the medical student and the greater the advantage of his education to the community.

Annotations.

"Ne quid nimis."

THE COMING ELECTION TO THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

NOTICES, dated June 2nd, have been issued by the Secretary of the Royal College of Surgeons of England that "a meeting of the Fellows of the College will be held at the College, in Lincoln's-inn-fields, on Thursday, the 2nd day of July, *at 1.30 o'clock in the afternoon precisely*, for the election of three Fellows into the Council of the College." Intending candidates are informed that blank forms of the requisite notice from a candidate and of his nomination may be obtained on application to the secretary, and the same must be received by him, duly filled up, within ten days from the date of the circular—i.e., *not later than on Friday, the 12th day of June next*. A voting-paper will be sent by post to each Fellow whose address in the United Kingdom is registered at the College on Monday, the 22nd day of June next, and Fellows will not be required to apply for voting-papers. The vacancies to be filled are created by the retirement of Mr. Bryant, Mr. Cadge, and Mr. Pick on the completion of the full eight years' term of office. Mr. Bryant and Mr. Cadge were first elected in 1880, and have therefore each served for sixteen years or for two full periods of eight years consecutively, both having been re-elected in 1888. Mr. Bryant, who has passed the chair, is the representative of the Council of the College on the General Medical Council of Education and Registration, and will stand again. Mr. Cadge does not intend to do so. Mr. Pick, who is one of the Vice-Presidents, and has only enjoyed one full term of eight years as a Councillor, will naturally offer himself for re-election. We have not yet before us the names of all the other intending candidates, and, therefore, defer further comments till the list is officially complete. It may be noted that as there are no death vacancies this year the number of vacancies is three—the usual number of vacancies by rotation. Next year, in the absence of any death vacancies, the number of vacancies will depend upon the re-election or not of Mr. Christopher Heath as President of the College. Mr. Heath's second term of eight years on the Council expires next year; but if he is re-elected President he will not retire, a clause in the charter expressly providing for this contingency.

"PROTEST AGAINST THE INJUSTICE OF THE MEDICAL AUTHORITIES."

UNDER the above heading we published in our issue of March 21st some remarks reflecting on the action of Dr. J. B. Crozier in issuing a card intimating, amongst other things, that he would see patients whose income was under £2 a week at a certain scale of fees. In our issue of April 4th we published a letter from Dr. Crozier explaining his position. The matter came to the knowledge of the Royal College of Physicians of London, and that body, after due consideration, have informed Dr. Crozier that "they gladly accept his explanation and consider it satisfactory." While we are fully in sympathy with Dr. Crozier's grievance and also agree that a ready money fee, however small, from a poor patient is better than the club or contract system, we still think his method of drawing attention to the matter was a mistaken one. We recognise, however, his *bona fides*, and are glad to see that the Royal College of Physicians of London have accepted Dr. Crozier's view of the matter.

HORSEFLESH AS FOOD.

PRIVATE opinion may be allowed to decide what is agreeable to the palate, but wholesomeness in diet cannot be regulated by the same flexible standard. Certain statistics recently published in connexion with the Belgian trade in horseflesh are interesting as bearing on this subject. From these it appears that about 6000 horses were exported last year from this country as part of the food-supply of the poorer classes in Belgium. Most of these were old and wretched animals and, what is of much greater consequence, a certain proportion were affected with glanders. Such evidence of mismanagement as these facts afford has naturally attracted the attention of the Belgian Government, who have accordingly taken steps for the better supervision of the horse traffic, and especially for the detection of glandered animals. As a preventive makeshift this arrangement is no doubt reasonable and convenient. No one can pretend that it satisfies the conditions necessary to healthy nutrition, for we cannot suppose that it will do more than condemn the carcases of animals which are actually diseased. Until the horse is reduced by the general employment of mechanical motors to the state of a mere lounger like the pastured ox we need not expect that any but maimed or superannuated animals will contribute materially to the food-supply of a poverty-stricken population. Bad at the best will be, for a long time to come, the sinewy meat provided by the horse-butcher. It is clear that under such conditions thorough

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supervision by capable veterinary officials is alone compatible with public safety. It appears to be taken for granted that all this inferior horseflesh is consumed in Belgium itself. There have been suggestions notwithstanding that this is not the case. In consideration of certain disquieting rumours which have been set afloat in the British press we would suggest as a highly proper and legitimate subject of inquiry for the official supervisors of *abattoirs* the question, How much of this meat, if any, returns to the British Islands, and under what name?

THE DEATH OF SIR GEORGE JOHNSON.

WE deeply regret to announce the death of Sir George Johnson, M.D., F.R.S., Physician Extraordinary to Her Majesty the Queen, which occurred at his residence, 11, Savile-row, on Wednesday afternoon last, June 3rd. The deceased gentlemen, who was in his seventy-eighth year, had been in excellent health up till Monday, but on returning from a drive on that afternoon he had a hemiplegic attack, from which he never recovered. We shall give an extended notice of Sir George Johnson's career in our next issue.

COMPARATIVE PAUPER STATISTICS.

IT is satisfactory to be able to record a continued decline in pauperism, as shown by the monthly comparative pauper returns issued by the Local Government Board. We have before us the return for the month of March, and we find that in all the several divisions of the country there has been a decline in the amount of pauper relief as compared with March of 1895, and that this is true of each week of the month. Certainly it is said that the present year has had freedom from the severe frost prevalent in February of last year and which was of a character to have an influence on the March pauper data as well as those of February. At the same time the figures are encouraging. In London as regards the first week the decline was as much as 22·0 per cent. on the corresponding week of March, 1895, and 15·0 per cent. in the closing week. In England and Wales the rates of decrease in 1896 as compared with 1895 were 9·5 per cent. in the first week, 7·9 per cent. in the second week, 6·3 per cent. in the third week, and 5·7 per cent. in the fourth week. In proportion to population the rate per 1000 in the last week of March this year was lower than in any of the years 1857–95, except the four years 1891-94.

THE LAY REPORTER AT CORONERS' INQUESTS.

OBSCURE and unusual cases are always worth recording in their proper place, but the details of inquests which often find their way into the daily press serve little end but the satisfaction of a morbid craving on the part of the public. Capital is too frequently made out of details which are exceedingly inaccurate, and a very false impression may be created in the mind of the public. In more than one of our evening contemporaries paragraphs appeared last week relating an "extraordinary death" which occurred at St. Bartholomew's Hospital as the result of drawing a tooth. From these we might gather that the patient, a girl aged fourteen years, went to the hospital, had the tooth extracted, was detained, and died suddenly in hospital the next day from rapid inflammation of the brain which had escaped the diagnosis of the physicians under whose care she was. Inquiry shows that the case was indeed an obscure one and remained so. After the extraction of the tooth the girl went home, became ill two days later, and was admitted to the hospital on the third day in a nearly unconscious condition and with severe constitutional symptoms. She developed risus sardonicus and chronic convulsions, and later in the day tonic convulsions and opisthotonos, with intervals of complete relaxation. No definite diagnosis could be made, though tetanus and strychnia poisoning were duly weighed. She died suddenly during the night after admission, and the necropsy showed merely intense congestion of the brain, doubtful indications of meningitis, and some minute recent vegetations on the mitral valve. The coroner ordered no examination of the contents of the stomach, though these had been reserved. Cases such as this are by no means unknown and have baffled the diagnosis of many physicians, but no good end is served by dishing them up inaccurately for the lay press.

A JENNER RELIC.

THE immortal Jenner was a many-sided man, but outside the profession he is best known as "the man who invented vaccination." An interesting relic of this "person" of Jenner has been presented to the Royal College of Surgeons in the shape of Jenner's silver lancet-case and lancets. The donor is Mr. E. Wadams of Great Malvern, and the relic was presented to him by an old patient whose grandfather was Jenner's assistant. This case bears Jenner's initials and the lancets his name, and it can be seen in the Museum of the College along with the other Jenner relics.

COÖPERATIVE EDUCATIONAL TRAVEL.

THE following is a portion of the title page of a pamphlet sent to us by a correspondent: "Coöperative Educational Travel, by Henry S. Lunn, M.D., B.Ch., Fellow of the Medical Society of London; and J. T. Woolrych Perowne, M.A., late Classical Scholar, Corpus Christi College, Cambridge." Truly times have changed. In old days people never started on a journey with the idea of being educated. Of course, if they travelled in a proper manner they were educated, but the primary objects of travel were either to visit the Holy places, or amusement, or both. Of pilgrims in the first sense there are many examples. Early travellers for travel's sake are rare, but a notable instance of the combined pilgrim is the astounding liar who wrote the immortal travels of Mandeville—if, indeed, he ever travelled at all. Somehow the title "Educational Travel" takes away the romance of travel. It savours too much of those educational games which appear at intervals—and to judge by this prospectus, everything is made far too luxurious. Roughing it is half the pleasure of travelling. To show what an old time journey was like—a journey undertaken when a pilgrimage was a real act of a very lively faith—we recommend a perusal of a little-known work, an "Evagatorium" by Brother Felix Fabri, to the writers of the pamphlet. It is not written in good Latin, but is full of wisdom. He quotes a remark made by a "prudens Comes" to the effect that the journey to the Holy Land "nimis fore periculosam illis, qui levitate ducti, aut curiositate, aut seculi pompam, aut quandam vilem ac transitoriam vanitatem, finem ejus præstituerint." Now hear the pioneers of coöperative educational travel:—

"*The twenty-one guinea cruises.*—For the sake of clergymen who can only spare three Sundays from their parishes and professional men whose busy life will not allow a longer vacation we have planned two short cruises to Palestine and Egypt, calling at Sicily and Malta, which will afford the opportunity of a brief visit to the Holy City and the Pyramids to those to whom it would not otherwise be possible. The days of rest on the steamer will obviate any sense of hurry, and the time allowed for Jerusalem and Cairo is long enough to give opportunity for treasuring up never-to-be-forgotten memories of historic scenes."

The *Midnight Sun*, the chartered steamer, is indeed a floating palace. We quote from the prospectus:—

"The s.s. *Midnight Sun* is one of the finest pleasure yachts afloat and is a magnificent steamer of 3188 tons register and

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3500 horse-power. Her passenger accommodation is exceptional. All cabins on the main deck are fitted up with large port-holes. The steamer is lighted throughout with electricity and fitted with electric bells. There are numerous hot and cold water baths for ladies and gentlemen, and all the cabins are supplied with hot and cold water. The majority of the cabins are arranged for two persons only and there are no upper sleeping berths, all berths being on the same level opposite each other. The dining saloon is eighty feet in length, and there is a smoking-room on the upper deck which will seat 100 people. There is also a drawing-room and music saloon, and a ladies' sitting-room on the upper deck. The steamer's launch is placed at the service of the passengers in the ports. The fare: ..... coffee and biscuits in the early morning, breakfast, lunch, afternoon tea, dinner, coffee after dinner, tea, at 8.30 P.M. All these meals are maintained while staying in port. A dark room is provided for the use of amateur photographers."

Brother Fabri, who had no ideas of coöperative education, went in a very different way. We cannot quote his account of the galley, but if the pamphleteers will read his chapter, "De inquieta dormitione peregrinorum in navi," they will see what a pilgrimage used to be like. "Multis noctibus fui, quod nunquam clausi oculum," says the unhappy Fabri.

PROSECUTIONS UNDER THE DENTISTS ACT.

THE *Western Mail* of May 23rd reports that two men have been fined at Newport (Mon.); the one, Walter Frederick Joll, for "unlawfully taking and using the name, title, addition, or description of dentist." One witness testified that the defendant at Messrs. Goodman's consulting-room said he was a dentist and drew a tooth for him (the witness). The offence was admitted and an undertaking given that it should not recur. A fine of 40*s.* and costs was imposed. The name of the other defendant was Moses Abel. He described himself to one of the witnesses who applied to have a tooth stopped as "a qualified dentist." The defendant's counsel, Mr. C. J. Jackson of Cardiff, tried to show that it had not been proved that his client used the title of dentist and that the witness called had been merely sent to entrap him. The evidence showed that the defendant had been fined on a previous occasion for practising as a dentist and advertising himself as such. The magistrates considered the case proved and inflicted a fine of £5, with the alternative of twenty-eight days' imprisonment. The magistrates declined to state a case.

THE BACTERIOLOGICAL DIAGNOSIS OF MALARIA.

IN the May number of *Archives de Médecine Navale et Coloniale* Dr. du Bois Saint-Sevrin has a short paper on the best way to identify the presence in human blood of the parasite which M. Laveran regards as the exciting cause of malarial fever. Dr. Saint-Sevrin, who is Professor of Bacteriology in the Naval School at Toulon, believes firmly in the specific character of the alleged hæmatozoa and, manifestly ignoring some recent developments, even goes so far as to assert that for some years the fact has not been seriously contested. He thinks that the reason why so many conscientious observers fail to find the parasite is because they follow defective methods of research, being misled by their habitual guides. The writers of treatises on microscopical procedure, while correct for the most part, nevertheless copy each other in perpetuating certain erroneous indications which tend to lead neophytes away from the proper path. For example, they all maintain that the patient whose blood is to be examined must not have taken any quinine for a considerable period, but in upwards of 100 cases all taking the alkaloid Dr. Saint-Sevrin never once failed in demonstrating the specific agent. It is essential, however, that the blood for examination should be drawn at the commencement of a malarial paroxysm. Another erroneous indication consists in recommending the employment of fresh blood without the use of staining re-agents. It is true that by this method alone can the flagellated bodies be demonstrated; but these, though academically interesting, are not essential from a diagnostic point of view. The small, recently developed bodies almost entirely free from pigmentation are what we have chiefly to depend upon for purposes of identification, and even with experienced observers there is often great difficulty in detecting them when staining material is not employed. During the period of apyrexia in a patient who is taking quinine regularly the hæmatozoa, as a rule, cannot be demonstrated in peripheral blood; they only make their appearance on the advent of a febrile paroxysm. The writer endeavours to account for this by the hypothesis that the parasites are momentarily lodged in the spleen, but the explanation is scarcely all-sufficing. Dr. Saint-Sevrin's paper, which is illustrated by an admirable coloured plate drawn by M. Boyer, terminates with the following conclusions:—1. Double staining with eosine and methylene blue constitutes the most favourable procedure for a rapid examination of paludal blood. 2. Canada balsam forms the best mounting for preserving the preparations. 3. Bacteriological examination should invariably be undertaken in all doubtful febrile cases. 4. In many cases prognosis and treatment cannot otherwise be established.

THE FUNERAL OF SIR J. RUSSELL REYNOLDS.

ON June 2nd the funeral of the late Sir John Russell Reynolds took place at Owlpen, Gloucestershire, the first part of the burial service being read at St. Peter's, Vere-street, by the Rev. Prebendary Harry Jones and Canon Page Roberts. Lady Russell Reynolds attended with the Rev. Dr. Henry Reynolds, elder brother of the deceased, as chief mourners. There were present, in addition to the late baronet's relations, General H. Lynedoch Gardiner, representing Her Majesty the Queen; Sir R. Quain, President of the General Medical Council, and Mr. Wheelhouse, representing the General Medical Council; Dr. Samuel Wilks, President of the Royal College of Physicians of London, and Mr. Christopher Heath, President of the Royal College of Surgeons of England, while these bodies were further represented by Sir Dyce Duckworth, the Treasurer, and Dr. Edward Liveing, the Registrar, of the Royal College of Physicians, and Mr. Reginald Harrison, Senior Vice-President of the Royal College of Surgeons; Mr. Ward Cousins, Sir William Priestley, M.P., Mr. H. T. Butlin, Dr. Holman, Mr. Macnamara, and Mr. F. Fowke, representing the British Medical Association; and Dr. Goodall, representing the Melbourne and Victoria Branch of the British Medical Association. Among others present were Sir William Broadbent, Dr. Barlow, Dr. Lauder Brunton, Dr. Buzzard, Dr. Cayley, Dr. Coupland, Professor Corfield, Sir J. Erichsen, Sir J. Fayrer, Sir W. Flower, Sir W. Foster, M.P., Sir A. E. Garrod, Dr. Garrod, Dr. Hare, Dr. S. Hutchins, Mr. Victor Horsley, Mr. Shirley Murphy, Dr. Stephen Mackenzie, Sir James Paget, Professor Burdon Sanderson, Mr. J. Tweedy, Dr. Whipham, Dr. Theodore Williams, Captain Arthur Reynolds, and Mr. G. W. E. Russell. Mrs. Best (sister of the deceased) and Mr. Best, Mrs. J. S. Vaizey (sister) and Mr. Vaizey, Rev. J. H. and Miss Best, Mr. K. G. R. Vaizey and Miss S. E. Vaizey, Mr. and Miss Sharp (nephews and nieces of the deceased), Canon Reynolds, Mr. Talbot Baines, and Mr. A. Baines, Mrs. Martin-Leake and Mrs. Trent-Stoughton (sisters of Lady Russell Reynolds), Messrs. Martin-Leake and the Misses Martin-Leake (nephews and nieces), were also present at St. Peter's, Vere-street. After the lesson the body was conveyed to Paddington and thence by train to Frocester, the station for Owlpen, for the

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conclusion of the service. The Vicar of Owlpen met the procession and recited the commendatory portion of the service. Dr. Sedgwick and Mr. Fowke represented the British Medical Association at the grave.

HOMES FOR THE DYING.

ANYONE who has ever worked in a hospital must necessarily have been struck with the need that exists in London of a home for the dying. It is impossible, and indeed would be unfair, for an ordinary hospital to take in incurable cases; but, so far as we know, there are but three institutions in the whole of London open to this class of case. The oldest is the Hospital of St. John and St. Elizabeth in Great Ormond-street; then comes Freidenheim, near the Swiss Cottage; and, latest of all, the Hostel of God, 82, The Chase, Clapham. All these institutions do excellent work, but it is specially for the last that we now speak. In aid of its building fund a concert will take place on June 9th at Stafford House. Tickets £1 1*s.* each (two for £1 10*s.*) or 10*s.* 6*d.* each (three for £1 5*s.*) may be obtained from Miss Erskine, Speaker's-court, Palace of Westminster, or from the following: Messrs. Lacon and Ollier, 168a, New Bond-street; Messrs. Keith and Prowse, 48, Cheapside; and Messrs. Larner and Stokes, 42a, Chester-square; or subscriptions may be sent to Mr. W. Portlock-Dadson, 281, Strand, W.C.; Mr. W. Hoare, The Brewery, Lower East Smithfield, E.; or to the account of the "Home for the Dying," Messrs. Hoare, 37, Fleet-street, E.C.; to Colonel Hardy, 35, Wellington-street, Strand, on account of the "Home for Dying"; or to the Sister Superior, the Hostel of God, 82, The Chase, Clapham, S.W. In our columns of May 27th, 1893, will be found an earnest appeal from Mr. T. Bryant, and no more words of ours are necessary to impress upon the charitable the excellent work which such institutions carry on.

"A RIVER VOYAGE THROUGH NORTHERN SWEDEN."

WE have received from the Swedish Touring Club a pamphlet in English bearing the above title. It is freely illustrated and describes the scenery of some of the large rivers which flow into the Gulf of Bothnia from Sweden, and it gives detailed instructions as to the routes, the objects of interest, and the average expenses of the journeys which it sketches out. For some years the Swedish Touring Club has been doing excellent work in opening up to travellers the less frequented districts of Sweden, and the northern or forest regions of that country are among the most beautiful spots in Europe. It is strange that while Norway has for years been overrun with tourists from this country Sweden should remain so long unknown, for unknown it is to the vast majority of English people. Those who have penetrated into the country invariably return full of enthusiasm as to its charms, but when they urge their friends to go there likewise for a holiday their praises too often fall upon deaf ears. It is not at present the fashion to go to Sweden, that is all. The trip from Stockholm up the Baltic coast by steamer to Sundsvall occupies seventeen hours, for the first five of which the vessel is steaming smoothly among the countless islands which form an archipelago round the entrance to Stockholm. This journey among the islands is full of beauty, the steamboats are models of comfort and cleanliness, and the food is uniformly excellent. The traveller is always safe to trust to the catering on board these coasting steamers, because the Swedes are a restaurant-loving people, and insist upon having good food and refreshments wherever they go, so that all anxiety as to commissariat may be dismissed when on board of, or even within reach of, a Swedish passenger boat. On reaching Sundsvall the steamer may be taken up the Indals River, returning later by the Angerman River, and so back to Stockholm, or the traveller can prolong his visit inland. The inland districts are characterised by mountains, pine trees, lakes, and rivers, but among the wilds there exist excellent hotels and health resorts. The fresh and stimulating air, the bright daylight, and the intensely vivid green of the grass and the foliage all tend to make these upland summer resorts excellent. In Sweden the English are always welcome; scrupulous cleanliness prevails, living is cheap and good, meals are served for the most part in the open air, and there is good music to be heard almost everywhere. We strongly recommend our readers who are in search of a new holiday resort to try Sweden, for they will be surprised and charmed with it and invigorated as well.

OVERWORK AND EMPLOYERS' LIABILITY.

IT is not only in connexion with the management, or rather the mismanagement, of railway service or of retail business that we are brought in contact with the mischievous effects of overwork. A variety of other callings are liable to be disorganised by the same form of excess. Seldom indeed, however, do we find that either the long-continued strain of labour or its disastrous consequences are so palpably evident as in a case recently investigated at the London Hospital. A carman had fallen, while asleep, from his driving seat, and had sustained a fatal fracture of the skull. On examination it transpired that the man had been at work for thirty-six hours consecutively, either cutting or carting garden produce for his employer, and that it was intended that he should work for twelve more hours before taking rest. It is not surprising that the verdict of accidental death passed in this case was accompanied by important modifications. The hazard imposed upon men employed in responsible and heavy duties with such unscrupulous disregard for the absolute needs of existence is not greater than the danger which is, by the same action, thrust upon the general public. Lessons like that conveyed by this so-called accident, moreover, are hard of acceptance unless it be understood that they shall effectively teach the practice of prevention. We need hardly remind our readers that in order to secure this end more is required than the mere censure of a jury. Accidents in which one party is to be blamed for the injury of another may well constitute a ground for liberal compensation. In such a case as that before us this form of expiation is the least that should be regarded as consistent with the legal duty of a culpable employer.

THE MANUFACTURE OF EXPLOSIVES.

THE twentieth annual report of Her Majesty's inspectors of explosives just published is on the whole a satisfactory one, especially when regard is had to the great number of new explosives invented during the last few years. The number of deaths from accidents by fire or explosion in manufacture was ten only, which, although above the average for the past ten years marks an extraordinary and most satisfactory contrast with the figures which obtained before the Act came into operation (1876). These satisfactory results, it is stated, have been accomplished without any undue or even inconvenient interference with the trade. Makers at home have complained from time to time that the severity of the Act has given a better chance to makers abroad. Of recent years, however, complaints on this head have been less frequent, owing chiefly to the fact that during the years which have elapsed since the English Act was passed other countries have introduced laws and applied regulations affecting explosives based on our own, but as a general rule they have been of greatly increased

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stringency. In their remarks upon the slight explosion which occured in the manufacture of cordite at Waltham Abbey on April 22nd., the inspectors were not able to trace the cause of the ignition with certainty. It is remarkable, however, as they point out, that the bulk of the paste fell out of the broken cylinder intact and that the cordite present in the building was not ignited. Only one ounce of the paste in the cylinder exploded, although the charging press from which the cylinder was filled contained about thirty pounds of cordite paste. Bearing in mind the large increase in the number of factories, the increased output, the number of hands employed, the greater resulting chances of accident, and the increase in the enormous number of nitro-compounds made and imported, the Act, as shown by the present report, is evidently doing good work.

LUNATICS IN WORKHOUSES.

THE Local Government Board have just issued a circular to boards of guardians with special reference to the medical examination of lunatics received into, or removed from, workhouses. The circular appears at an opportune moments when much is being written and said concerning the care of paupers. Instances of failure to make the requisite examination and to record results where examination has been made have come under the Board's notice, and these probably account for the issue of the present document. Careful examination by the workhouse medical officer is enjoined immediately on the admission of a lunatic and immediately prior to removal or discharge; any examination in the latter case made even on the day previous to discharge is to be repeated on the actual date when the patient leaves the institution, special regard being given to any bruises or other injuries on the person. The physical condition of the patient to be removed is also to be a point of consideration by the medical officer. Such examination is in nowise to replace that called for by the Lunacy Act of 1890, where a private medical practitioner is in question. Another point refers to attendance on lunatics detained in workhouses. The Board consider that all lunatic, should be both by day and by night under the immediate charge of paid officers, and that pauper assistance, when it is impracticable to altogether dispense with it, should be under the closest supervision of paid officers. We look upon this as a very important part of the letter, and trust that as time goes on the Board will insist more and more on the replacement of pauper attendance by that of properly appointed and remunerated officials.

MEDICAL HISTORY OF PEKING DURING THE WAR.

THE thirty-fourth annual report of the Peking Hospital[1] in connexion with the London Missionary Society for the year 1895, by Dr. Eliot Curwen, is interesting. He speaks highly of the activity and efficiency of two native students—Mr. Li Hsiao-ch'uan and Mr. Liu Paoching—between the departure of Dr. E. T. Pritchard and his own arrival. The popularity of the hospital and dispensary seems to increase, the visits paid being 4000 in excess of those of any previous year; thus 33,253 visits were paid by 14,604 patients in 1895. To patients at their own homes 278 visits were paid and 162 were treated in the wards. Unfortunately, we presume for want of funds, only two out of three wards for males were in use. There was a memorable outbreak of cholera in Peking in 1895. Dr. Curwen speaks of it as the most fatal epidemic of the century. It is estimated to have attacked half the houses and to have killed 75,000 of the inhabitants. Few cases were brought to the hospital. If not quickly fatal they were mostly treated by native medical men with acupuncture of the larger joints or of the tongue. As a consequence of this treatment many afterwards became patients at the hospital suffering from acute suppurative inflammation of the larger joints. The prevalence and mortality of cholera need occasion little surprise when we learn that the roads were watered with the contents of open sewers to save the trouble of drawing water from the wells. The Chinese recognise that unboiled water and green fruit generally are ready carriers of the disease. Dr. Curwen acknowledges the willing help in many ways of Dr. S. W. Bushell of the British Legation. One of the most blessed influences in such countries must surely be that of the members of our own profession, whether official missionaries or not.

THE BIRMINGHAM HOSPITAL SATURDAY FUND.

THE Executive Committee of the Birmingham Hospital Saturday Collection has received a valuable gift in the shape of a seaside home for children. The generous donor, who does not wish his name to be disclosed, has handed over a mansion called Bryn Marle, between the two convalescent homes for men and for women already in use. He is prepared to furnish and maintain it free of cost for the first twelve months.

THE HEATH SCHOLARSHIP

THE Heath Scholarship has been awarded to Mr. G. P. Newbolt, M.B. Dunelm., F.R.C.S. Eng., for his essay on the Surgical Diseases of the Jaws. The prize is £200. It is awarded every second year to the writer of the best essay upon some surgical subject selected by the trustees of the Heath Scholarship Fund, and only graduates in medicine or surgery of the University of Durham can compete for it. The subject for the next competition is Congenital Deformities, their Pathology and Treatment. The essays must be sent in on or before the last day of March, 1898. Mr. Newbolt is the first winner of this valuable scholarship.

STATISTICS ON WEIGHT OF INFANTS, SEX AND FŒTAL HEART-RATE.

STATISTICS of large numbers of cases are often useful to correct erroneous impressions on statistics from small numbers. A paper read before the Obstetrical Society of Boston on Feb. 18th of this year is interesting and valuable from this point of view as showing the results obtained from observations in a large number of infants as regards weight, sex and fœtal heart-rate.[1] Thus the assertion is often found in text-books that the fœtal heart-rate of girls is more rapid than that of boys. It appears to depend on the statement made in 1859 by Frankenhauser that the average fœtal rate in boys was 124, in girls 144, and this he obtained as a result of fifty observations. It is no wonder that predictions of sex based on such a small foundation should be disappointing. Taking a thousand cases at full term at the Boston Lying-in Hospital, the average rate of the fœtal heart was as follows: 500 males, 140·26 per minute; 500 females, 141·83. This difference of one and a half beats is, of course, valueless for prophetic purposes. Let us hope that Frankenhauser's statement will no longer be copied into the text-books. The average weight of these 1000 full-term infants was as follows: 500 male infants, 7 lb. 8·9 oz.; 500 female infants, 7 lb. 5·1 oz. It might be said that the slightly slower heart-rate in the boys depended on the slightly heavier weight of the male sex. It is interesting to note, however, that some of the very heavy babies had rapid hearts, and *vice versâ*; so that no individual prediction of the weight of the child could be made by the heart-beat. The variation in the rate of the heart-beat at different periods in the labour is also

[1] Boston Medical and Surgical Journal, May 14th, 1896.

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a commonly observed fact. Of 7515 deliveries at the Boston Lying-in Hospital, the heaviest child was a female weighing 12 lb. The infants were all carefully weighed, and the actual weight without clothing was obtained. The following table shows the number of heavy children over 10 lb. in weight born at the hospital:—

	Male.	Female.
10 to 11 lb.	46	25
11 to 12 lb.	10	5
12 lb.	—	1
	56	31
Total	87	

The records of the out-patient department were not considered sufficiently reliable to examine for this purpose. The largest infant, however, in which the record could be trusted weighed nearly 13 lb. This child was carefully weighed in scales that had been tested.

FOR THE FADDIST.

THE medical officer of health for the St. Olave District has issued a report to the Board of Works for that district on the increasing neglect of vaccination in the union. In 1881 the proportion of children, says Dr. Bond, unaccounted for in regard to vaccination (including cases postponed) in the Metropolitan unions was only 5·7 per cent. of the total births. In 1891 this proportion had risen to 16·4 per cent. In the St. Olave Union the corresponding rates were 4 1 and 15·3 per cent. Of the 676 cases of small-pox that were removed to the hospital ships of the Metropolitan Asylums Board during the six months ending Dec. 29th, 1895, there were 113 under ten years of age, and 68 over ten years and under fifteen years. Of the 113 under ten years of age 104 were not vaccinated, 7 were vaccinated, and in 2 cases there was no history in regard to vaccination. Of the 68 between the ages of ten and fifteen 36 were not vaccinated, 31 were vaccinated, and in one case there was no history in regard to vaccination. Not one of the 68 patients over ten and under fifteen years of age was stated to have been re-vaccinated. The strongest practical evidence that small-pox can be stamped out by vaccination and re-vaccination is supplied by Germany, for since the year 1874 re-vaccination before leaving school has been compulsory, and during the last ten years small-pox has been almost extinct, being at the rate of only one case per million inhabitants; and these few cases are those of foreigners or natives who have not been re-vaccinated. Comment on these figures is needless, and we can only hope that when the report of the Royal Commission on Vaccination does see the light it will insist not only on vaccination but on re-vaccination.

THE secretary of the Royal College of Surgeons of England has issued notices for a meeting of the Fellows of the College, to be held at the College in Lincoln's-inn-fields on Thursday, July 2nd next, at five o'clock. The last day for the reception of notices of motion by the secretary is Thursday, June 11th next, and motions must be signed by the mover or by the mover and other Fellows.

WE are informed by the Colonial Office that a telegram has been received from the Governor of Hong-Kong stating that eighty-one fresh cases of bubonic plague occurred in the colony in the week ending June 1st and that the number of deaths from the plague during that period was seventy-three.

A COMPETITIVE examination for twenty-five commissions in the Army Medical Staff will be held on Aug. 7th next and following days. Particulars thereof will be found in our advertisement columns.

THOMAS WAKLEY,

THE FOUNDER OF "THE LANCET."

A BIOGRAPHY.[1]

CHAPTER XXII.

The Revolt of the Members of the Royal College of Surgeons of England.—Wakley's Consistent Attitude.—The Navy and the College.—The Members' Petition in the House of Commons.—Sir Robert Peel for the Defence.—The Decision of the House.

IT would serve no purpose to trace all the steps of the duel that now took place between the reformers and the College authorities. The part that was played in it by Wakley was throughout consistent and vigorous. The official refutation was treated by him with complete ridicule, inasmuch as it refuted nothing, but only added fresh insults to those which had already been accepted by the Members for years and were now for the first time being resented. In particular, the last paragraph but one of the unfortunate document came in for scorn. The statements that the subversion of the Charter would lead to the election to offices of control and responsibility of persons "who for the most part exercised the professions of apothecaries and accoucheurs," in which case the institution would soon cease to be a College of Surgeons or Surgery, while "a system of continual intrigue and cabal amongst the profession in general would be introduced," furnished Wakley with an admirable text upon which to address the profession at large, and one of which he was not slow to avail himself. Such words he held to constitute a direct insult to the general practitioners of England as well as a distinct attempt to exercise an illegal power. While declaring in uncompromising terms that the general practitioners were much more capable of conducting the affairs of their corporation than were many of the twenty-one councillors elected for life, and frequently displaying evidences of senility while occupying their offices, he pointed out that the Charter—the infamous Charter under which this oligarchical and irresponsible little body claimed the right to control the affairs of the Members—contained no provision for the limitations which the refutation of the College attempted to lay down. There was not a word in the Charter implying any disability on the part of an apothecary or an accoucheur to occupy a seat either on the Council, the Court of Examiners, or even the Presidential bench, and he accused the existent Council of attempting to read into the Charter already upholding no interests but their own unwritten clauses still further securing to themselves all the benefits, honorary or pecuniary, in the power of the College to bestow. This formed an admirable rallying cry for the Members and it was recognised by them as such, THE LANCET receiving at the time an enormous access of regular readers and subscribers among the general practitioners of England, who recognised in Wakley the guardian of their interests, the man who was not only prepared to see that they received some substantial return for their fees, but also that they were treated with the respect due to them as the persons who paid.

It was not until the last day of 1826 that the petition to the House of Commons for the abrogation of the Charter reached its final stage, so that signatures could be invited for it. Spontaneous as had been the revolt of the Members against their rulers, and unanimous as had been their

[1] Chapters I., II., III., IV., V., VI., VII., VIII., IX., X., XI., XII., XIII., XIV., XV., XVI., XVII., XVIII., XIX., XX., and XXI. were published in THE LANCET, Jan. 4th, 11th, 18th, and 25th, Feb. 1st, 8th, 15th, 22nd, and 29th, March 7th, 14th, 21st, and 28th, April 4th, 11th, 18th, and 25th, May 2nd, 16th, 23rd, and 30th respectively.

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strongly-worded resolutions of remonstrance at the general meetings, the movement would have ceased at the mere passing of these resolutions had it not been for Wakley's energy, desire for justice, and, it must be admitted, personal implacability. Mr. Lawrence was satisfied with the commotion that had been caused in the comfortable breasts of the Council and from personal reasons was desirous of peace. Many of the leaders in the agitation were also ready to lay down their arms on the promise of some slight concession. But not so Wakley. He held the meeting to their pledged course, declaimed against the perpetual delay in the preparation of the petition, and was finally able to announce that the means of redress had at last been brought within reach of the Members, for the document was lying ready for signature at Freemasons' Tavern. During the eleven months that elapsed between the general meetings and the completion of the petition for signature the columns of THE LANCET had regularly contained leading articles or correspondence bearing upon the strained relations between the Members and the Council. Generally the intent of these articles and communications was very clear; indeed, where Wakley's, Wardrop's, or Lawrence's pen was speaking the terms used were uncompromising to a degree, yet occasionally the connexion between the information given to the public and the actual terms of the internecine quarrel in the profession was not so distinct. But Wakley was not a careless editor nor a promiscuous vilifier of his opponents, and all the notice taken by THE LANCET of the attitude of the Council had a definite reason. When the petition at last made its appearance the prominence given to certain matters not obviously germane to the subject at issue became manifest. Wakley, for instance, had dwelt at length on the fact that the Navy had refused to accept the diploma of the College as sufficient to warrant the advance of the medical men holding it from assistant surgeon to full surgeon. He also inserted from time to time little exposures of quacks and advertising charlatans who claimed to be, and occasionally were, on the official list of Members of the College. Both these points were brought to the notice of his readers with definite intent, as will be seen from the opening words of the petition. Wakley also stirred up the provincial surgeons to present separate petitions of their own in protest against the wrong done them and their hospitals by the recent by-laws of the College, and in two places at least his words bore fruit. For the medical men of the neighbourhoods of Bristol and Winchester instructed their knights of the shire to speak in Parliament in support of the Members' petition.

The petition was an able document, bearing, however, no trace of labour or research, so that it is difficult to understand why it should not have been ready for signature until the end of the year. The resolutions of remonstrance adopted at the general meetings at the Freemasons' Tavern in the spring[2] will sufficiently indicate the lines upon which it was drawn, as it was designed to meet those specific grievances. The declared object for which the Charter of 1800 was granted was "the due promotion and encouragement of the study and practice of the art and science of surgery," the principal means by which these objects were to be brought about being by the conduct of examination into the qualifications and education of candidates for admission into the College or into the medical department of the Navy and Army, the obvious supposition being that the certificates of the College would enable the public to distinguish between the expert and the pretender. The petition then pointed out that the charter had consigned the whole management of the College to twenty-one persons, who, being elected for life themselves, had the privilege of electing whomsoever they liked, also for life, to fill any death vacancies; that these twenty-one persons appointed ten of their own body to form a Court of Examiners and were not accountable to the Members for the appropriation of the funds, nor for any other of their proceedings which were conducted in private. The petition next showed that the twenty-one governors of the College had a direct interest in keeping all the emoluments to themselves and that they did so by preventing other persons than the Court of Examiners and personal friends of that Court from delivering official lectures to the students, upon which followed naturally a representation of the grievances concerning the new by-laws as to the sources of official certificates of attendance at lectures. We now see Wakley's object in inserting matter that must have seemed at the time that it was printed mere irrelevant abuse. *He knew what the petition was going to be.* His object in alluding to the action of the Navy when that department refused to accept under certain circumstances the diplomas of the College as proofs of scientific efficiency is now transparent. One of the main reasons for the existence of the College, one of the specified objects that George III. had before him in granting to the discredited corporation a Royal Charter whereon to begin a new life, was that the College should accept the responsibility of supplying the military and naval services with efficient surgeons. In this the College must be held to have failed. A second main reason for the grant of the royal charter had been to safeguard the public against quacks, the duty devolving on the College to discriminate between the charlatan and the true man of learning. The object of giving prominence to the fact that there were notorious quacks, persons dealing in secret and disgraceful remedies, and whose names were on the official list of the College, now leaps to our eyes. It was to show that in another direction the College had been found wanting to the implied contract between its original governors and the King.

On June 20th, 1827, Mr. Warburton, whose name is more closely associated with the Anatomy Bill of a little later period, presented the petition of the Members to the House. In his speech in its support Mr. Warburton pointed out that in 1797, when the former Corporation of Surgeons were attempting to obtain from Parliament a re-establishment — the parent corporation having ceased to exist in consequence of some irregularities in its procedure — Lord Thurlow persuaded the Lords to scout the Bill because it contained certain clauses inimical to the interests of the Members. These same clauses were now, he said, in active operation under a Royal Charter against the Members, who therefore prayed for relief in the full trust of obtaining it. Mr. Warburton then recapitulated almost in the words of the petition the various tribulations of the Members as exemplified by the six strong resolutions of remonstrance passed at the general meeting,[3] and concluded by moving for a return from the Royal College of Surgeons of England of all public money lent or granted to the College from 1799 to the present time. He specified the grants he required to have information upon as being those made for the purchase, building, and repairing of the College, and for the purchase of the Hunterian Museum. He also desired that the regulations under which the Members of the College and the medical students were admitted to the Hunterian Museum and to the library of the College should be laid on the table, as well as the numbers of persons who had been examined by the College since 1800. He required also an account of all moneys received by the College from its Members and a detailed statement of the appropriation and

[2] See Chapter XX. of this biography.

[3] Loc. cit.

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expenditure of these sums and of the sums granted by the State. After a few words from a Mr. Smyth, who said that the petition was the work of interested persons and was based upon no better foundation than feelings of personal pique, Mr. Peel, the Home Secretary (afterwards Sir Robert Peel, the great statesman), rose to speak in behalf of the College. The line of defence adopted was practically a confession of guilt. Mr. Peel, who was a trustee of the Hunterian Museum, said that he had discussed with the Council of the College every subject of complaint preferred in the petition, and that many of the causes no longer existed, and that every one of them that appeared reasonable would be in time removed. The back-door entrance was done away with, the catalogue of the museum was being prepared, and a quarterly statement of the financial affairs of the College would for the future be made public. Mr. Peel did not consider "that there was the slightest ground of accusation against the College," but he was willing to support Mr. Warburton's motion, after the explanation the House had heard of his vote, because he considered Parliament had a right to be informed of the proceedings of an institution which had received large grants of public money.

As Wakley pointed out the following day, Mr. Peel's speech was a very illogical performance. Certain complaints were made concerning the action of the Council; therefore a petition was presented to Parliament begging for an alteration in the Charter which sanctioned the abuses. Mr. Peel rose and admitted that the complaints were being attended to and would receive further attention, and yet said that the petition was presented on no proper grounds of accusation!

The House acceded to Mr. Warburton's motion and the College was called upon to render an account of its stewardship. A temporary victory was thus gained by the Members.

(To be continued.)

THE FIRST QUINQUENNIAL CENSUS IN LONDON.

THE Registrar-General, in his return for the week ending Saturday, May 23rd, briefly notes the results of the recent London census, taken at the end of March last under the provisions of the London (Equalisation of Rates) Act, 1894. Especial interest attaches to the results just published from the fact that the recent census is the first quinquennial census that has been taken in this country. Based on the assumption that the rate of increase of population that prevailed in London during the ten years 1881–91 had since been maintained, the Registrar-General had estimated the population of the metropolitan area known as Registration London in the middle of this year at 4,435,955, whereas the revised estimate for the same date, based upon the numbers enumerated on March 29th last, now adopted by the Registrar-General, is 4,421,492, and 14,463 below the previous estimate. In other words, the recent census shows that the rate of increase of population within Registration or Inner London since 1891 has been smaller than the rate that prevailed during the ten years 1881–91. This recent decline in the rate of increase in Inner London need cause no surprise, since it was pointed out in the last census report that the increase per cent. of population within this area, which had been 16·0 and 17·3 in 1861–71 and 1871–81, fell to 10·4 in 1881–91. Indeed, the actual decline of population in Central London, owing to the substitution of business premises for dwelling-houses, and the migration of the residents to suburban neighbourhoods, a large proportion of which lie outside the arbitrary boundary of Inner or Registration London, has long been in progress at an increasing rate. The population enumerated in March last in Inner London showed an actual increase of 199,528 upon the number enumerated at the previous census in 1891; the increase per cent. in the five years being 4·7, against 10·4 in the ten years 1881–91. The decline, therefore, in the rate of increase was not so great as it had been between 1871–81 and 1881–91. As regards the whole of London the error in the estimate of population, which this quinquennial census has enabled the Registrar-General to correct, was in reality very slight, and for general statistical purposes might be disregarded. When we come to consider the more distinctly local results of the census the value of the quinquennial figures, meagre as unfortunately are the details available, becomes patent. It is distinctly evident that in many sub-divisions of the metropolitan area the rate of increase between 1881 and 1891 afforded no trustworthy indication of the increase since 1891.

One of the most strongly marked features of the new figures is the evidence of the arrest of the rapid decline of population in the central districts. It was pointed out in the last census report that in eleven of the central registration districts the enumerated population showed an actual decline during the ten years 1881–91 equal to 7·2 per cent. in the aggregate and ranging from 25·5 per cent. in London City, 18·8 in Westminster, and 18·1 in the Strand, to 2·0 in Shoreditch and in Stepney and 0·8 in St. Pancras. In the five years 1891–96 the decline was changed to increase in three of these eleven districts—namely, in St. Pancras, Stepney, and St. George-in-the-East; while in each of the other eight districts the percentage of decrease showed a marked decline except in London City, where the decrease in the five years was 17·2 per cent., against 25·5 in the preceding ten years. In the aggregate of the eleven districts the percentage of decrease in the five years was only 1·0 per cent., whereas in the previous ten years it had been 7·2 per cent. The nineteen other registration districts which showed an increase in the ten years 1881–91 continued to show an increase during the five years 1891–96, but the percentage of increase, which had been 29·3 and 17·5 in the census periods 1871–81 and 1881–91, further declined to 6·6 per cent. in the five years ending with March last. The increase, with very few exceptions, showed a decline in each of these nineteen districts; the most noticeable exceptions were Whitechapel and Lambeth, in each of which districts the increase was proportionally far greater than it had been in the preceding inter-censal period. The most marked decline in the rate of increase naturally occurred in Fulham, Hammersmith, Hampstead, Wandsworth, Lewisham, and Woolwich, in which the percentages of increase had been exceptionally large in 1881–91. In Fulham and Hammersmith, for example, the increase in the five years 1891–96 did not exceed 15·4 per cent., against 74·0 and 64·5 in the two ten-year periods 1871–81 and 1881–91. It is much to be regretted, from a statistical point of view, that the scope of the recent census did not include Greater London, as, having regard to the continued decline in the rate of increase in Inner London, it would be full of interest to know whether the percentage of increase of population in Greater London, which declined from 22·7 in 1871–81 to 18·2 in 1881–91, is continuing to decline. For information on this point, however, it seems necessary to await the next national census in 1901. As a matter of fact, the recent census embraced the area of the Administrative County of London, which includes the hamlet of Penge (with a population in 1891 of 20,375), in addition to Inner or Registration London. It has long been a matter for serious regret that no measures have been taken to include Penge within Inner or Registration London, which would thus be made co-extensive with the Administrative County of London, the main obstacle to which appears to be that Penge forms part of Croydon Registration District and Poor-law Union.

THE annual meeting of the Incorporated Medical Practitioners' Association was held on May 14th at the Holborn Restaurant. The annual report showed a rapidly increasing membership and the formation of important branches in Devon and Cornwall and in Lancashire and Cheshire during the past year. A number of new by-laws providing for an extended organisation of the Association were passed, Dr. Bedford Fenwick was elected president, and the council and other officers were appointed for 1896–97. A considerable number of members and their friends dined together in the evening under the chairmanship of the late President, Mr. George Jackson, F.R.C.S., of Plymouth.

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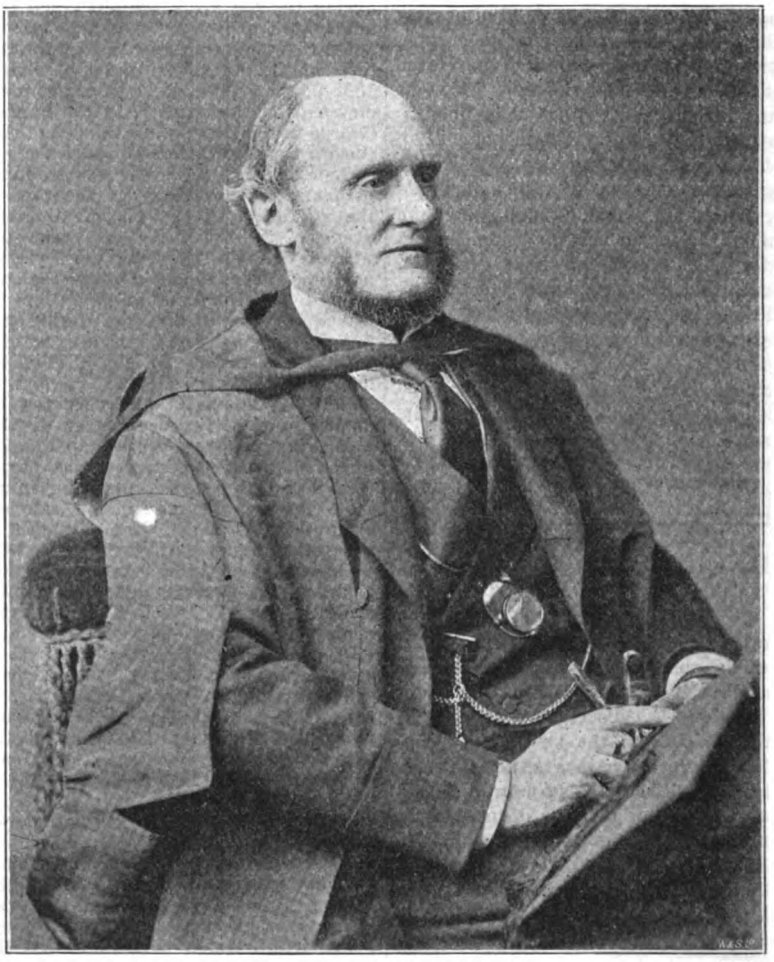
Obituary.

SIR JOHN RUSSELL REYNOLDS, BART., M.D., F.R.C.P. LOND., F.R S. LL.D. ABERD., LL.D. EDIN.,

PRESIDENT OF THE BRITISH MEDICAL ASSOCIATION, PHYSICIAN TO HER MAJESTY'S HOUSEHOLD, CONSULTING PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL, AND LATE PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

WE deeply regret to announce the death of Sir John Russell Reynolds, which took place at his residence in Grosvenor-street on Friday afternoon last (May 29th). He had been failing in health during the whole of the present year, but no organic mischief having manifested itself it was hoped by his friends and medical advisers until the end that the great debility, which was the chief and for some time the only obvious sign of illness about him, would give way to rest, treatment, and change of air, and that a return to health would be established. These hopes have been disappointed, for in spite of the most watchful medical care and assiduous nursing the weakness steadily increased until, at the beginning of last week, a condition of extreme prostration was reached, from which he never rallied, but gently passed away in a condition of painless unconsciousness.



SIR JOHN RUSSELL REYNOLDS, BART., M.D., F.R.S.,
LATE PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

John Russell Reynolds was the second son of the Rev. John Reynolds, a distinguished figure in the Nonconformist world, and the grandson of Dr. Henry Revell Reynolds, F.R.S., who was physician to Middlesex Hospital at the beginning of the century, Goulstonian Lecturer, Censor, Harveian Orator, and Elect of the Royal College of Physicians, and Physician in Ordinary to King George III. John Russell Reynolds was born at Romsey in Hampshire in 1828 and his early education was received at the hands of his father who had been captain of Westminster School and classical scholar of Oriel College, Oxford. Having decided to follow in the steps of his grandfather he proceeded in 1846 to University College, London, where his elder brother Henry (the Rev. Dr. Henry Reynolds, late principal of Cheshunt College) was already a distinguished student. His medical career was exceedingly brilliant. He obtained gold medals at University College in medicine, clinical medicine, and obstetric medicine and graduated in the University of London as University Medical Scholar and Gold Medallist in physiology, comparative anatomy, and medicine. With this record of successful performances and a high character for industry, conscientious work, and zeal, the young physician was marked out by his colleagues and tutors as a coming man, so that it was felt by all when he decided to leave London to practise in the country that he was renouncing a future of assured brilliancy. Dr. Russell Reynolds was not, however, a man of large private means, nor was his father able to afford him much pecuniary assistance, and the opening at Leeds of which he decided to avail himself on becoming qualified was attended with peculiar advantages for him, inasmuch as he had influential friends and relations in the town to whom the details of his promising career were well known. But, hardly had he settled down in Leeds when an unexceptionable opportunity for London practice presented itself to him. His great friend and brilliant teacher, Dr. Marshall Hall, F.R.S., the discoverer of the reflex functions of the spinal cord, decided to leave London and give up professional work, and his house in Grosvenor-street was offered to Dr. Russell Reynolds upon favourable terms. The house was familiar to him, for in his late student days he had been one of the half-dozen men who met weekly there to be less, perhaps, instructed than inspired by the prolific imagination of the greatest neurologist of the mid-century. He was at first anxious to avoid the responsibility of starting in practice in so conspicuous a manner and in so expensive a locality. He was satisfied with his chances at Leeds though the new prospect tempted him much. But his friends and his teachers were so urgent that he should lay aside modesty and come to London to command the success that lay ready to his beck that he accepted the surrender of Dr. Marshall Hall's lease of 38, Grosvenor-street and established himself there in 1852, in the house where he died forty-four years later.

Dr. Russell Reynolds was fortunate. He had not long to wait for recognition. In 1855 he was appointed assistant physician to the Hospital for Sick Children, Great Ormond-street, in 1857 assistant physician to the Westminster Hospital and Lecturer on Forensic Medicine in the school, and in 1859 assistant physician to University College Hospital. This appointment brought him back again (to his and their extreme pleasure) among his old teachers and friends, Sharpey, Walshe, Thompson, Jenner, Wilson Fox, Henry Thompson, and Erichsen, to mention a few whose names immediately recur to memory, and in this brilliant circle he was made entirely welcome, being

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recognised, not only as a colleague most grateful to their sentiments, but as a powerful adjuvant to the teaching resources of the institution. In 1862 he became full physician to the hospital and Holme Professor of Clinical Medicine, and three years later he succeeded Sir William Jenner as Professor of the Principles and Practice of Medicine in the College.

He immediately made his mark as a lecturer. He was lucid, learned, informatory, and, above all things, original. Deeply read as well as practically expert, he knew the difficulties which lay before his hearers, and he took his own way to clear them up. With a command of French and German as well as of his own language, it was no trouble to him to find a new manner of saying old things or new examples elucidatory of old knowledge; consequently he was able to clothe the truisms with which all scientific lectures must abound, and the repetitions, without which they would be incomprehensible, in a perpetually novel and striking attire of ideas and words. And stress must be laid upon the fact that this display of subtle intelligence and verbal felicity was, as has been said, no trouble to him. Never was a lecturer less affected. Never did a public speaker hunt less or grope less for the allusion that should seem extraordinary or the quotation that should seem apt. There was with Dr. Russell Reynolds no necessity for effort and no concealed struggle—facts which accounted for the pleasure with which he was always heard by his audience. Fluently, accurately, and with absolute precision he taught his science, while, having his learning at his finger tips, his poetic similes and quaint, humorous illustrations made their natural appearance in his discourse and riveted in the memory of his hearers many a simple fact, as well as many an elaborate argument, that in the unilluminated page of the text-book had seemed without importance or, perchance, without meaning. His old pupils to this day speak of their attendance at Reynolds's morning lectures in medicine not merely as a part of their routine medical education to which they were forced to submit, but rather as an interlude in that education from which they reaped not only substantial assistance in their comprehension of medicine, but absolute intellectual pleasure and wider views of life.

Dr. Russell Reynolds's skill and eloquence were the outcome of his intimate knowledge of his subject and the wide range of his general culture, but that does not account for all his success in lecturing. These things would have given him the material, but his literary skill gave him the power of performance. For although, compared with many men of less eminence in the profession, he was not a voluminous writer, it was as an author that he won his spurs, and as an author that he justified in the eyes of the profession his early success as a consulting physician and his prompt election while still quite young to so many important medical posts. His first medical work was an essay upon Vertigo. This was an expansion of a short paper read before the North-west London Medical Society in 1854 and reprinted at the request of some of those present who recognised in it a genuine contribution to medical literature. The essay marked its author out at once as an observant clinician and a well-read neurologist. It was a sketch of the development of medical knowledge concerning the causes of rotatory movement, the phenomena being for purposes of clearness distributed into "vertiginous movements" and "vertiginous sensations." Although largely a historical *résumé* the author's reflections had the stamp of an original mind, while the clearness and grace of his style contributed to the value of his monograph. This essay was followed in the course of a few months by two larger works having the titles, "The Diagnosis of Diseases of the Brain, Spinal Cord, and Nerves," and "Tables for Diagnosis of Diseases of the Brain." These constituted at the time the most clear and explicit account of the diseases of the nervous system that had appeared. It was characteristic of the author's precision and modesty that, having defined the scope of the work as a collection of what was known, he made no attempt to increase the stock of individual pathological observations. He dealt with the things that were before the profession and reduced to their proper value such semeiological phenomena as had already been recorded in connexion with disturbances of the functions of the brain and spinal cord. These contributions to the literature of neurology were followed in 1861 by his book on Epilepsy. This was a brilliantly written application to medicine of the statistical method now generally followed, but introduced into medical literature by his teacher and colleague, Dr. Walshe. The book at once carried Reynolds to a position as leading authority on diseases of the nervous system, confirming him in the place left vacant by the death of his friend Marshall Ward. The full title of the book was "Epilepsy, its Symptoms and Relations to other Convulsive Diseases," and it was a picturesque, accurate, and forcible treatise upon all epileptiform conditions, far ahead of the general knowledge of the day, both revealing great acumen in the interpretation of obscure manifestations, and carrying the facts as far as their small amount would permit.

These treatises possessed the same qualities that we have noted as characteristic of Dr. Reynolds's verbal addresses—in fact, he imported into his lectures the precision of style and wide range of learning that he had cultivated in his writings. He was author first and lecturer afterwards. This may be seen in his Lectures on the Clinical Uses of Electricity, which appeared in 1871, and which are the only examples of his lectures which were ever printed for public circulation. At this date but little was known of electricity in its application to medicine or physiology. There were no electrical departments in connexion with the general hospitals, and the lectures, when they appeared were a revelation to the profession of the workings of what might almost without exaggeration be termed a new therapeutic agency. They presented the subject from the side of practical medicine, not from that of electrical science which has dominated some writers to an unpractical degree. But they would never have been printed had it not been that Dr. Reynolds's most assiduous and brilliant pupil at the time asked him one day when the course was completed why he did not publish his lectures on electricity, seeing that the subject was one on which the profession badly wanted instruction. Dr. Reynolds confessed that he shrank from the trouble because the lectures had been delivered from notes only and no real manuscript existed. "I can bring you the manuscript in the course of a few days," said the student (who was W. R. Gowers), "for I have taken down your lectures *verbatim* in shorthand as they were delivered."

In 1866 appeared the first volume of "A System of Medicine" under Dr. Russell Reynolds's editorship, and published by Messrs. Macmillan and Co. The science of surgery had some two or three years previously been summed up by the greatest British authorities under the superintendence of Mr. Holmes, and it was widely felt that a similar work on medicine was required; and it speaks very highly for Reynolds's reputation in the profession that at his age, and having been full physician to a general hospital for but one year, he should have been able to surround himself with a brilliant staff of representative medical authors. He discharged his own share splendidly. He wrote several admirable and lengthy articles; for instance, those on Erysipelas, Epilepsy, and Hysteria, but especially he excelled in his general introduction. This was the ablest summary of the existent conditions of medicine that had appeared. It dealt successively with the definition and nomenclature of disease, its natural history and diagnosis, therapeutics, and hygiene. The editor made no attempt to dogmatise. He laid down the principles on which a systematic treatise on medicine should be written with a happy union of philosophical acuteness and practical common sense. No one more thoroughly realised the insufficiency of the nomenclature of that day than did Reynolds, yet he furnished good reasons for compromise in the matter. Obvious mistakes must be corrected, but old associations must be respected. These were his extremes and he found the mean. In the passages devoted to the consideration of what is meant by symptoms of disease he rose to a very high level of philosophical discussion without for a moment losing his peculiar clearness of expression. It would be impossible to imagine a more beneficial corrective of loose style than the marshalling of his arguments; and as THE LANCET of that date said on the appearance of the first volume, "Many hard-worked medical men whose soul has often fainted within them when wandering in the howling wilderness of medical nosology welcomed with relief the simplicity of his scheme of classification." The "System of Medicine" took over ten years to complete, and the amount of trouble as well as literary labour that it entailed upon its editor was very great, in spite of the help he received, for the first three volumes, from the late Dr. Anstie, and for the last two from Dr. Gowers. He rightly allowed his staff free speech, but they took advantage of his genial administration and were unpunctual with their contributions and not careful to avoid the limitations in space laid down

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for them. The great work suffered by the delay, as the sense of cohesion so perfectly suggested in the editorial foreword somewhat evaporated, while several repetitions crept in; but further exceptions to Reynolds's System have never been taken. It was a record of the science of medicine in its day, and many of its sections have been of permanent value to the profession; it was, in short, a great work, planned with boldness and due regard to order, and executed with thorough efficiency.

It is time to return to Dr. Reynolds's more purely professional career. Having proceeded to the degree of M.D. Lond. in 1852, he was elected a Fellow of University College in 1856 and a Fellow of the Royal College of Physicians of London in 1859. In 1868 he was appointed an Examiner in Medicine in London University for a period of five years, and in 1869 he was elected a Fellow of the Royal Society at the instance of his teacher, Professor Sharpey. At the Royal College of Physicians of London he was appointed Lumleian Lecturer in 1867, Censor in 1878, and Harveian Orator in 1884. The Lumleian Lectures and the Harveian Oration form a remarkable contrast in their style and in intention and illustrate well Reynolds's wide range of thought. The former had as their title "On Some Points in the Relation between Medical and Legal Practice," and were a good example of his simplicity and lucidity in dealing with matters of fact. The subject was one that interested him much (he returned to it later with a *brochure* entitled, "On the Scientific Value of the Legal Tests of Insanity," in which he dealt thoroughly and not very flatteringly with all the *criteria* of insanity upheld by the Courts), but he felt that it was one for assertion rather than speculation—one in which his task was to make things clear by the directest methods. The Harveian Oration, on the other hand, was a brilliant essay on the progress of medicine, full of original thought and beautiful simile, elaborate and eloquent, and terminating in a noble estimate of Harvey's character as a religious man, although an unfettered seeker after truth. It was a fine piece of high thinking expressed in appropriate words, but it was not absolutely simple reading.

In 1878 Dr. Russell Reynolds was appointed Physician to the Household, a post in which he earned the gratitude of many of Her Majesty's old servants as well as the esteem of his Sovereign; in 1884 he became consulting physician to University College Hospital; in 1890 he was appointed Senior Censor of the Royal College of Physicians of London; and in 1893 President of the College in succession to Sir Andrew Clark. In 1895 he was elected President of the British Medical Association, a post which he still held at his death, and in the same year he was created a Baronet. The present year brought further honours to him, for since its commencement the Universities of Edinburgh and Aberdeen have conferred upon him the honorary degree of LL.D. For his tenure of office as President no one had anything but words of warm praise. He was business-like, punctual, observant, and restful. The deliberations over which he presided took their tone from him, and it greatly facilitated official labour: he did not spare himself and made the wheels run smoothly for others.

Our readers are now in a position to estimate the loss that the death of Sir John Russell Reynolds will cause to the profession and the deep grief that is suffered by his devoted wife, his relations, and his large circle of affectionate friends. His life had been so busy that they and he alike were looking forward to the time when he should consider that the call of duty no longer precluded him from seeking a well-earned leisure. Not that for such as he freedom from the duties of office and the cares of practice would have meant idleness. Far from it. But it would have meant a period in which the time would have been his own to use as he chose—a form of leisure which it had not been his lot to enjoy for fifty years. That he would have turned aside now and again from medicine and pursued the arts of music and painting, in each of which he was an amateur of no mean proficiency, is probable, but the medical profession would also have benefited directly by a prolongation of his life. It was his intention to give to the world at the earliest possible date some of the results of his enormous practical experience in the form of a volume of scattered essays. He loved writing and was an artist in words. Therefore his literary output during his working life was, on the whole, small, for he required a certain aloofness from daily routine before he could make his pen serve faithfully its accurate, poetic, and fastidious master. The projected volume would have been largely a collection of addresses, speeches, and papers already published, but the additions would have transformed these into a new contribution to medicine, for it was Sir Russell Reynolds's design to write to each essay an appendix, bringing it up to date, and adding to it out of the carefully recorded experience of nearly half a century's assiduous practice in ward and consulting-room. That such a book would have had a deep and abiding interest for the profession we feel sure, but the bitterness of death interfering with the fulfilment of his design is not in this instance undiluted. Had Sir Russell Reynolds required such a monument to his memory it would have been sad that he should have died before its erection, but apart from his high official positions—indeed, decades before he reached them—he had earned for himself a secure position in medical history. His early writings were far in advance of any previous attempts to systematise the symptoms arising from nervous lesions. He appeared at a transition period, when order was just discernible forming itself out of chaos, and he was largely responsible for that order. Five or six years before the paths of microscopical investigation had been made plain by Lockhart Clarke, Reynolds was working at the clinical aspect of diseases of the nervous system and perfecting the knowledge and proving the surmises of Marshall Hall. Later a flood of light was to be thrown on these subjects by the philosophical lore, the research, and the clinical teachings of Hughlings Jackson, Bastian, Ferrier, Gowers, and Buzzard; but during the interval the torch was held aloft by Reynolds. He laboured at his subject, he interested as well as instructed others, he made things plain so that his successors could start with ease where he left off, and he rescued the manifestations of hysteria and epileptoid conditions from the curious uncanny kind of mystery in which they were shrouded and showed them to the whole profession as simple results of cause and effect. These are great accomplishments, and Reynolds, denuded of official and Court dignity, of his prestige as a writer, his reputation as a lecturer, and his claims upon the public as a general physician, would still remain secure of his fame as a pioneer in the science of medicine.

It was because of his early success as a neurologist and his abiding interest in the nervous phenomena of disease that the profession and the public alike decided that he should be a specialist; but a specialist he never was, and in its limited sense he repudiated the character very strongly, arguing that any success he might have achieved in particular walks was entirely due to the fact that his work had been thorough, comprehensive, and general. As has been said, one of the subjects in his "System of Medicine" on which he chose to write himself was Erysipelas, and as a clinical teacher he was every whit as effective and as instructive when discoursing on diseases of the lungs or of the heart or acute specific diseases as when dealing with the branch of medicine with which he was supposed to be most familiar. He carried his characteristic width of knowledge into all his work, and the practitioners who knew him best had equal reliance on his judgment in all classes of disease.

This sketch of the life of the great man just gone from among us would be incomplete without a brief presentation of his private character. Sir Russell Reynolds was a rigidly strict man in his code of honour, but full of kindness and sympathy. He was an exceedingly affectionate friend, but not at all a man of promiscuous friendships. High-minded, sensitive, and physically delicate, he shrank from the companionship of numerous persons to whom he was willing to be just, of whose merits he was appreciative, and whose interests he would take endless trouble to serve. But many of these he could no admit to intimacy, his standpoint in so many of the details of life being different from theirs. Studiously grave and quiet in his manner, those who did not know him well might have mistaken him for a melancholy man. And it would have been a mistake indeed, for all things, save a very few, he was ready to regard in a humorous light, while his conversation and his writings were full of witty allusion and quaint illustration, and he was never happier than when he found himself the cordial host to a group of congenial friends.

For religious effort of thought or deed he had the sincerest respect. A friend (not of the medical profession) who has known him intimately for more than the last thirty years has written to us thus concerning him, and it would be impossible to improve upon this estimate of Sir Russell Reynolds:—"Of all the men

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whom I have seen with their armour on or off he will ever live in my memory as most keenly sympathetic. Nothing personal put him out, and yet this came from no apathy of temperament, for he was quick in responding to every phase of life, but from sheer power of apprehension and ability to see in a glance that something could always be said on both sides in a crisis which other men might take time to disentangle and so be drawn into hasty or complacent utterance. Though eminently tolerant and tender-hearted, Dr. Reynolds was not a man to make things pleasant or speak smoothly when he smelt dishonour, duplicity, or injustice, for he had no respect of persons and delivered his mind when occasion arose with unmistakable distinctness. He was, moreover, thoughtfully unselfish, putting himself, for instance, to continuous trouble in a case of the most commonplace suffering if he thought he might be able to mitigate it. And when a friend was ill, though not necessarily a patient, his loving tenderness was enough to make the sufferer think that Reynolds had no other claim upon him or drain upon his time. And he was as generous with his purse as with his power, and wise though free in his charity. There is no need of many words to record the manifold hospitality shown by Lady Reynolds and himself, but it was, perhaps, at the gathering of a few friends that the charm and flavour of it came to be most shed and felt, for though he could speak and preside with gracious effect he did not exult, as some do, in the semi-public performances of a host. It was in the warm social atmosphere of his own house that his geniality unfolded itself. And this was backed by what many learned and wise souls are without—i.e., the keenest sense of humour and ability to discern between the ridiculous and the witty in man and his ways."

His old friend goes on to say: "In setting sadly down a few of the things which crowd my memory while thinking of the sorrow now fallen upon his family and so many beside myself, those who knew him best feel it to be mitigated by the remembrance of the high motives which were plainly behind all that he said and did. They know, moreover, that his incisive scientific perception was associated with a profound sense of those hidden laws of life which elude analysis, but cannot be disregarded by genuinely intellectual minds. He was moved and strengthened by the deepest Christian faith, of which he made no reproachful display, though he never shrank from openly claiming it as a true support of his life and work, being a devout worshipper and communicant at his chosen church."

We hope that we have drawn Sir John Russell Reynolds with sufficient distinctness for our readers to recognise what manner of man it was whose remains were quietly laid to rest in the little Gloucestershire churchyard on Tuesday last. It only remains to add a few words concerning his last illness. During the whole of last year he was undoubtedly overworked. He suffered severely from influenza in March of that year, while he was prevented through his numerous engagements, official and private, from securing a proper holiday. Though with somewhat of a struggle, he succeeded in discharging conscientiously his double duties as President of the Royal College of Physicians of London and of the British Medical Association, and left London in the autumn. In November he again fell a victim to influenza, but returned to his work before Christmas. He was undoubtedly not quite himself at the end of the year: he had not recovered strength or tone and was occasionally very weak in his movements. At the beginning of 1896 he went to Hastings, and returned somewhat stronger and feeling himself more apt for work. But the improvement was of short duration, the physical weakness increased, and at the advice of his friends he decided not to offer himself for re-election in April as President of the Royal College of Physicians of London. Again he left London, and again returned feeling better, so much better, indeed, that on the day of his return he saw patients and made appointments to see others. But that afternoon, most unfortunately, on returning from a drive he slipped on his own doorstep and bruised his ankle severely. The injury was sufficient to compel him to keep his bed, and from that time he went steadily down, slowly at first, but at the end rapidly. Until the last week or so of his illness he preserved his faculties, but the intellectual capacity was badly served by the extreme physical failure. On Friday last (May 29th) he died peacefully and painlessly without a struggle in the presence of his devoted wife, who never left him for a moment during his long illness. To her we tender our sincere and respectful sympathy, feeling sure that it must be a consolation to her even now when her sorrow is keenest and greenest to know that her husband's memory will be preserved with unstinted honour in the hearts of the profession that he adorned and served so well.

CHOLERA IN EGYPT.

As regards the progress of this disease in Egypt the returns for the week ending May 30th show that there were 111 cases and 93 deaths at Alexandria and 286 cases with 243 deaths at Cairo. At Tourah there were 119 cases and 80 deaths. With regard to the disease in the provinces and outlying districts and villages the statistics are scanty and unreliable, but there does not seem to be any doubt that the epidemic is slowly but surely extending itself, in Lower Egypt especially. A fatal case has occurred among the British troops quartered at the citadel in Cairo, but as it was an isolated case and the soldier occupied a detached building it was not deemed necessary to evacuate the barracks. The latest returns show that the number of cases at Alexandria and Cairo is declining. Five deaths from cholera occurred at Alexandria on the 1st inst., and 35 in Cairo. There are at present in Cairo about 162 cases altogether. Since last September over 3000 cases have occurred, with a mortality of over 2500. The Egyptian Government has, it is understood, requested the Pasteur Institute to send a mission to Cairo to make experiments with a new anti-cholera serum. The authorities in Egypt have had many warnings of late to set their house in order and prepare for an outbreak of epidemic disease by the introduction of some scheme for the water-supply and drainage of its larger cities and towns and the organisation of sanitary measures generally, but the complicated nature of the government of the country and its opposing factions, the cost of carrying out sanitary engineering works—to say nothing of what particular scheme should be adopted—and the opposition that all sanitary measures and precautions have to encounter have hitherto prevented any adequate action in this respect. The disease (cholera) was there; it was only dormant and ready to manifest itself afresh on favouring climatic conditions. The high death-rate among the native population, and especially among the children, that occurs year after year also affords a sufficient indication of the state of public health and hygiene in Egypt. The adoption of sanitary measures when an epidemic is actually present is always most difficult and frequently futile, while their enforcement often provokes great opposition and mob riots among an ignorant and fanatical population, as has been the case at Cairo on the present occasion. However, we can only repeat now what we have so often urged already in connexion with this subject. There is no royal road and short cut to dealing effectively with epidemics. Once they have begun the stamping-out process among mixed populations is by no means so simple as people imagine. The lesson that experience enforces on us is, that the way to stamp out epidemics is by removing the soil in which they grow by precautionary sanitary measures adopted in advance of their occurrence. Meanwhile the sanitary authorities in Egypt have to deal with the facts confronting them as best they can, and it must in justice be said that they seem to be acting with energy and good judgment.

While there is no doubt about the nature of the disease prevalent in Egypt, there appears to be considerable doubt as to the presence of epidemic cholera in Spain, where a cholera scare has nevertheless arisen. There have been a few suspicious cases at Toledo and a large number at Carpio, in the same province, but as the disease has so far not been attended with fatal results it is scarcely likely to be true cholera; indeed, the outbreak has been locally attributed to bad milk.

When writing a memorandum in January last on the recent outbreak of cholera in Egypt, Dr. Rogers Pasha, C.M.G., D.S.O., the head of the sanitary department, said, "Whether the disease will be entirely stamped out before the summer, I cannot say," and Lord Cromer also made a similar reservation in his report. For some months it appeared as if these precautionary utterances were superfluous, for from the week ending Feb. 4th, as will be seen by the subjoined table compiled from the official *Bulletins Hebdomadaires*, the epidemic seemed to be entirely extinguished

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throughout the country, save for occasional sporadic cases at Alexandria, where it might *a priori* be supposed that they could be most effectually dealt with:—

Week ending 1896.	Place.	Government ambulances.					Deaths from cholera outside ambulances.
		Remained.	Admitted.	Recovered.	Died.	Remaining.	
Feb. 4th	Charkieh.	1	—	1	—	—	—
,, 4th	Gharbieh.	—	1	—	1	—	—
,, 4th	Alexandria.	5	1	2	2	2	2
,, 11th	,,	2	2	3	—	1	2
,, 18th	,,	1	4	1	2	2	10
,, 25th	,,	2	9	—	3	8	14
March 4th ...	,,	8	—	5	1	2	5
,, 11th ...	,,	2	2	2	1	1	4
,, 18th ...	,,	1	—	—	—	1	—
,, 25th ...	,,	1	—	1	—	—	1
April 1st ...	,,	—	1	—	1	—	1
,, 8th ...	,,	—	7	—	2	5	18
,, 15th ...	,,	5	2	—	5	2	7
,, 22nd ...	,,	2	3	—	2	3	5
,, ,, ...	Assiout.	—	1	—	1	—	—
,, 29th ...	Alexandria.	3	5	2	3	3	4
,, ,, ...	Korshid.	—	1	—	1	—	—
,, ,, ...	Tantah.	—	1	—	1	—	—
,, ,, ...	Zagazig.	—	1	—	1	—	—

Towards the end of April, however, a fatal case was reported from Assiout in Middle Egypt, and the following week the Delta was found to be once more contaminated in three distinct centres. Since then the resurgent epidemic has made alarming progress, the chief places attacked being Alexandria, Cairo, old Cairo, and Tourah, and unfortunately the expectant attitude assumed by Dr. Rogers Pasha is only too completely justified.

It is a remarkable thing that for close on three months cholera should have remained smouldering in Alexandria while elsewhere the disease was apparently stamped out. Alexandria is supposed to be the most advanced town in Egypt with regard to civilisation. It contains many splendid buildings, well lighted and paved streets, and boasts of an efficient scavenging service. Its internal affairs are administered by a municipality in which the European element largely predominates, and there should be no lack of money to place the great seaport above reproach from a sanitary point of view. Alexandria is also the only town in the country which possesses sewers, but unfortunately it is a question whether these subterranean channels are not a source of more harm than good. Built in piecemeal fashion on the massive culvert plan they do not possess sufficient fall, or anything like it, and the house connexions, as a rule, permit the freest reflux of noxious gases. Even in the newest and most palatial edifices the drainage of the block is effected through uncemented shafts left in the thickness of the wall during the process of building. These unlined shoots permit the oozing out of the fluid contents and hence the unsightly patches defacing the rear, and in some cases the façade of the imposing-looking structures. The privy accommodation is of the most primitive description, consisting of a marble slab with a hole in the centre. It is invariably situated next the kitchen or even in the same apartment with merely a screen between it and the stove. When a medical man visits a patient and wishes to ascertain the state of his bowels the stock inquiry is, "Have you been to the kitchen to-day?"

In this connexion the following extract from a report by Sir E. Baring (now Lord Cromer), which was presented to the British Parliament in 1891, will be read with interest:—"I have already spoken of sanitation in dealing with the medical department. I will here only add that an attempt was made some years ago to introduce something like order into the sewerage system of Alexandria; it had to be abandoned, as it was found impossible to carry it into execution without infringing the legal rights of the European residents. It is especially in matters of this sort that the rights conferred by the Capitulations hamper well-intentioned efforts at reform, and act in a manner which is in reality detrimental to the true interests of Europeans and natives alike."

It will readily be understood how terribly handicapped the sanitary officials must have found themselves whilst endeavouring to dislodge their enemy from his ultimate stronghold, and truly it is no wonder that under the circumstances they were unsuccessful. After lingering in Alexandria for nearly three months the epidemic has burst forth with renewed virulence, and all the work of repression has to be recommenced. Sisyphean labour of this description is unquestionably discouraging, but there is not, of course, the least reason to dread the slighest relaxation of effort in the case of the Englishmen employed in the sanitary department. The European members of the Alexandria municipality are said to have fled from their posts, frightened out of all sense of duty and decency by the death from cholera of a well-known lady. As long as the victims were natives of the lower classes no one seemed to care very much, but no sooner did the disease attack a European than, as on former occasions, panic at once set in.

PUBLIC HEALTH IN MASSACHUSETTS DURING 1894.

THE twenty-sixth annual report of the State Board of Health of Massachusetts is well worthy of the series to which it belongs, and this is no faint praise. For many years past these volumes have ranked with the very first of public health literature, and the work which the Board have done and are doing, more especially in experimental directions, entitles them to the gratitude of all workers in sanitary science. To attempt a review of a volume containing some 1000 pages in the space at our disposal is obviously futile, but we may, by giving some indication of its more important contents, serve to guide those interested in the subject of which it treats to the valuable matter it contains. On the subject of small-pox and vaccination there is much of interest, and in these days it is as well to cull statistics from foreign as well as from home sources. From 1885–94 the fatality-rate from small-pox among the vaccinated was 5·5 per cent. as compared with 29·1 among the unvaccinated, and 27·4 among the unknown. For the years 1888–94 the details with regard to age distribution are given, and these show that: (1) no vaccinated child under one year was attacked with small-pox, as against 17 among the unvaccinated, and of these latter 9, or 53 per cent., died; (2) among vaccinated persons under fifteen years of age there were 18 attacks and no deaths; (3) among vaccinated adults there were 109 attacks and 8 deaths, or 7·3 per cent.; (4) among unvaccinated adults there were 66 attacks and 21 deaths, or 31·8 per cent.; and (5) all the deaths of the vaccinated were among adults, while nearly 42 per cent. of the deaths of the unvaccinated occurred among children.

The report contains an interesting summary of statistics of several states and countries for the twenty years 1871–1890, and as regards a comparison of Massachusetts with England and Wales, the marriage-, birth-, and death-rates of the former were 18·1, 25·7, and 19·7 respectively, while for the latter they were 15·6, 34·0, and 20·3. The statistical aspect of the report under consideration is very fully developed, and it will repay perusal by all those who are interested in comparing the statistics of the several infectious diseases in the old and new world. In this part of the report there may be mentioned a curve which shows that since 1853 there has been a steady decrease in the mortality from phthisis in Massachusetts, the rate per 10,000 being 41·1 for the five-yearly period 1851–55 and but 23·6 for the period 1891–93. The mortality from phthisis in the dense districts being taken as 1000, that in the medium districts is found to be 810, and that in the sparse districts as 727. It seems, too, that the mortality from phthisis in Massachusetts diminishes in its ratio to the distance from the sea-coast.

The water-supply of Boston is the subject of a special report, and in it the Board state that they have taken as the assumption upon which to work the estimate that the

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growth of Boston and the district surrounding it will continue at the same rate as it has done during the last twenty-five years. It is proposed to form a Metropolitan Water District containing a population of some 848,000. The Board report that they have found a thoroughly satisfactory supply for the district in question in the south branch of the Nashua River above the town of Clinton, and they point out that should further supplies be needed at a future date they can be easily procured. A considerable portion of the Massachusetts report is taken up as usual with the advice given by the Board to cities or towns which are about to establish works of water-supply or sewerage. It is one of the statutory duties of the Board to from time to time consult with and advise authorities, and in the execution of these duties much valuable experimental work is conducted by the Board. For instance, even in the ordinary routine work of the year there have been no fewer than 2006 samples of water examined chemically and microscopically, while much has also been done in the connexion between the odour and taste of waters and the organisms contained in them. Dr. Thomas Drown, the chemist to the Board, has done good work with regard to the composition of deep well waters in Boston and its vicinity, whilst Dr. Sedgewick, the Board's biologist, and Mr. Prescott, S.B., have contributed a valuable and useful paper on the bacteria contained in certain ground waters, including deep wells, in which they have demonstrated that these waters are by no means as free from bacteria as has generally been supposed. The writers show that even deep tubular well waters are not free from bacteria, and they promise in a subsequent paper a report upon the probable source of the bacteria and the species present. It seems, however, that but few liquefying colonies presented themselves and that there was an abundance of chromogenic organisms, facts which, as they point out, tend to strengthen faith in waters of this description. Many of our readers are probably familiar with the extremely valuable work done by the Massachusetts Board in connexion with the purification of sewage and water at the Lawrence Experimental Station, and they will be glad to hear that these experiments have been continued during 1894 and that the results are set forth in the volume under review. It can only here be stated that the experiments include investigations upon the composition of sewage, of the effects of precipitation and sedimentation upon bacterial purity, and of the influence of sewage composition and of temperature upon nitrification. The effects as regards water filtration of using coarser filters at high rates of filtration and the bacterial effects of such treatment have been gone into, and there is also a valuable paper by Mr. Clarke on the physical and chemical properties of sand in relation to the filtering of water.

THE MAUSER RIFLE IN THE CUBAN WAR.

DR. ENRIQUE PEDRAZA, a Spanish military surgeon, contributes to the *Revista de Ciencias Médicas* of Havanna an interesting article on the effects of the Mauser projectile as seen by him in the present war. He points out the great difference which exists between this and the older forms of projectile as the Remington and Freire Brul. These latter being much larger and having a smaller initial velocity cause large openings and carry septic materials into the wounds they make which are therefore very difficult to render aseptic on the field and consequently when they come under proper treatment in a hospital are in a condition which is very difficult to manage, especially when, as is frequently the case, the hæmorrhage has necessitated the use of perchloride of iron which increases the size of the wound or when a bone has been hit, and, as usually happens, even at distances of 100 or 150 yards, is shattered.

The Mauser projectile as issued in the Spanish Army is 3 centimetres in length and 7 millimetres in diameter, and consists of a hard nucleus of lead and antimony coated with steel, outside which is a coating of nickel and copper alloy, the whole weighing 13·7 grammes and having an initial velocity of 632 metres per second, which enables it to pierce a Krupp steel plate 10·5 millimetres in thickness at a distance of 50 metres. Such a projectile ought, it might be thought, to produce a clean and minute wound with little hæmorrhage, easy to close on the field and therefore likely to heal rapidly in hospital, more especially as the bones would be bored rather than shattered and as there would be little chance of foreign matter being introduced into the wound by the projectile itself. These expectations are, however, by no means always realised, and the first few cases of primary wounds from a Mauser projectile which Dr. Pedraza saw at Manzanillo very greatly surprised and disappointed him. With longer experience, however, he learned that the benign results he had expected to see do occur, but only when the enemy is 150 yards or more distant. When the patient is shot at from 10 to 70 yards the destruction of the tissues is very great, and it is this that has given rise to the suspicion that explosive bullets were being used, especially as the orifices of entrance and outlet are sometimes so small that they can scarcely be seen. The explanation suggested is that the shock which the enormous velocity of the projectile produces on entering the soft parts causes them to behave as a fluid or semi-fluid does when enclosed in a box and "shot through," the hydraulic pressure bursting the sides, or, if an opening be left, driving a column of the fluid through it. As to how far any destruction of the projectile itself may be a contributing factor he has no direct evidence, but from specimens he has seen of the Wagner and Mannlicher projectiles after experiments made by Dr. Cardenal, which he showed at a lecture before the Cataluna Academy of Medicine, he thinks it probable that the projectiles do become more or less disintegrated when they hit at short distances.

In striking contrast to such wounds are those produced at 150 yards or more by the Mauser rifle. Here the entrance and outlet are very small and there is but little evidence of internal destruction, even bones being tunnelled through without fracture, and as aseptic treatment is possible from the first a rapid recovery may usually be anticipated. Thus, in one case where the projectile entered the abdomen in the eighth intercostal space on the right side, passing through the stomach, and coming out three fingers' breadth on the left of the sternum, though the ninth rib was fractured and the patient suffered from vomiting, hæmatemesis, and fever, he very soon improved and recovered completely. In another case the projectile entered the left frontal eminence, passing out by the right parotid region. The patient suffered from concussion of the brain, ecchymosis of both the right eyelids, with some difficulty of vision of that eye, but recovered in twenty-six days. If, therefore, it could be arranged that fighting should never occur at less than 200 yards distance the Mauser would, Dr. Pedraza thinks, be a most humane weapon.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A MEETING of the Committee of the Association of Fellows of the Royal College of Surgeons of England was held on the 18th ult. at 25, Grosvenor-street, W., Mr. T. Holmes, Vice-President, being in the chair.

Mr. Percy Dunn, honorary secretary, reported that he had received a reply from the President, forwarded through the Secretary to the College, to the resolution passed at the meeting of the Committee on May 6th. The reply was to the effect that it had appeared to the President that the Committee had misinterpreted or had been misinformed as to the proceedings of the Council at the meeting in February, as no such agreement as that referred to in the resolution had been arrived at by the Council either at the meeting in February or at any subsequent meeting. It was decided that no action should be taken regarding this communication. With regard to the resolution of the Council of the College in favour of polling the Fellows on the question of the representation of the Members on the Council the following resolution was unanimously adopted:—"The Committee of the Association of Fellows, understanding that the Council of the College of Surgeons have nominated a Committee for the purpose of ascertaining the opinion of the Fellows on the question of the Members' representation on the Council, respectfully suggest the following as the points which should be submitted to each Fellow: 1. Are you in favour of giving to the Members direct representation on the Council? 2. If so, do you think

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that such representatives should be Fellows only, or would you accept Members as representatives? 3. What number of such representatives would you admit? 4. Should they be in addition to the present Council?" A copy of this resolution was directed to be sent to the Secretary of the College with the request that it be laid before the Council at the next meeting.

It was also reported that the vacancies on the Council this year would be caused by the retirement of Mr. Cadge, Mr. Bryant, and Mr. Pick. It was understood that Mr. Cadge did not intend to offer himself for re-election, but that Mr. Bryant and Mr. Pick would again come forward. It was pointed out that Mr. Bryant had already served two consecutive periods of eight years each and had passed the chair and that the Association had advocated the ineligibility of Councillors for re-election after they had served two full periods of eight years. The results of such re-elections had not been at all satisfactory. The honorary secretary was instructed to communicate with Mr. Victor Horsley with a view to ascertain his intention as to becoming a candidate for the Council in July next. A similar instruction was given with respect to a provincial Fellow. A long discussion then followed regarding the action which it would be expedient for the Association to take in the event of certain other candidates coming forward. Ultimately the discussion was adjourned until the next meeting of the Committee.

THE TREATMENT OF HABITUAL DRUNKARDS AND THE "CURATEL" PROCEDURE.

A MOST interesting report on "The Treatment of Habitual Drunkards in Austria and the 'Curatel' Procedure" has just been issued by the Foreign Office in its "Miscellaneous Series." From this report it would appear that very little legislation on the subject of drink and drunkards has actually taken place in Austria, drunkards only coming under the law in that country as "spendthrifts" or "idiots." The process of "Curatel," whereby the court appoints a curator or administrator for persons who do not look after their own affairs and who are unable to defend their rights, is made applicable not only to children, lunatics, and idiots, but also to those who, having been declared "spendthrifts" by a magistrate, have been deprived of the administration of their property. A man may be judicially termed a "spendthrift" if it appears on examination of the charge that he is running through his property in a senseless way and that he is exposing his family to future destitution by contracting loans under reckless or ruinous conditions.

In some kingdoms, as in Galicia and Lodomeria, there is a special law for the prevention of drunkenness, and one section provides that on being convicted of drunkenness three times in the course of one year, the district authorities may forbid the offender to visit public-houses or liquor shops in the neighbourhood of his domicile for the period of one year, under pain of fine or imprisonment. The inadvisability of mixing mere drunkards with the insane in asylums is fully recognised by the Austrian authorities. Last year a Bill for the erection of public asylums or establishments for the cure and reform of drunkards was brought into the Reichsrath by the Ministry of Justice. These institutions are intended for the reception of (1) those who have been judicially punished for drunkenness three times in the course of one year; (2) those mentally affected owing to habitual or periodical abuse of alcohol who have been admitted into hospitals or lunatic asylums and who, although they have recovered their sanity, have not sufficient self-command to resist the temptation to drink; and (3) those who, owing to habitual or periodical abuse of alcohol, endanger the moral, physical, or financial security of themselves or their relations. Provision is also made for the compulsory retention of patients for a period which may not exceed two years and placing the police and judicial authorities at the disposal of the administration of the asylum in order to recover fugitives from the same. Consideration is given to the proper safeguarding of the individual from the illegal and undue application of the various processes upon which detention in an asylum may be carried out.

The provisions of the Bill are worked out very much upon the lines and recommendations of the Home Office Departmental Committee which sat in 1891-92, and we hope that with a judicious and firm application of the "Curatel" procedure not only will the unfortunate victims of this sad propensity hail the results with gratification, but the public also will be constrained to withdraw their dread "bogey" of "interference with the liberty of the subject" when they see what an influence for good the new procedure shows itself to be. After all, what sort of "liberty" is sottishness, and what sort of a "subject" is the habitual and reckless drunkard.

Voluntary inmates of these institutions for drunkards are to be on the same footing as those who are compulsorily placed in them.

THE MIDDLESEX HOSPITAL.

THE quarterly general Court of Governors of the Middlesex Hospital was held on May 28th, Mr. T. W. Nunn, F.R.C.S., in the chair. Among those present were the Right Hon. Sir R. Thompson, K.C.B. (chairman of the weekly board), Sir A. T. Watson, Bart., Mr. F. Hoare, Lieutenant-Colonel T. Lambert Mears, Mr. J. G. Noel, C.B., and others. The report of the weekly board states that the building of the convalescent home at Clacton-on-Sea is progressing satisfactorily and that the home will be ready for occupation in July. A *fête* in celebration of this event will take place in the grounds of the hospital on July 1st and will be inaugurated by their Royal Highnesses the Duke and Duchess of York. It is estimated that the total cost of the convalescent home will be nearly £30,000, of which amount about two-thirds has already been paid from funds at the disposal of the Samaritan Fund, aided by an advance of £16.000 from the Spicer trustees on mortgage, and a loan of £2000 from the bankers. Allusion is made to the losses sustained by the hospital in the deaths of Baron de Hirsch, vice-president, and Mr. W. Debenham, for nineteen years a member of the board. To Mr. Debenham the credit of establishing the convalescent home must be in great measure attributed. The Right Hon. Viscount Gort has been elected vice-president, and Mr. F. Debenham has accepted the vacant seat on the board. The retirement of Mr. George Lawson from the active staff, after a service of thirty-three years, is announced, and his appointment as consulting surgeon recommended to the Court. Mr. Pearce Gould has been elected to the vacant office of surgeon. An important paragraph of the report bears on medical education. It states that "the Board are proceeding with the negotiations for the amalgamation of the hospital and medical school, and as soon as a report has been received from the subcommittee appointed to consider the financial clauses the board anticipate that they will be in a position to submit a scheme in a complete form for consideration by the Court of Governors." Dr. Arthur Robinson, late of Owens College, has been appointed lecturer on anatomy, and Dr. R. A. Young lecturer on physiology. The plans of the new cancer wing have been approved. After reference to other matters the report closes with a statement to the effect that during the quarter ending March 31st 487 medical and 599 surgical patients were treated in the hospital, 77 had died and 302 remained in hospital on April 1st. During the same period 10,477 patients were treated in the out-patient department, the total number of attendances giving an average of 305 patients seen daily.

CONTRIBUTIONS TO THE NEW PHOTOGRAPHY.

WE continue to receive from week to week communications on subjects illustrating the value of the "X" rays in surgical diagnosis. In the main, however, the applications appear to be restricted to the examination of hands and limbs and no practical success appears yet to have attended the exploration of deeper parts, save in the work of Mr. William Turner, the Surgical Registrar of King's College, London. This gentleman has made some very interesting radiographs of joints and of the processes of union after

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fracture among other things, and we shall publish his paper upon them shortly—next week if possible.

The General Electric Company of Berlin have effected an improvement in the Roentgen apparatus, so that it is now possible to observe peculiarities in the interior of the head and throat and especially the action of the lungs and heart by direct inspection with the fluorescent screen. This improvement is to be submitted for inspection to the Twenty-fifth Surgical Congress now sitting at Berlin, when Dr. Virchow, Sir Spencer Wells, Dr. Guyon of Paris, Dr. Ollier of Lyons, Dr. Antona of Naples, and Dr. Lange of New York are expected to be present.

Mr. F. C. Abbott has sent to us one of the best examples of the new photography applied to surgery that we have as yet seen. It is a photograph of a backward dislocation of the right elbow of a woman. Eight weeks before admission to St. Thomas's Hospital she injured the right elbow by direct violence. Her medical man at that time diagnosed fracture of the humerus and put the arm in splints. The arm subsequently swelled greatly and was treated at an infirmary by the application of an icebag. On admission to St. Thomas's Hospital, under the care of Mr. Bernard Pitts, the right elbow was found to be considerably swollen and thickened, the forearm was semi-flexed, and there was great limitation of movement. The diagnosis rested between fracture of the lower end of the humerus with backward displacement and a backward dislocation of the forearm, and at first presented some difficulty owing to the swelling. The photograph, which was taken by Messrs. White and Stanley Kent, at once made the diagnosis plain, the displacement of the humerus being shown with admirable clearness.

Mr. Basil Trevelyan sends us a successful photograph of the left hand of a patient who accidentally shot himself in the palm with a pistol. The photograph shows clearly the position of the bullet, although most careful exploration under an anæsthetic had failed to discover it. On cutting down at the place indicated in the photograph Mr. Trevelyan successfully extracted the bullet which was found to be resting upon the internal lateral ligament of the wrist-joint. The bullet had evidently glanced against the middle metacarpal bone and so was directed upwards and inwards for a distance of over three inches.

Mr. C. Coppinger sends us some photographs which are of interest because they were taken directly on prepared sensitive paper, and hence the bones appear white and not black as in most photographs hitherto taken. He does not, however, give details of the process as to the time of the exposure or as to the kind of paper used. He also encloses a print of a case of tuberculous dactylitis.

A NURSING EXHIBITION.

THE idea of a nursing exhibition was a happy one, and Mrs. Bedford Fenwick, the editor of the *Nursing Record*, and those who have assisted her, are to be congratulated on the organisation of the exhibition, which opened at St. Martin's Town Hall, Charing-cross, on Monday last. Nursing as a profession is growing every year, and appliances for the care and comfort of the sick are daily increasing, but it is only the metropolitan nurse who has an opportunity of keeping pace with this increase, and her sister in the country knows little or nothing of the progress that is being made. In this exhibition the latest and most approved appliances for the comfort and welfare of the sick and injured are brought together and are likely to prove of great educational value to the nurse as well as to the general public.

One of the first things which will be noticed by the visitor is the effigy of a nurse on a Humber bicycle. This is exhibited by Messrs. Debenham and Freebody of Wigmore-street, Cavendish-square, by request, in order to show a special form of cloak for the use of district nurses who use the cycle in place of the somewhat expensive dogcart. Many of the exhibits are brilliant testimonials to the industry of the hospital nurses of the metropolis, who, amidst their arduous duties, have found time to construct models which exhibit in a very striking way the practical application of many of the appliances. Literature is represented by a selection of Messrs. Cassell and Co.'s publications relating to nursing and invalid cookery. Messrs. Maw, Son, and Thompson's exhibit of aseptic instrument cases occupies a prominent position in the large hall, and Messrs. Burroughs Wellcome & Co. have a notable display. Disinfectants and deodorisers are represented by Sanitas and the new non-poisonous "Electrozone," made from sea-water by electricity, the Arema Manufacturing Company, and the Red Cross Germicide Company.

The Frame Food Company have an interesting exhibit of their preparations, and visitors with a predilection for tasting can exercise their propensity both at this stall and that of Messrs. Stephen Smith and Co. of Bow, who dispense Hall's coca wine, and a new preparation of Liebig's extract of meat with malt wine. Messrs. Reynolds and Branson, Messrs. W. H. Bailey and Son, Messrs. Southall Brothers and Barclay, Messrs. Down Brothers, and Mr. J. H. Montague of New Bond-street have some useful appliances on view, and Messrs. Edward Cook and Company have a large exhibit of their toilet preparations. The Bovril Co., Messrs. Welford and Sons with their stand of sterilised and peptonised milks and Messrs. Cadbury Brothers are also represented. The Gorham Patent Bedstead Company, Ltd., give practical demonstrations of their ingenious invention and the Bed Support Company have on view their "Excelsior" bed supports. During the progress of the exhibition, which will remain open till June 13th, many popular vocalists and instrumentalists will appear; a conference of nurses will also take place and papers of interest to the nursing profession will be read.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 5609 births and 3668 deaths were registered during the week ending May 30th. The annual rate of mortality in these towns, which had declined in the three preceding weeks from 18·5 to 18·1 per 1000, further fell last week to 17·6. In London the rate was 16·9 per 1000, while it averaged 18·2 in the thirty-two provincial towns. The lowest rates in these towns were 8·5 in Swansea, 12·3 in Leicester, 12·8 in Derby, 13·0 in Norwich, and 14·2 in Bristol; the highest rates were 20·7 in Liverpool, 20·8 in Hull, 21·8 in Oldham, 23·0 in Sheffield, and 24·1 in Sunderland. The 3668 deaths included 542 which were referred to the principal zymotic diseases, against 562 and 591 in the two preceding weeks; of these, 195 resulted from measles, 151 from whooping-cough, 67 from diphtheria, 54 from diarrhœa, 48 from scarlet fever, 27 from "fever" (principally enteric), and not one from small-pox. No fatal case of any of these diseases was recorded in Brighton, in Blackburn, or in Halifax; in the other towns they caused the lowest death-rates in Swansea, Derby, and Bradford, and the highest rates in West Ham, Salford, Oldham, Hull, and Croydon. The greatest mortality from measles occurred in Huddersfield, Croydon, Manchester, Sunderland, Hull, and Oldham; from scarlet fever in Bristol and Salford; from whooping-cough in Croydon, Cardiff, Bolton, West Ham, Preston, and Salford; and from diarrhœa in Hull and Plymouth. The mortality from "fever" showed no marked excess in any of the large towns. The 67 deaths from diphtheria included 40 in London, 4 in West Ham, 4 in Birmingham, and 4 in Liverpool. No fatal case of small-pox was registered last week in any of the thirty-three large towns. There were 19 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, May 30th, against 15, 20, and 22 at the end of the three preceding weeks; 3 new cases were admitted during the week, against 5, 6, and 5 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2679, against 2527, 2539, and 2596 on the three preceding Saturdays; 297 new cases were admitted during the week, against 238, 293, and 305 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had declined in the four preceding weeks 292 to 217, rose again last week to 230, but were 44 below the corrected average. The causes of 47, or 1·3 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Leicester, Bradford, Newcastle-upon-Tyne, and in twelve other smaller towns; the largest proportions of

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uncertified deaths were registered in Nottingham, Blackburn, Preston, and Hull.

HEALTH OF SCOTCH TOWNS

The annual rate of mortality in the eight Scotch towns, which had been 19·3 and 19·2 per 1000 in the two preceding weeks, was again 19·2 last week, and was 1·6 per 1000 bove the mean rate during the same period in the hirty-three large English towns. The rates in the eight Scotch towns ranged from 14 3 in Greenock and 15·2 in Edinburgh to 22·5 in Dundee and 27·4 in Perth. The 560 deaths in these towns included 27 which were referred to whooping-cough, 20 to measles, 17 to diarrhœa, 10 to "fever" (principally enteric), 6 to scarlet fever, and 3 to diphtheria. In all, 83 deaths resulted from these principal zymotic diseases, against 72 and 82 in the two preceding weeks. These 83 deaths were equal to an annual rate of 2·8 per 1000, which was slightly above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 38 and 29 in the two preceding weeks, further declined to 27 last week, of which 17 occurred in Glasgow, 4 in Edinburgh, 3 in Aberdeen, and 3 in Paisley. The 20 deaths from measles, were within one of the number in the preceding week, and included 19 in Glasgow. The deaths referred to different forms of "fever," which had been 4 and 6 in the two preceding weeks, further rose to 10 last week, of which 6 occurred in Glasgow, and 2 in Edinburgh. The fatal cases of scarlet fever, which had been 3 and 5 in the two preceeding weeks, further rose to 6 last week, and included 2 in Edinburgh and 2 Greenock. The 3 deaths from diphtheria corresponded with the number in the preceding week, and included 2 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 92 and 109 in the two preceding weeks, declined again to 97 last week, and were 21 below the number in the corresponding week of last year. The causes of 33, or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased in the three preceding weeks from 21·9 to 23 7 per 1000, further rose to 23·9 during the week ending May 30th. During the past nine weeks of the current quarter the death-rate in the city has averaged 23·4 per 1000, the rate during the same period being 18·4 in London and 17·4 in Edinburgh. The 160 deaths registered in Dublin during the week under notice were within 1 of the number in the preceding week, and included 9 which were referred to the principal zymotic diseases, against 5 and 9 in the two preceding weeks; of these, 5 resulted from "fever," 3 from diarrhœa, and 1 from scarlet fever, and not 1 either from small-pox, measles, diphtheria, or whooping-cough. These 9 deaths were equal to an annual rate of 1·3 per 1000, the zymotic death-rate during the same period being 3·0 in London and 2·3 in Edinburgh. The 5 deaths referred to different forms of "fever" exceeded by 2 the number recorded in the preceding week. The 3 fatal cases of diarrhœa exceeded the number in any recent week, while the mortality from scarlet fever corresponded with that recorded in the preceding week. The 160 deaths in Dublin last week included 26 of infants under one year of age, and 40 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons exceeded the numbers returned in the preceding week. Four inquest cases and 4 deaths from violence were registered; and 53, or nearly a third, of the deaths occurred in public institutions. The causes of 15, or more than 9 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ROYAL MILITARY TOURNAMENT.

THAT the Royal Military Tournament, under what is practically new management, is a success the announcement which was posted up in the Royal Agricultural Hall on Tuesday afternoon last fully testifies: "House full; every seat sold"; and in spite of the fact that Wednesday was Derby Day the Hall filled at both afternoon and evening performances. It is to be noted, too, that since the opening on Thursday, May 28th, the number of visitors exceeded those who visited the tournament on corresponding days last year. We, therefore, offer our congratulations to the members of the executive committee—Major-General Lord Methuen, C.B., C.M.G. (chairman) Colonel W. H. Mackinnon, A.A.G. (vice-chairman) Lieutenant-Colonel R. S. S. Baden-Powell, 13th Hussars; Major J. S. S. Barker, R.A.; Major Irvine, R.E.; Captain Bramhall, A.S.C.; Colonel E. Villiers, 1st Surrey Rifles; Colonel G. M. Fox (commandant); Lieutenant-Colonel E. Blaksley, R.H.A.; Lieutenant-Colonel E. W. D. Ward, C.B., D.A.A.G. (hon. treasurer); and to Major Eyre Crabbe, Grenadier Guards (hon. secretary)—on whom the responsibility for the excellent management mainly rests. It is also gratifying to know that under the presidency of the new Commander-in-Chief, Lord Wolseley, the proceeds of the tournament, which bid fair to be unprecedented, will this year be distributed among all the military charities and not given to one institution as hitherto, and that the naval charities will also receive a share. The object of the seventeenth Royal Military Tournament, as set forth in the general rules, is "to encourage and develop skill at arms in all ranks of Her Majesty's Regular and Auxiliary Forces and to benefit various military charities"; but incidentally it must be a powerful factor in popularising the various departments of the Services as well as in promoting true patriotic pride. This is particularly shown in the bursts of applause which usher into the arena each detachment which takes part in the brilliant pageant "Sons of the Empire." In this display it has been the endeavour of the committee to give some idea to the general public and to the world at large of the enormous reserves which lie ready for action behind our iron walls—our first line of defence—and also behind the comparatively small permanently armed force which is commonly accepted as the English army, and which guards 277 million British subjects in an Empire covering nearly nine million square miles. The pageant is divided into six divisions comprising representatives of the home army, Indian army, Canadian army, Cape army, Australian army, and Colonial forces. In addition to the various feats of skill, tent-pegging, lemon-cutting, heads and posts, &c., there is a musical ride by the Royal Scots Greys (who will give place to the 2nd Life Guards next week) and a musical drive by the Royal Horse Artillery. From a practical point of view nothing is worthy of greater praise than the display by non-commissioned officers from the gymnasium at Aldershot, of which Colonel Fox is Inspector. Wrestling on horseback, the melée, sword *v.* sword, sword *v.* bayonet, sword *v.* lance, &c., mounted and on foot or mounted *v.* foot, are received with the same applause that has always characterised these exhibitions. The display by the Queen's Own Hussars strikingly brings out the difference between civilised and uncivilised warfare in regard to the wounded. The closing item of the programme represents the storming of an Afghan fort and involves a display of all arms. The Royal Military Tournament will remain open till Thursday next, June 11th, but intending visitors will do well to book their seats at once, as many applicants for seats are now turned away daily. With regard to the medical and sanitary arrangements they are as perfect as circumstances will permit, and the comfort and welfare of the general public are well looked after. Next week we hope to refer to the medical aspects of the tournament in fuller detail.

MOVEMENTS OF THE ARMY MEDICAL STAFF.

SURGEON-LIEUTENANT-COLONEL A. ADAMS of the Madras Medical Service, Residency Surgeon at the Court of H.H. The Maharajah of Jodhpore, has reported himself at Netley to join the Class of Bacteriology in the Army Medical School.

VOLUNTEER CORPS.

Artillery: 1st Kent (Eastern Division, Royal Artillery): Surgeon-Major R. R. Brown to be Surgeon-Lieutenant-Colonel. *Rifle:* 5th (the Hay Tor) Volunteer Battalion the Devonshire Regiment: Surgeon-Captain W. G. Scott, M.B., to be Surgeon-Major. 3rd (Sunderland) Volunteer Battalion the Durham Light Infantry; Surgeon-Captain R. J. Burns resigns his commission. 3rd (The Blythswood) Volunteer Battalion the Highland Light Infantry: Surgeon-

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Lieutenant J. S. McConville, M.D., to be Surgeon-Captain. 3rd (the Buchan) Volunteer Battalion the Gordon Highlanders: The undermentioned officers resign their commissions:—Surgeon-Captain A. Blackhall, M.D., and Surgeon-Lieutenant P. B. H. Macleod, M.B.

VOLUNTEER MEDICAL STAFF CORPS.

The London Companies: Stuart Oliver, gent., to be Surgeon-Lieutenant.

VOLUNTEER INFANTRY BRIGADES.

Aberdeen Brigade: Surgeon-Lieutenant-Colonel W. Paterson, 4th Volunteer Battalion the Gordon Highlanders, to be Brigade-Surgeon-Lieutenant-Colonel. Plymouth Brigade: Surgeon-Major J. R. Thomas, M.D., 4th Volunteer Battalion the Devonshire Regiment, to be Brigade-Surgeon-Lieutenant-Colonel.

THE SOUDAN EXPEDITION.

There has been little to chronicle regarding this expedition during the past week. It seems, however, that there are signs of a forward movement taking place shortly. We do not think that much, if any, weight should be attached to various rumours and reports about the movements or intentions of Osman Digna or of the Dervish forces, for there is really very little reliable information on the subject. In spite of the great heat the health of the Anglo-Egyptian troops continues to be excellent, and the fact is a very creditable one to the medical and other services concerned, for it speaks well for the hygienic, hospital and transport arrangements of the expedition. But it is well to remember that the severe strain and test will come later when really active operations have begun. The latest Anglo-Indian papers are full of news connected with the dispatch of the Indian brigade for Suakin, which, as we know, has since arrived at that station. Brigade-Surgeon-Lieutenant-Colonel Calthorp is the principal medical officer of the brigade, which has been accompanied by the 31st and 32nd Native Field Hospitals. It is possible that the hospital accommodation on shore will be supplemented by one of the transport ships acting as a floating hospital, but we believe the troops composing the Indian contingent prefer to be treated on land.

THE DISPOSAL OF REFUSE AND NIGHT SOIL IN INDIA.

As everybody knows the dry earth system and the use of different forms of trenches for the disposal of night soil by burial are commonly adopted in India. It has often been suggested that this was open to the objection that the buried animal refuse might not be thoroughly disinfected and purified by the action of the soil and sun before the desiccated matters became blown about by the wind, especially in the case of shallow trenches in a highly porous soil. We learn from the *Pioneer Mail* that of late years the Indian Government has been carrying out experiments for the incineration of night soil and its reduction to ashes. This would no doubt be an excellent plan, especially for hill stations in India, and three kinds of incinerators have been used. Our contemporary speaks of the pattern known as the Henry Campion Incinerator as, on the whole, the simplest, cheapest, and most satisfactory.

ROYAL VICTORIA HOSPITAL, NETLEY, VOLUNTEER MEDICAL STAFF CORPS.

The Manchester Companies of the Volunteer Medical Staff Corps arrived at Netley on Saturday, May 23rd, for their annual training. The strength consisted of ninety-four non-commissioned officers and men under the command of Surgeon-Captain J. R. Renshaw. The other officers of the Companies present were Surgeon-Captain J. J. K. Fairclough, M.D., and Surgeon-Lieutenant A. Phillips, who were attached for duty respectively to the Medical and Surgical Divisions of the Royal Victoria Hospital. The Companies paraded daily at 6 15 A.M. to join the Medical Staff Corps parade and again at 8 40 for Hospital duties. The drills, &c., were arranged by the officer commanding and took place daily. The Companies paraded in drill order on May 29th, and were inspected by Surgeon-Lieutenant-Colonel B. M. Blennerhassett, A.M.S. The Companies left Netley on May 30th.

Examinations for twenty-five commissions in the Army Medical Staff and for twelve appointments in the Indian Medical Service will be held in London on Aug. 7th next and the following days.

John Alexander McMunn, M.D., Physician and Surgeon to the Royal Hospital, Chelsea, from Surgeon on Half-pay List, retires on retired pay.

Surgeon-Major James Magill, M.D., of the Coldstream Guards, is promoted to Surgeon-Lieutenant-Colonel.

Correspondence.

"Audi alteram partem."

"THE REGISTRATION OF MIDWIVES."

To the Editors of THE LANCET.

SIRS,—Dr. Fraser in his otherwise excellent letter published in THE LANCET of May 30th has fallen into one or two errors which require correction. He attributes the responsibility for the Midwives Registration Bill to the Midwives Institute. Now, Sirs, the Midwives Institute is not responsible for the measure in question. The Bill was promoted by the Midwives Bill Committee, a representative body principally composed of medical men and medical women. On this committee are two representatives of the Midwives Institute. These ladies have carefully avoided any interference apart from looking after the rights which midwives already possess. It is only fair to the Midwives Institute to make this statement, as it is receiving, and has received, a good deal of unmerited abuse. The promoters of the Bill have no objection to the Local Government Board as the supervising body under the State, but this Board is understood to be already overburdened with work. Its record, too, in respect to workhouse infirmary nursing seems to show that there is insufficient elasticity in it to make it a very suitable body for the governance of what Dr. Fraser calls "midwifery nurses." The principal difficulty, however, is that the Privy Council has imported itself into the matter on the initiative, not of the promoters of the Bill, as Dr. Fraser suggests, but of the Select Committee of the House of Commons on the Registration of Midwives. I do not propose to criticise in detail the points raised in the letter, most, if not all, of which have been at one time or another fully discussed by the promoters of the Midwives Registration Bill. I am only concerned at present to set Dr. Fraser right on certain questions of fact.

I am, Sirs, yours faithfully,

ROWLAND HUMPHREYS.

Midwives Bill Committee, Office, 12, Buckingham-street, Strand, W.C., June 2nd, 1896.

IN PRAISE OF CYCLING.

To the Editors of THE LANCET.

SIRS,—As cycling in health and disease is being written about in medical journals perhaps THE LANCET would allow me to say that I have found the moderate use of the bicycle to produce the most admirable effects on young people, especially girls who spend the greater part of the day shut up in houses of business and breathing in many cases a more or less vitiated atmosphere. "Spins" into the country when the labours of the day are over put strength, vigour, and vivacity into these young women, and the evening sun soon tinges their cheeks with the russet and ruddy hues of health. No doubt many people suffering from organic disease are benefited by judicious bicycle riding. I have a diabetic patient who lives in the country and visits me from time to time. In January of this year the specific gravity of his urine was 40 and he was looking and feeling very ill. A few days ago this patient called upon me and I was agreeably struck with his amended and robust appearance, and I was about congratulating myself on the effects the last mixture I had prescribed for him had produced when he informed me that the specific gravity of his urine was now 22, and that he had for some time left off taking medicine, had nearly eschewed the restricted diet, and had taken to the bicycle with energy. As to bicycles in present use, the chief complaint I hear about them is of their behaviour when ridden over a rough or cobbled roads. Then their bumpings and jarrings produce on their riders sensations of a painful and most disagreeable character. If this state of things could be remedied a boon of comfort would be conferred on

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the bicycle-riding public. I had the pleasure of a conversation with four working men whom I met the other evening on a country road. Each had a bicycle of a bad description, and I was not surprised to hear from them that their mounts were rough in the riding and galled them awfully. Still, the machines were very useful to them, for they enabled the men to come into Lincoln to their work from a village six miles away in forty minutes which used to take them an hour and a half to walk. I am, Sirs, yours faithfully,

WILLIAM O'NEIL, M.D., M.R.C.P. Lond., &c.

Lincoln, June 2nd, 1896.

"RATIONAL THERAPEUTICS AND COMMON REMEDIES."

To the Editors of THE LANCET.

SIRS,—In the interesting and instructive paper published in THE LANCET of May 30th, under the above title, Dr. Samuel West asks for instances in which iodide of potassium has caused stoppage of the secretion of milk, and he also speaks of this drug as an efficient galactogogue. I must confess that I have always considered it to be quite the reverse; and in cases where I have thought it advisable to recommend a nursing mother to wean her infant I have been in the habit of prescribing from fifteen to twenty grains of iodide of potassium, to be repeated two or three times at short intervals, for the very purpose of stopping the flow of milk, and with very satisfactory and speedy results. In this treatment I am only following that recommended in the text-books of Playfair and Galabin.

I am, Sirs, yours faithfully,

R. BRUCE FERGUSON, M.A., M.D. Cantab., &c.

June 1st, 1896.

"THE CHURCH ANTI-VIVISECTION LEAGUE AND HOSPITAL SUNDAY."

To the Editors of THE LANCET.

SIRS,—We have reason to be very grateful to you for the increased publicity you have given to the circular of our committee by inserting it in your widely read journal. That you should, however, think it needful to ask for proof of the alienation of people from the Church by the attitude of, at any rate, a portion of the clergy on the vivisection question is a curious proof of what different circles we Londoners can dwell in. Of the feeling of which you seem altogether ignorant daily proofs are thrust upon me. I have, of course, no right in a public journal to mention without their consent the names of others in a matter concerning their spiritual life, but I can at least speak for myself. I am by this cause prevented from attending my parish church, where I should otherwise have been a regular worshipper, and have to go elsewhere to a church where I know the clergy to be anti-vivisectionists. Nothing (unless it be the attitude of many clergy at the time of the Eastern war) has ever been so great a strain on my faith as their indifference to this terrible sin, and I always carefully avoid as far as possible coming into contact with vivisectionist clergy, whether by contributing to their funds or otherwise, and I know I am but a fair sample of thousands in this. It is true that these clergy are generally unaware of the motives of our actions because respect for their sacred office seals our lips, but the fact remains all the same. Hardly a day passes without my coming across persons, both Anglican and Roman, who tell me how their faith has been strained, and, alas! too often weakened or destroyed. With your permission I will give a few typical instances out of the well-nigh countless examples which might be adduced. 1. A lady, very devoted to the services of a well-known Paddington church, told me recently she wanted to take a house in that neighbourhood in order to attend the church, but could not do so till she ascertained the views of the clergy about vivisection. 2. A regular and devout attendant at a well-known Kilburn church told me she had been obliged to leave and go to a church where the type of services was repugnant to her because the vicar of the former was not an anti-vivisectionist. 3. A lady in this immediate neighbourhood brought me in the winter an appeal she had received from the vicar of a North Kensington parish, saying she could not contribute unless he were an anti-vivisectionist. Unfortunately, I could give her no information on this point, but a little later he preached against vivisection and she then at once sent him a cheque. 4. Another North Kensington lady told me she had, alas! altogether given up attending church through having come across vivisectionist clergy. 5. A gentleman who writes the mystic letters M.D. after his name told me he hailed the existence of our society because he thought it would strengthen the faith of many waverers, and he mentioned that another anti-vivisectionist physician of his acquaintance had become almost an Unitarian on account of what he imagined to be the tone of the Church on this question. With regard to the theological argument in your article, I must confess I altogether fail to see how the extracts from St. Thomas Aquinas and St. Augustine support vivisection. It is an insult to common sense to assume that the right to kill and the right to torture are the same thing. A member of our league, already known to the public as an author, is preparing a catena which, when published, will conclusively show the real tone of Christian theology on this point.

I am, Sirs, yours obediently,

A. L. WOODWARD,

Hon. Sec., Church Anti-vivisection League.

Lancaster-road, W., May 29th, 1896.

*** We publish this letter with great pleasure: first, on account of the motto at the head of our correspondence column; and, secondly, because it is interesting to see the ideas that some people have as to what constitutes "proof." It is a little hard upon Ladies 1 and 2 to assume their alienation from the Church. The Church is not a building. As to Nos. 3 and 4 we would direct the writer's attention to the twenty-sixth of the Articles of Religion.—ED. L.

"THE USE OF GUAIACUM IN THE TREATMENT OF CHRONIC GOUTY AFFECTIONS."

To the Editors of THE LANCET.

SIRS,—In the report of my observations at the Royal Medical and Chirurgical Society on Sir Alfred Garrod's paper on the Use of Guaiacum in the Treatment of Gout reference is made to a local method of treating the acute manifestation of this affection which I have employed with success. With your permission I will give the formula in full. I take half an ounce of iodide of potassium, dissolve it in half a pint of rectified spirit—methylated spirit is used in hospital practice—add one ounce of soap liniment, and then half a drachm each of oil of cajeput and oil of cloves. A piece of lint is soaked in this mixture, wrapped round the affected part, covered with protective and kept in place by a bandage. It acts as a powerful counter-irritant, and the inflammation usually subsides in from twelve to twenty-four hours. In addition I not uncommonly give a drachm of colchicum wine with ten grains of iodide of potassium three times a day. These large doses of colchicum wine induce brisk purgation, sometimes accompanied by vomiting, but they speedily cut short the attack. This mode of treatment is especially useful in the case of robust, full-bodied men in active employment, to whom the loss of a day's work is a serious consideration. In sciatica, lumbago, and rheumatism affecting one joint the local application of a liniment containing half an ounce of salicylate of sodium, half a drachm of oil of cajeput, fifteen minims of oil of eucalyptus, and half an ounce of soap liniment in six ounces of rectified spirit affords prompt relief.

I am, Sirs, your obedient servant,

Welbeck-street, W., May 31st, 1896. WILLIAM MURRELL.

"NERVE GRAFTING FOR INJURY."

To the Editors of THE LANCET.

SIRS,—My attention has just been drawn to your notice in THE LANCET of March 7th, 1896, of the case of nerve grafting for injury which I reported in the *Medical News*. As I believe I stated in that report, the man was discharged the service of the army because of this disability. After the report was published and about five months after operation I received a letter from him asking aid in securing a pension. In this communication he stated that there had been no improvement resulting from the operation. Interested as he was in obtaining a pension it is barely possible that had there been any improvement he would have concealed it, but from what I know of the man I believe he is honest in his statement. The time which had

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elapsed (five months) has proved in some similar cases too short a period for return of function. Technically the operation was successful, and I still have some hope that eventually function may be restored. I can see no reason why if success should ever result in similar procedures it should not have been achieved in this case. I am prompted to make this communication in view of your closing remark in the notice in your issue referred to: "It would have been very interesting to know whether any improvement resulted from the procedure."

I am, Sirs, yours faithfully,

A. E. BRADLEY,
Captain, Medical Department, United States Army.

Fort Yellowstone, Mammoth Hot Springs, Yellowstone National Park, Wyoming, May 18th, 1896.

THE DUNBAR WATER-SUPPLY.

To the Editors of THE LANCET.

SIRS,—So many letters have reached me from various quarters inquiring about rumours regarding Dunbar water-supply and an alleged fresh outbreak of typhoid fever that I shall be much obliged if you will make public the following facts. All such rumours are absolutely false. The old water-supply is entirely cut off, so that it is impossible for any of it to be used. The new water-supply is perfectly satisfactory and the water has been certified to be of the most excellent quality. There has been no case of typhoid fever notified since Feb. 4th last, and, indeed, Dunbar as a rule is conspicuous by its freedom from infectious disease of any description. Intending visitors, therefore, can come to enjoy Dunbar with full confidence in its safety as one of the healthiest seaside resorts in the country.

I am, Sirs, yours faithfully,

G. T. SINCLAIR, M.D. Edin.,
Dunbar, June 1st, 1896. Acting Medical Officer of Health.

THE ARMY MEDICAL STAFF.

To the Editors of THE LANCET.

SIRS,—Will you permit me to urge on the "second-rate and inferior" members of the profession to seize this favourable opportunity to enter the Army Medical Staff? Within a few years they will equal in professional knowledge the *superior* men and far surpass them in the knowledge of the world. In the army there are disadvantages, but they are few and insignificant as compared with the marked and numerous advantages of service in the Army Medical Staff. The pay is good, better than the remuneration in private practice; the work is less arduous and more pleasant, the worry and anxiety are less, the taskmasters are fewer, holidays are more certain and more frequent, friends are more easily made, jealousy is almost unknown, the advantages of travelling at Government expense are not to be despised, and the opportunity of retiring and living a life of ease at a comparatively early age is not to be overlooked. I do not deny that the Army Medical Staff have grievances which the War Office authorities would do well to remove, but I do assert that, compared with the drawbacks and disadvantages of life in private practice, they are almost microscopic. As "Brigade-Surgeon, A.M.S.," and "Active List" have not signed their letters I conceal my identity under the disguise of

June 2nd, 1896. SURGEON-CAPTAIN, A.M.S. (Retired).

"A DECEPTIVE ETHER INHALER."

To the Editors of THE LANCET.

SIRS,—As the original makers of Clover's ether inhaler we wish to deny the parentage of the inhaler mentioned by Mr. Paul. Many imagine that all Clover's inhalers are now manufactured by us, so that this disclaimer is necessary. We may mention that this is by no means the first case of "transposed viscera" that has come to our personal knowledge, and we cannot help thinking that, at any rate in this case, professional etiquette, which prevented our patenting this apparatus, has often brought a good and useful instrument into ill repute.

We are, Sirs, yours faithfully,

MAYER AND MELTZER.

Great Portland-street, W., May 30th, 1896.

LEGISLATIVE PROHIBITION OF THE SALE OF ALCOHOLIC LIQUOR.

To the Editors of THE LANCET.

SIRS,—I have read with interest and profit the leading article in THE LANCET of May 30th on the above subject. Medical men see more of the terrible national disease, alcoholism, and are better able to judge of its causes and consequences than any one else. We ought, therefore, to be in a better position than other people to suggest the best methods for dealing with it. Indeed, intelligent legislators will naturally expect us to furnish them with information which shall guide them in framing laws dealing with the subject. Your article enables us to see what methods have been tried elsewhere, how far they have succeeded, and in what respects they have failed. It is evident that drastic laws, like drastic medicines, are likely to do more harm than good, since they generally lead to defiance and contempt of law. Hence, as you observe, "the policy of prohibition has been on the whole a decided failure," and that, on the other hand, "great success has attended prudent measures of regulation and repression." The zealous advocates of prohibition commit two errors. They underrate the importance of education and they overrate the power of law. Until far greater care is taken in the training of youth, until a far more intelligent system of education is adopted, one which shall develop in a balanced manner the physical, mental, moral, æsthetic, and religious faculties, widening, elevating, and beautifying the sphere of daily life, men will grovel within narrow limits and will seek for enjoyment in mere animal gratification. Now since alcohol engenders a sense of contentment and pleasure more readily than anything else which he can command the uneducated man flies eagerly to that, and if he has the means of purchasing the much-desired agent he will indulge therein. The craving for alcohol amongst the masses of the people is lamentably common. Restrictions will be tolerated, but the attempt to suppress the sale of the favourable beverages would excite fierce resentment. The cure for national intemperance must therefore be a gradual process depending on the more thorough education of youth on the one hand and gradually increased restrictive laws on the other.

I am, Sirs, yours faithfully,

Manchester, June 3rd, 1896. P. M.

THE CHILDREN OF THE STATE.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of May 23rd you referred to a severe criticism upon the report of the Poor-law Schools Committee, and showed that those whose care of pauper children in the past had been so seriously called in question by the report were not content to sit down quietly under the stigma laid upon them by the conclusions of the committee. The feeling of hostility towards the tenor of the report is undoubtedly growing. I should like to direct attention to a report made to the Shoreditch board of guardians by their committee charged with the visitation of the cottage homes belonging to the parish of St. Leonard, Shoreditch, in which the contentions of the Schools Committee are referred to in very severe terms. The several points of which much is made in the Schools Committee's report are specially mentioned, and the construction placed on the evidence seriously called in question. Without going over the ground covered by the local committee I may say that their view is that the report of the Schools Committee is, in brief, a statement of conclusions arrived at prior to the taking of evidence, and is a founding of general impressions from isolated examples rather than a judgment based on comprehensive views of debatable matters. Too much, say the local committee, is made of the particular in the way of formulating therefrom recommendations to govern the whole. "Bias" is the term which the critics would apply to the report, and this in a direction hostile to the past action of the guardians and their officers. The improvement of the system hitherto in vogue with the advance of ideas is never acknowledged, and the too sweeping condemnation of the school system by reason of a few statements showing up its bad features in particular instances is held to be the fixed purpose of the departmental committee. One strong point put forward

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by the local committee at Shoreditch is that the educational system as now practised has been shown by no less an authority than Mr. Lockwood, one of the inspectors of the Local Government Board, to have resulted in the absorption in the army of the respectable wage-earning classes of the country of almost the whole of the thousands upon thousands of pauper children who have in the past been under the care of guardians. The system of dealing with children in Shoreditch is shown to have anticipated many of the suggestions of the departmental committee and to be working well. The report is looked upon as reproducing too faithfully the views of its members as known prior to the appointment of its writers, while the manner of treating the evidence of witnesses, according as it did or did not fit in with these preconceived ideas, is referred to as a species of biased favouritism. The opinion, from a perusal of this criticism and of others, is that the idea prevails that the report and its recommendations go altogether beyond the ground covered by the evidence. In these circumstances it is pleasing for boards of guardians to be assured by none other than the Duke of Devonshire, as Lord President of the Council, that no action will be taken with a view of adopting the recommendations of the committee before plenty of opportunity has been given for the voicing of the feelings of those at present charged with the administration of the laws touching pauper children and the manner of the upbringing and education of these children. If the departmental committee have in any wise overstepped the bounds of general fact and dealt with points only from the view point of individualism their case will be weakened wherein they seek to show the absolute necessity for reform in the direction of taking pauper children out of their present sphere and of placing them in London under one central authority.—I am, Sirs, yours truly,

OLIVER TWIST.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Dr. Niven on Sanitation among the Manchester Jews.

THE twelfth annual meeting of the Manchester Jewish Ladies' Visiting Association was held on the 21st ult. in the town hall. The report stated that the work of the association was energetically carried on; that 225 houses on an average were visited every week; that besides offering such suggestions as might promote cleanliness in the homes of the poor the district visitors distributed carbolic powder and had sold 20 cwt. of carbolic soap, besides supplying materials in order to enable the poor to carry out the requirements of the Health Department of the corporation as to cleansing their houses. The financial statement was satisfactory. In moving the adoption of the report Dr. Niven said "the condition of health of the Jewish community in Manchester offered a very interesting and pleasant spectacle." Year after year the death-rates in the Jewish quarters offered a striking contrast to those of neighbouring districts. The death-rate for the first quarter of this year was 17·3 in Red Bank and 18·5 in Strangeways. They are inhabited chiefly by poor Jews and contrast strongly with the adjoining district of Angel Meadow with a death-rate of 50·9, and with St. George's Central and Ancoats West districts with rates of 39·2 and 42·0 respectively. It was no exaggeration to say that the Jewish community presented a death-rate less than half that of some of the neighbouring districts. While it is difficult to understand all the factors helping to produce the contrast, probably the most important are the prevailing temperance and, perhaps even more, the great care which the Jewish people take of their children. Dr. Niven, so far as his inquiries went, thought they were probably better clothed, fed, and cared for than the children in many other parts of Manchester. He believed that the Jews in their polity looked to the mothers staying at home to take charge of the children while the men went to work. As is well known, it is the custom for a very large proportion of the non-Jewish mothers to go out to work, leaving their children in the care of others. "It was interesting to find that the death-rate as regarded children was low among the Jewish community where the mothers stayed at home and looked after their children, and so high in neighbouring districts, where so many mothers went to work, leaving their children to the care of others." He could not think economically that the Lancashire custom for the mothers to go out to work was a good one, and the contrast as to death-rate was interesting because it was in spite of what we rightly lay stress on—i.e., the want of cleanliness among the poor Jews. "He did not think any of the Jewish people would claim—and especially those who had recently come from abroad—that they were more cleanly and nice in their habits than others. ..... They were in many respects extremely slovenly and dirty in their habits, and effluvia which arose from decaying vegetables and from the extraordinary cooking operations which went on in the houses were in many respects often very disagreeable." He spoke also of the poor Jewish people being "more apt to accumulate dust than their neighbours," a pleasing and delicate euphemism, and dealt very tenderly with the frightful proclivity to dirt that seems ingrained in most of the poor Jews. The strange thing is that they flourish in spite of their habits and surroundings, which seems to point to great racial vitality. They no doubt owe much to their temperance as to alcoholic drinks, while as to food they are not frugal, but rather lavish, and though their cooking is peculiar and not always as cleanly as we should like their rich, greasy messes seem to suit them.

Milk Adulteration.

Some cases involving points of interest under the Food and Drugs Act were heard at the city police-court on the 21st ult. An inspector took a sample of the milk sold by a small shopkeeper and it was found to have been deprived of fat to the extent of 27 per cent. The shopkeeper declared he sold it exactly as he received it from a wholesale milk dealer. A sample of milk sold by the latter had been deprived of 26 per cent. of fat. The wholesale dealer in turn declared he sold it as he received it from the farmer. Samples, therefore, were taken on different occasions of the farmer's milk as it was delivered at the station, which, according to the analyses of Mr. C. Estcourt, the city analyst, "had been deprived of fat to the extent of from 16 to 45 per cent." The analysis of Mr. Charles Blades, a member of the Society of Public Analysts, produced very different results, and it was agreed that the summonses should be adjourned for a fortnight to allow of these gentlemen making a joint analysis. It should be said that two inspectors went to the farmer and asked for a sample of the milk as it came from the cows, but he would not allow them to have it until it had passed through the refrigerator. In the second case the retail dealer and the wholesale dealer declared they had sold the milk, which had been deprived of much of its fat, as it had been delivered to them, and a sample taken of the milk as it was supplied by the farmer showed that 32 per cent. of the fat had been removed. The defending solicitor contended that the milk-dealers had combined to throw all the blame on the farmers and complained that the inspectors attached to the sanitary department of the town hall took advantage of "the poor unsophisticated Cheshire farmers"; notwithstanding which touching appeal the farmer was fined £5 and costs and the summonses against the dealers were withdrawn. Three other milk retailers were fined for adding water.

Summer Camp for City Boys.

Ever since 1883 a camp for poor city boys has been formed each summer as part of the work of the Boys' Refuge, a most valuable Manchester charity. The first year it was at Morecambe, and since then at Llandudno, Ansdell near St. Anne's, and for the last three years at Birkdale, Southport, where the camping-ground has been placed at the disposal of the committee by Mr. Wild-Blundell, the lord of the manor. It is on sandy soil, is near the railway-station, and only a few minutes from the sea. The camp is formed at Whitsuntide and continued to the end of the summer, during which time batches of poor boys, about 120 at a time, are kept under canvas for seven days, being replaced every Monday by a fresh contingent. Last year 1461 boys had a week's holiday, and it is hoped that this year 1500 may be received. The movement is helped by many philanthropic people. A large corrugated iron structure, known as Byrom Hall, has been given by a lady and gentleman of that name from Bury, which is of great use in bad weather, and many of the tents have been supplied by friends. "In this and other ways—by gifts offered, camp equipment, &c.—the cost of maintenance is sensibly reduced, and with the sums contributed annually by the lads the committee are enabled to provide for them a very enjoyable and health-giving summer holiday at a cost of 6s. each per week." A sergeant and his wife, with the help of one or two junior

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officers, look after the boys, and members of the committee go down from time to time. The city missionaries, district, visitors, and others interested in the poor find plenty of deserving cases, and the candidates are always in excess of the accommodation. While under canvas a sort of uniform is worn, which identifies the boys as belonging to the camp, and allows of the fumigation and storing of the temporarily discarded clothing. Before leaving Manchester the boys are medically examined by Dr. Ledward, and while they are under canvas by Mr. Reinhardt Anderson of Southport, the honorary medical officers. Ten or twelve are allotted to each tent. The bugle-call for rising is at 6.30, then come a brief drill, prayers, and breakfast at eight. Tents are then swept out and cleansed, after which, if the tide serves, the boys parade for bathing. Dinner is at 12.30, tea at 5, supper at 9, and after prayers, which cannot be of excessive length, the lads go to their tents at 9.30. The time passes with a little drill, various games, and rambles along the shore, a blissful change from the stifling slums and alleys of Manchester on a hot summer's day. The food is good and substantial and there is no stint. At the recent opening for the season by the Mayor of Southport many friends were present, who could not fail to be touched by the appearance of these lads from the slums. Some few seemed robust, but the great majority showed in their pale faces and stunted growth the degeneration of race, in the production of which the unhealthy conditions of life in the low districts of our large towns are important factors.

June 2nd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Proposed New Asylum for Pauper Lunatics.

As a result of a conference between representatives of the parish council and the Lunacy Board it has been agreed that the parish council will be under the necessity of providing a new asylum to accommodate pauper lunatics to the number of 400 or 500. The present asylum at Morningside is able to deal with only about one-third of the number of lunatic paupers, which are under the care of the parish council, hence the necessity for additional accommodation. It is expected that the building connected with this scheme will necessitate an outlay of at least £50,000. The question of a site for the new asylum has still to be considered.

Health of Edinburgh.

At a meeting of the Public Health Committee it was reported that the number of deaths during the month of May was 353, giving a death-rate of 15·31 per 1000. The average death-rate for the preceding five years was 17·31 per 1000. Zymotic diseases had proved fatal in 6·51 per cent. of the total mortality.

June 2nd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Irish Medical Association.

AT the meeting of this association, which was held in Dublin on June 1st, a strong opinion in favour of the extension of the English Superannuation Measure to Ireland was expressed by many of the speakers. Mr. Horace Plunkett, M.P., with Dr. Jacob, the secretary of the association, have been very active in the matter, and there seems to be some hope that a Bill embodying an arrangement by which a superannuation allowance would be secured to retiring Union medical officers may be passed this Session.

The Royal College of Surgeons in Ireland.

The annual meeting for the election of the President and Council of the College took place on June 1st, when Mr. William Thomson and Mr. Kendal Franks were elected President and Vice-president respectively for the ensuing year. The only changes which have taken place in the *personnel* of the Council are indicated by the disappearance of the names of Mr. William Stoker, who resigned his seat in May in order to become an examiner, and of Mr. Cranny, who was elected on that occasion to fill his place. Sir W. Thornley Stoker, the outgoing President, and Sir William Stokes, recently one of the examiners in surgery to the College, occupy the two vacancies. The new Council will be obliged to deal with a very unpleasant matter in the shape of a movement which has taken place in the medical school of the College in reference to the recent election of Dr. E. Winifred Dickson to the position of examiner in midwifery and gynæcology. The students have held a meeting, and in addition to a request for Miss Dickson's resignation have threatened that unless their demand is complied with they will leave the school and College to obtain their qualifications elsewhere. Dr. Dickson, who is gynæcologist to the Richmond Hospital, is, of course, highly qualified for the post of examiner. The wisdom, however, of the College in appointing any young lady to examine young medical students in midwifery and obstetrics is considered by many to be open to question.

Death of Mr. Robert Gilmer, L.R.C.P. & S. Edin.

I regret to announce the death, on May 24th, at his residence, Ballymena, of Mr. Robert Gilmer, in his fifty-first year. He has been ailing for several months, so that death was not unexpected. Mr. Gilmer studied in Belfast and after becoming qualified began practice in Ballymena, where for the past twenty years he has enjoyed the respect and confidence of a large *clientèle*. The greatest sympathy is felt for his wife and family in their very sad bereavement.

The Condition of the Belfast Workhouse.

Mr. Agnew, Local Government Board inspector, in his report on the condition of the workhouse in Belfast, states that the accommodation for the infirm classes, both male and female, is inadequate and inefficient, particularly for the infirm women, a number of whom were located in sheds used as living and sleeping rooms. In the school building the day-room accommodation for the male attendants is inadequate, while the women had no day-room at all. The inspector recommends that structural changes should be made to meet the wants of these classes. In the healthy nursery, where 50 mothers and 59 children were located, there was no bath or lavatory accommodation. There was also no lavatory accommodation for a large number of healthy men and women. The inspector suggested that structural changes were necessary in the infirmary so as to provide separate wards for phthisical and erysipelas patients. The water-supply in the infirmary was inadequate. The school-yard was in a discreditable condition. At the meeting of the board of guardians, held on May 26th, a committee was appointed to consider this report of the inspector.

Queen's College, Belfast.

Dr. Whitaker, medical officer of health for the city of Belfast, has been appointed lecturer on Sanitary Science at Queen's College, Belfast.

Presentation to Mr. John Wilson.

Mr. John Wilson, recently appointed medical officer of Enniskillen Union, after having been for a period of sixteen years dispensary medical officer of the Barronstown district, co. Louth, was last week presented at a meeting in the Dundalk Club with an address and purse of sovereigns. The presentation was made by members of the medical profession, the hunting men of the district, his former patients, and by the general public.

The Queen's College Union, Belfast.

At a meeting of the General Committee of the Students' Union, held at Queen's College on May 29th, it was reported that the new union buildings were progressing rapidly, and that financially, after paying for the erection and furnishing of the union, there would be about £1000 over for investment. The draft constitution was considered and adopted, and the bursar of Queen's College was appointed auditor. It is expected that the new union will be ready next session, and as early in the coming year the jubilee of the College is to be celebrated this would be a very suitable occasion for the public inauguration of an institution which will serve as a bond of union between students, graduates, and officials of the College.

Hospital Saturday in Belfast.

The annual street collection on behalf of the Royal Hospital was taken up in Belfast on May 30th, and, despite the beautiful weather and the large number of collectors, who threw themselves most energetically into their work, the

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amount collected was less than last year by about £50, so that when necessary expenses are deducted there will only be a sum of £230. The movement, judging by results, is not increasing in popularity; and amongst many the feeling is growing that the hospital must be put on the city rates as, unlike the similar charities in Dublin, it is not subsidised by the Government contributions. One reason why less interest is being taken in the Royal Hospital is undoubtedly the large number of smaller charities of every kind which have in recent years sprung up all over Belfast and which take many of the old hospital subscribers.

The Health of Belfast.

The report presented to the City Corporation on June 1st by the medical officer of health shows that the condition of Belfast from a health point of view is most unsatisfactory. For the five weeks ending May 23rd the death-rate was from all causes 26·9 per 1000, while in Dublin it was 24·8, and in Cork 18·9; in Belfast the death-rate from zymotic diseases was 3·6, while in Dublin it was 1·6 and in Cork 0·1; in Belfast from chest affections it was 9·6, in Dublin 7·6, and in Cork 7·0. Various theories are put forward to account for the continued extraordinary high death-rate in Belfast; it is said, for instance, that the death-rate is calculated on a population of 277,354, which is much too low, as the probable present population is close upon 300,000; again, it is said to be due to the large pauper population, to the nature of the soil, or to the character of the manufactures, and to the absence of notification of disease; but in the discussion in the Corporation on the question it was pointed out by one of the members that the matter could not be dealt with by such generalities, and that it would be infinitely better if the members of the public health committee would go to the root of the matter and ascertain what was the real cause of the undoubtedly high death-rate of the city. Some progress has been made in reference to the long-talked-of erection of an infectious hospital, and the public health committee have selected two sites as suitable—one at Old Park-road and the other in the asylum grounds at Purdysburn. There is one slight morsel of comfort in that the birth-rate of Belfast is the largest of any district in Ireland. One thing is quite evident, the death-rate of Belfast is exceptionally high, the causes of which should be found out and removed. Birmingham affords a notable example of what can be done in this direction.

June 2nd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Craving for Salt.

IT may seem strange that this well-worn subject should at the close of the nineteenth century be discussed at the Société de Biologie (May 23rd). M. Lapicque, after reminding his audience that chloride of sodium is consumed as an article of necessity by nearly all races and that most of the lower animals are fond of it, tells us that there are, however, exceptions to this rule. The herbivora betray a greater liking for the salt than the carnivora, and in the same way agricultural populations, who are more or less vegetarians, are invariably large consumers of it. The tribes who eat no salt lead a pastoral or nomadic existence whose regimen is almost exclusively animal. This led Bunge to formulate the theory that as vegetables contain principally potassium salts these latter replace the sodium salts in the economy, and the vegetarian instinctively craves for common salt in order to compensate for its loss through the kidneys. This theory is, however, weak, for it does not explain why certain peoples who have not access to sea salt replace it by salts of potassium obtained by the incineration of plants. Such a people are the negro inhabitants (1,000,000) of the French Congo between Lake Sangha and Lake Tchad. Salt is unknown in this vast territory, which is as large as France; for it is substituted an artificial salt extracted from a certain number of selected plants, whose ashes are washed and their potassium salts crystallised out. Samples of the salt have been analysed and found to be composed of potassium salts only. When on their first entrance into the country the French endeavoured to sell common salt they found it unsaleable, the natives preferring their own. This disposes of the theory propounded by Bunge, and to my mind weakens another theory advanced by Ringer and others, claiming for potassium salts the property of a protoplasmic poison and cardiac depressant. M. Lapicque inclines to the belief that salt is only of use in procuring for man and animals a gustatory stimulus. M. Trouessart reminds us that dearth of salt in besieged cities has been made up by the use of saltpetre. M. Giard told his colleagues the story of the chimpanzee of the London Zoological Gardens which, deprived of salt, took to drinking its own urine. As soon as it was provided with a block of bay salt it ceased to drink its urine and used to sleep with the salt held tightly in its arms. According to M. Samson oxen and sheep will on large farms abstain for weeks together from the salt placed within their reach, whereas at certain other periods they eat largely of it. This variability of appetite for salt is due to the variation, according to the season of the year, of their diet.

A New Method of Treatment by Heat of Soft Chancres.

Dr. Audry of the Toulouse Faculty has devised a modification of the heat treatment of soft chancres introduced three years ago by Dr. Welander of Stockholm. Dr. Audry employs radiant heat supplied by the thermo-cautery, the button of which is held for a few seconds at a distance of three or four millimetres from the sore previously washed and dried. Should the point of the thermo-cautery be fine it must be brought to a white heat; if larger, to a dull red heat. Exposure to this radiated heat for the period indicated has the effect of thoroughly drying the ulcer, on the edges of which there now appear sanguinolent striæ. Too long exposure determines a raising of the surrounding epidermis and a reddening of the skin. A single *séance* is stated to be usually sufficient to transform the chancre into a simple ulcer, which soon cicatrises under the influence of any antiseptic powder. The rapidity of the healing is due to the absence of the scab that always follows the direct application of actual or chemical heat. The pain is said to be quite endurable, being less than when the actual cautery is employed.

The late Dr. Stoltz.

The death on May 22nd, after a very short illness, of Joseph Alexis Stoltz deprives French obstetric medicine of one of its chief celebrities. Born in 1803 at Andlau in Alsace, his father being an *officier de santé*, he studied at Strasbourg, graduating M.D. at the age of twenty-three years. He at once selected obstetrics and gynæcology as his special studies. Appointed *professeur-agrégé* in 1829, he became five years later Professor of Obstetrics of the Strasbourg Faculty and Director of the Departmental Midwifery School. In 1846 he was appointed Dean of the Faculty. He was a *membre associé national* of the Paris Academy of Medicine. Commander of the Legion of Honour, and had filled the offices of member of the Municipal Council of Strasbourg and member of the Conseil Général of the Bas-Rhin. Opting for France after the catastrophe of 1870 he followed the Faculty of Strasbourg in its migration to Nancy, where he retained the same posts of Professor and Dean. There he remained until 1880, when he retired to his native place, Andlau, picturesquely situated at the foot of the Vosges. Here he became the Good Samaritan of the district, nor did he refuse an occasional consultation.

June 2nd.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Official Report on the Langerhans Case.

THE death of a child after an injection of diphtheria antitoxin, which I reported lately in these columns, has induced the legal authorities to order a careful examination of the serum used in this case. The examination was performed by Professor Ehrlich, Director of the Royal Control Office, and the results are now published in the official papers and in the *Berliner Klinische Wochenschrift*. The report states that the serum before being admitted to sale had been tested (by control experiments) according to the existing regulations by the office. The serum, then registered under No. 216, showed 100 immunisation units per cubic centimetre, and absolute sterility and the normal quantity of carbolic acid. After the fatal accident the antitoxin No. 216 was again tested and proved to be quite unaltered. By careful inquiries in those hospitals where other bottles of the antitoxin No. 216

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had been sent (Charité Hospital, Berlin; Julius Hospital, Würzburg; General Hospital, Hamburg; and municipal hospitals in Magdeburg and Krefeld), it was ascertained that in no instance had unfavourable symptoms been observed. In one of these hospitals a tenfold dose was administered to a boy one and a half years of age without any harm resulting; in another of them a series of children received injections for immunising purposes and remained quite healthy. The report concludes that from a clinical as well as from an experimental point of view the serum No. 216, used in the Langerhans case, must be regarded as a normal one. The death of the child is, therefore, not to be imputed to the antitoxin.

Hygiene in Printing Offices.

A Bill providing for hygienic improvements in printing offices has been proposed to the Federal Council by the Imperial Chancellor. It specifies that the rooms of the offices must be 4 metres (= 13 feet) in height, and must contain at least 15 cubic metres (= 530 cubic feet) of air for every man employed therein. The floor must be smooth, and the walls must be painted with oil paint renewed every five years. The type cases must be provided with pedestals to avoid the accumulation of dust beneath them. Stereotype work is to be done in special rooms efficiently ventilated. The type cases are to be cleaned in the open air and by the aid of bellows only. Ample lavatory accommodation is made compulsory by the Bill, which gives very precise directions in this matter. One washhand basin at least must be furnished for each five workmen, soap and towels are to be supplied to them free of charge, and a cloakroom separated from the workrooms is to be provided. This Bill, which is viewed very unfavourably by the employers, is on the other hand declared by competent medical men to be very useful. Dr. Lewin, a Lecturer on Toxicology at the Berlin University, points out that whilst the German insurance laws oblige employers' associations to indemnify workmen in case of accidents they are entirely unprotected against the chronic influence of poisons. As printers are liable to suffer from the effects of lead—one of the strongest poisons—he thinks that preventive measures are necessary, but the Bill ought, in his opinion, to be extended to other trades where lead is used, and he specially mentions some of the home industries where the workmen's children inhale dust impregnated with lead. The children of dial-plate painters, for instance, even if born healthy die in a few months with convulsions. In a village of Hesse, where pottery is glazed by home workers, 71 per cent. of the children were sickly, 50 per cent. died within the first five years, and the survivors suffered from hydrocephalus or macrocephaly.

Deaths of Medical Men.

Dr. Henle, one of the best German anatomists and Professor of Anatomy at the University of Tübingen, in Würtemberg, died in that town on May 23rd. He began his medical career abroad as an assistant to the great physiologist Donders of Utrecht, in Holland. He was then appointed professor at the Universities of Marburg, Rostock, Prague, and Tübingen respectively. The number of his anatomical publications is very great, his most renowned work being the "Handbook of Topographical Anatomy." His death will be lamented not only by the members of the profession but also by lovers of the fine arts, because he employed his anatomical knowledge in the interpretation of the problems which present themselves to artists. He published an essay on the Laocoon group, another on the works of Michael Angelo compared with those of the ancient masters, and a series of articles which were collected under the title of "Papers on the Plastic, Mimetic, and Dramatic Art."—Dr. Agathon Wernicke, chief medical officer to the Berlin police, died in Berlin on May 26th. He was one of the organisers of the University of Tokio, in Japan, having been summoned there together with another German medical man in 1874. He principally occupied himself with epidemiology and medical geography, and lectured on these subjects at the University of Berlin. He died from diabetic gangrene, and it caused much surprise that he allowed himself to be attended by a quack and declined to submit to an amputation which was recommended by an able surgeon.

The Apothecaries' Board.

A new board in connexion with the Government Medical Department is now instituted by a royal order. It has to deal with all matters concerning the pharmaceutical profession and is to be consulted if any alterations or reforms are intended. It may also advise the Government to alter the laws and regulations when circumstances require it. The board consists of the Director of the Medical Department as chairman, three medical members of this department, four qualified apothecaries (who must be owners of pharmacies), and four other qualified apothecaries employed in licensed pharmacies. The board is to meet at least once a year.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Infectious Disease in Schools.

AT Turin the other day Dr. Angelo Mosso, Professor of the Institutes of Medicine in the University, delivered before the Società Piemontese d'Igiene a lecture on the above topic. No man can be so "wholesomely practical" as the laboratory worker on due occasions, and Professor Mosso showed at once the grave importance of school hygiene by demonstrating that in the dust swept up from between the benches occupied so many hours each day by the scholars any quantity of pathogenic bacilli may be found—among them specimens of the bacillus diphtheriticus. In fact, it was at the instance of Professor Mosso's colleague, Professor Bizzozero, that the former physiologist prepared the lecture he has just delivered. "Every commune," so runs Article 110 of the legislative enactment for the observance of public hygiene, "must have its schools visited at least twice a month during scholastic hours, and without previous intimation by the communal sanitary officer or by medical practitioners specially told off for the purpose." This precaution, however, Professor Mosso proved by official documents to be quite irregularly enforced in even the best organised communes, like Turin itself, where there are over sixty schools, urban and suburban, to say nothing of private ones, and where the sanitary inspection prescribed by Government has to be carried out by only two medical men. Appealing to the precedent of Great Britain, particularly London, Professor Mosso insisted on the adoption in Italy of a similar thorough organisation if her large towns are to have so comparatively clean a bill of health as London, and especially London schools. Even where the "Commissione di Vigilanza," established by the Government quite recently for the protection of elementary schools, is fully organised, it is so far defective that the sanitary officer is without due authority and is without the means of effecting the reforms of which he sees the necessity. This is a grave omission, for, according to Professor Mosso, Italian municipalities "sono restii ai progressi dell 'igiene" (resist hygienic progress), and the want of power to coerce them explains the paralysis of the medical arm and the disastrous prevalence of infectious disease in young Italy. Meanwhile, urged the lecturer, in the present state of the kingdom (financially and politically incapacitated for the graver social reforms) the various Società d'Igiene throughout its borders must educate the public mind, show the dangers incurred by tender youth *in statu pupillari*, and prepare for such a methodical and medically inspired regulation of school hygiene as the Government may give effect to at the first favourable opportunity. Turning to sanitary details in scholastic life Professor Mosso proved that something more than ventilation (deficient as that usually is) requires attention. The *personale subalterno* (the subordinates charged with cleaning the school) must be taught hygienic principles and made to observe them. In the first place the benches should be only so long as to admit of their easy displacement for cleansing purposes under and below them. The old sweeping methods (with brooms), which simply stir up the dust and diffuse it in the air only to settle down again, must be abandoned. Three or four times a week (better every day) the floor should be laid with damp sawdust, afterwards diligently swept up, while twice a month the walls should be carefully washed. For such service the *personale subalterno* should be doubled or trebled. Again, the Società d'Igiene should initiate popular courses of hygienic instruction for schoolmasters and schoolmistresses, especially as to the origin, nature, and diffusion of infective disease, and should publish short, practical treatises addressed to the community so as to ensure intelligent coöperation between school managers and municipal authorities, between teacher and parent. Such a twofold propaganda can be fraught with

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nothing but good for "the Italy that is to be." Professor Mosso's recommendations were unanimously adopted by the society, which at its next sitting will discuss the same physiologist's report on "Physical Education in Schools," a subject on which the writer of "The Pathology of Fatigue" expatiates with peculiar authority.

The Premier on the "Direzione di Sanità."

In his great speech on the administrative programme of the Government the Prime Minister, the Marchese di Rudinì, has just made an important statement as to the "Direzione di Sanità" (public health department). That department laboured under two constitutional defects which fructified in much irregularity and inefficiency. It had a "scuola d'igiene" (a training college of hygiene) all to itself, and it had "autonomy." The former arrangement, as shown by such eminent physicians and surgeons as Baccelli, Tommasi-Crudeli, and Durante, was vitiated by its detachment from the University. A few years' trial has proved that solidarity with the academic system ensured a more thorough, more enlightened schooling in sanitation and the cognate sciences on which it depends than could be obtained by a separate teaching staff on which these sciences were imperfectly represented or not represented at all. Accordingly, the "scuola d'igiene" has ceased to exist and returns to the University, with all its special laboratories, however, retained. It will, as before, be under the direct cognisance of the Ministry of Public Instruction, like every other branch of medical training and practice. The "autonomy," which made the technical department of the "scuola" a spending department, was also found to work badly. Experts in hygiene, as Baccelli showed, are invaluable as counsellors and assessors, but when it comes to practical administration another set of conditions intervenes for which the laboratory is not the best discipline. They have their place—their indispensable place—in the "Consiglio Superiore di Sanità," but according to the Prime Minister they will no longer have the power of unchecked initiative. Henceforth they will work in concert and, it is believed, in harmony with the heads appointed by the State. These announcements were received by the Chamber of Deputies with loud and well-nigh unanimous expressions of approval.

May 30th.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Cholera in Alexandria.

DURING the past three weeks cholera has been manifesting itself in a much more businesslike way than at any time since its first appearance last October. The new cases at the beginning of May could be counted daily upon the fingers of one hand, but they gradually increased until they reached 40 on May 12th. Since then the daily returns have only once been higher than 30, but the total number of new cases during the three weeks is 521. The chief centre of the disease seems to have been some outlying hamlets, whence were brought salad and vegetables for town consumption. Directly the disease was stamped out energetically in these hamlets by English inspectors the number of cholera cases in Alexandria began to diminish.

Cholera in Cairo.

With the exception of some half a dozen cases reported during the winter Cairo remained free from cholera until May 9th, when for each of five days there were one or two cases. The disease attacked Old Cairo, the southern port of the city, but it is not certain whether it can have arrived from Alexandria by river or by train. In either case the germs had time to enter the drinking-water of Old Cairo from two men who died on boats there, and this is sufficient cause for the very local distribution of the epidemic so far. Upon May 12th the sanitary department determined to divide the city into districts and to place English medical men temporarily in charge to superintend native medical men and to carry out all necessary prevention work. Old Cairo was allotted to Dr. Keatinge, Saida Zenab to Mr. Milton, the citadel to Dr. Wilson, Ezbekieh to Dr. Engel, Boulak to Dr. Sandwith, while an extra inspector was also appointed to all other districts. Cholera regulations were put into force by the Governor for Cairo on May 16th, and several important measures were also taken for the first time in the history of Cairo. All insanitary bathing-places in mosques were closed, and power was given at discretion to close all dangerous public baths and drinking fountains. In order to preserve as far as possible from contamination the east bank of the Nile above and below the intake of the water company the river has been by the same decree kept clear of all boats and steamers and all washing and other possibilities of pollution. The British soldier is no longer allowed to bathe on that side of the river, and, most important of all, the drainage of the English barracks at Kasr el Nil is no longer allowed to foul the river immediately above the company's intake. It is to be hoped that this last measure will now be permanently adopted, for it has been constantly pressed by sanitary officials, and there can be no legitimate excuse for the negligence of the English military authorities. A special gang of scavengers has been employed to cleanse the river bank, and the whole town is being thoroughly well cleaned up by a special grant of £1500, placed to the credit of Mr. Perry, the head of the scavenging department of the Public Works Ministry. But this sum is only for two months' work, as it is assumed by the financial advisers that when the Nile has risen and cholera has been washed away no urgent need for sanitary matters will exist! It is to be hoped at least that some of the excellent work now being done will be allowed to continue as a permanency. One of the crying needs for Cairo is a real sanitary inspector, who must, of course, be an European. The cholera cases in Cairo since May 9th to May 27th have already numbered 401; nearly all of them so far have been confined to Old Cairo and its neighbourhood. Most of the cases in Boulak have been among workmen employed by day in Old Cairo. The maximum number of cases per day so far has been fifty-three. Dr. Keatinge has a straw hut hospital and a large staff of helpers, including some of the senior students of the medical school, and he has established a simple method of improving the water-supply by running a fire-engine hose out to draw water from a barge far removed from the bank. Yesterday some difficulty arose in consequence of some malcontents objecting to having their possessions disinfected. Unfortunately some women were accidentally sprinkled with acid by a temporary helper and had to be admitted to hospital, but with the exception of this regrettable incident the work has been quite smoothly carried on.

Cholera in other Places.

Since May 20th there have been 60 cholera cases at Tourat, near Cairo, among a new battalion of recruits and the police guarding the convict prison and a great village population of negresses. Coles Pasha, Mr. Crookshank, Surgeon-Colonel Gallwey, and Mr. Littlewood are dealing with this. At Ghizeh, opposite Cairo on the west Nile bank, there have been 22 cases, mostly in the prison. The whole number of cholera cases since October has now reached 2256 and the deaths 1878. This gives the high average of 83 per cent. mortality, but if we assume, as it is only fair to do, that for every reported case there are at least two unreported the average of deaths is lowered at once 27·7 per cent. In considering Egyptian vital statistics it must never be forgotten that the diagnosis is nearly always made by inspection of the dead body by an ignorant native doctor or midwife. The death returns of Cairo are extra high just now, because, in addition to the cholera, there is a fatal epidemic of measles among children under three years of age. The health of the British troops is excellent and the sick-rate at Alexandria, Cairo, and Wady Halfa varies now from 4 to 6 per cent. In spite of this a case of cholera has to-day been reported from the barracks at the citadel. The decoration of C.M.G. recently and worthily bestowed upon Rogers Pasha is the first official reward given by England to the Egyptian Sanitary Department since it came under English control in 1884.

Cairo, May 27th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Regulation of Immigration.

THE immense increase of Italian immigration during the early months of this year is attracting much attention, and the question of refusing entrance to such large numbers of undesirable foreigners is agitating the public. It is estimated that the approximate number of Italians who have arrived in New York between Jan. 1st and April 30th,

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1896, is 27,000. It is now proposed to apply an educational test. A test of the educational qualifications of immigrants shows that 67·6 per cent. are illiterate—that is, are unable to read or write their own language. It is held that this class is uniformly degraded, ignorant alike of their own language and of any occupation, incapable of appreciating our institutions and standards of living, and hence very difficult of assimilation. The test would be applied at the place where the ticket was bought and by agents of the steamship companies, thus saving the immigrant the hardship of making the voyage in doubt as to his admission or exclusion. This plan would secure rudimentary education on the part of all foreigners applying for naturalisation papers and American citizenship, and thus promote education among those who desire to emigrate.

Colour-blindness in Asiatics.

A surgeon in the United States Navy reports that in Japan among 1200 soldiers 1·58 per cent. were red blind, and 0·833 per cent. green blind. Among 373 boys 1 per cent. were red blind, and among 270 girls 0·4 per cent. Among 596 men in Kyoto 5·45 showed defective colour sense. Dr. Fielde of Swatow, China, examined 1200 Chinese of both sexes, using Thompson's wool tests. Among the 600 men were 19 who were colour-blind, and among 600 women only 1. The percentage of colour-blindness among Chinamen is then about 3 per cent. and does not vary greatly from that in Europeans. Dr. Fielde, however, found that fully half of those tested mixed up blue and green, and this investigator thinks that many of the race are quite blind to the violet colours.

Civil Service Examination for Pathologist.

The New York Civil Service Commission give notice that they will hold an examination for the position of pathologist in the department of public charities. No person shall be admitted as a competitor for appointment who shall not produce to, and leave for a reasonable time with, the Examining Board a diploma or certificate from some reputable institution, showing that he has pursued in such institution, with credit for two years, a course of study adapted to qualify him for the position which he seeks or for which his appointment is desired.

Privileged Communications.

The Medical Society of the District of Columbia has presented to Congress a Bill entitled "A Bill relating to the Testimony of Physicians in the Courts of the District," which is intended to extend to the citizens of this district the privilege of confidential communications to physicians. This Bill is contested by the justices of the Supreme Court of the District of Columbia on the ground of injustice to litigants and as being contrary to public policy to concede the rights of privileged communications to physicians. Twenty States, comprising one-third of the population of this country, have statute laws establishing the inviolability of such communications.

The New York Academy of Medicine.

The New York Academy of Medicine was organised on Jan. 6th, 1847. By bequests, donations, and subscriptions a property has been purchased and a commodious building has been erected, which, including the library, is now valued at $246,292. During the last twenty years the efforts put forth by the academy to collect and maintain a free medical library for the use of the profession and public at large have been more persistent than ever. This library, which at the present time contains more than 4500 volumes, was obtained by gifts, bequests, and purchases, and during the year 1895 was consulted by 6574 readers. Three library funds, by gifts and bequests, have already been instituted and invested on bond and mortgage, aggregating in amount $219,000, the interest of which can only be used for the increase of the library.

Inspection of Bakeries.

It is estimated that there are 2000 bakeries in this city, most of which are located in cellars that were never originally intended for such use and are not only badly ventilated but are the favourite haunts of cockroaches, mice, spiders, and even rats. Coal-dust and other matter float around the places, making them unhealthy as workshops and rendering it altogether impossible that wholesome bread can be produced under such circumstances. Bakeries are often the sleeping place of employés and are not more than six feet from floor to ceiling. As an evidence of the danger of such places some samples of bread from these bakeries have been found to contain thirteen varieties of living micro-organisms. In case of contagious disease among the occupants of these cellars there is no reason why the elements of contagion should not be distributed broadcast through the city in the bread there baked. These shops are to be placed under State supervision.

A National Public Health Service.

At a recent meeting of the American Medical Association the Committee on Public Health reported three methods of establishing a department of public health: (1) to secure legislation depriving the Marine Hospital Service of its public health functions and establishing a new department after the original plan; (2) to accept the Marine Hospital Service as it now exists and attempt nothing further; and (3) to try to improve the Marine Hospital Service, as far, at least, as its public health functions are concerned, and to render it still more effective with more ample powers and a still greater field of activity. The third plan seemed to be the most desirable one, but in carrying it out it was necessary not to interfere with or curtail the powers of the State boards of health. Additional legislation is needed to make the Marine Hospital Service more efficient, and it should be required to act in the several States in coöperation with the State boards of health and not independently of these boards. The association approved of the suggestions and re-appointed the committee with power to secure the proposed legislation.

May 18th.

THE DIFFUSION OF SMALL-POX.—The small-pox data for the four-weekly period ended May 16th show the disease to be still quiescent in London, the notifications in that period having been only 22, and of these 6 were in Kensington—2 of them, however, proving to have been wrongly diagnosed. Thirteen different sanitary areas in the metropolis contributed cases to the total, as against nine districts with 14 notifications in the period of similar duration immediately preceding. In the corresponding period of 1895 the notifications numbered 40 in the whole of London. In the week ended May 23rd of the present year the admissions of small-pox patients to the hospital ships were 5, against 3, 5, and 6 in the three immediately preceding weeks, and last week the admissions were only 3 in number. On Saturday last the patients remaining under treatment numbered 19. Two cases of small-pox have been reported in Birmingham during last week, both having been removed to hospital and every possible precaution taken. Each of the cases has been traced to infection derived from Gloucester. At the latter place in the week ended May 28th the new cases of small-pox coming to light numbered 52, the admissions to hospital 7, discharges 27, and the deaths 19. There was thus a slight increase on the new cases of the previous week. The principal question which has been under discussion at Gloucester lately has been that of the reopening of the schools. These were reopened on Monday of the present week, and the propriety of the order of the town council allowing this procedure has been called in question. The council have required that they may be made aware of all school children who have not been successfully vaccinated, and that such children be excluded from school. The school authorities have demurred to the alleged attempt of the health body to saddle them with the responsibility of ascertaining how far children have been or have not been vaccinated. The council on their part keep the School Board informed of all houses from which children should be debarred from attending school by reason of small-pox occurrences. When the schools were reopened it appears that of 6370 children on the books only 2029 presented themselves, and that only 17 of these were unvaccinated. Some exclusions not called for were recorded, and other children who should have been excluded were reported to be present. There are now only two cases of small-pox at Cheltenham. Leominster is said to have lost some £10,000 on account of three regiments being sent elsewhere which would have been quartered in the town but for the reported presence of small-pox. The report the small-pox had broken out at Tamerton Foliot, near Plymouth, is contradicted, but the disease is stated to have appeared at Pennycross, a village near at hand. At Lancaster 4 cases have occurred, all traced to infection from convalescent cases coming from Gloucester.

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THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

THE summer session of the General Medical Council opened on Tuesday last, June 2nd.

The chamber in which the Council now hold their meetings has been obtained, as the President pointed out, in spite of peculiarly exceptional difficulties, and is now their freehold property. The new chamber has been built over the former room, which was much below the level of the street, but occupies the same space as the old one—viz., about thirty square feet. Light, ventilation, and the heating arrangements seem to be excellent. That the sanitary arrangements are satisfactory should be guaranteed by the fact that they have been carried out under the direction of Mr. Teale and Dr. Thorne Thorne. But although the arrangements were greatly approved the new room was used for the first time under very trying circumstances. The roof is of glass, and the fierce heat of the exceptional sun on Tuesday had free course through it, to the inconvenience of the members of the Council and still more of the visitors in the gallery. Doubtless the ingenuity of the executive committee will devise some means of obviating the inconveniences of this roof at the summer meeting.

No less than three new members were received by Sir Dyce Duckworth, who filled the chair pending the appointment of a President—viz., Sir William Roberts, in place of Dr. Wilks, as representative of the University of London; Mr. W. Thomson of Dublin, in place of Dr. Kidd, as direct representative for Ireland; and Mr. Tichborne, who has been elected to represent the Apothecaries' Hall of Ireland in place of Dr. Moore.

Nothing could be more effective or appropriate than the speech in which Sir William Turner proposed the reappointment of Sir Richard Quain, who, as we anticipated, was selected President of the Council until the expiration of the time for which he was elected Crown representative.

It is the custom of the Council to adjourn at four o'clock on the first day of the meeting in order that the committees may get on with their work, and this was observed on Tuesday. The afternoon was occupied by a carefully written and read speech by Mr. Teale, on the increasing multiplicity of examinations and the increasing proportion of rejections. We publish this speech in full elsewhere and a leading article upon it (pages 1547 and 1573), both of which will, we hope, be read by all who are interested in the subject.

Mr. Teale showed that the examinations had wonderfully increased in number, and he quoted unanswerable evidence to show that there was a serious element of chance in the best of them often telling disastrously on the best men, whose failure was due to brain exhaustion and not to want of knowledge. The constant preparation for examinations interfered with the leisure for work—especially for hospital work, which was now postponed till the later years of the curriculum when many examinations had to be passed—as at the conjoint examination for England the ten minutes' bell and the element of hurry came in to agitate the student. He quoted the testimony of practitioners and on his own experience testified to the fact that some of the best university students were sent out with very little practical knowledge. He pointed out that the fifth year was meant by the Council to be available for pure clinical work either in hospitals or with a general practitioner. But it was largely spoiled for this purpose by the dread of unpractical examinations.

Mr. Teale's motion was seconded by Dr. Pettigrew, and then a series of more or less pertinent criticisms began. Sir William Turner, in his most practical and matter of fact style, objected to the speech as somewhat of an academic performance. This was a curious objection from the representative of an ancient university, where everything is prized according as it is academic. He was a little more forcible when he objected that Mr. Teale's motion was merely declaratory and deficient in point. This defect was soon supplied in the proposal to refer the speech and its material to the Examination Committee to report on at the next session of Council. Our own opinion on the subject will be found in another column.

The whole of Wednesday afternoon was taken up with a debate on the proposal by the representative of the Apothecaries' Hall of Ireland to give examiners in medicine as well as in surgery to the Hall. This appeal to the Council, it will be remembered, is in accordance with the suggestion of the Lords of the Privy Council in their recent hearing of the case of the Hall as affected by the refusal of the Medical Council to appoint surgical examiners in accordance with the provisions of the Medical Act of 1886. The question was one of absolute novelty and of considerable difficulty. There was a sharp division of opinion on the subject among the members of the Council, which was strikingly shown in the discussion. Even Irish opinion was much divided. Sir John Banks seconded the motion of Mr. Tichborne, the representative of the Hall, and it was supported by Sir Philip Smyly, who represents the Royal College of Surgeons. But Mr. Thomson made an excellent maiden speech against the proposal, showing that if the direct representative principle in Ireland does show a wonderful *penchant* for Dublin consultants it has in this case added a member to the Council who will contribute to the value and the dignity of its discussions, and we may assume that Dr. Atthill, who observed an eloquent silence, did not differ much from Mr. Thomson. The opposition to the proposal to accede to the suggestion of the Privy Council found its main exponents in Mr. Bryant, Mr. Wheelhouse, and Sir Dyce Duckworth. On the other side the principal speeches were by Sir Walter Foster, Dr. McVail, and Dr. Heron Watson. The importance of the discussion was in the fact that it involved the attitude of the Council towards the Privy Council in an entirely new situation and one requiring great and mutual respect. The tendency to end a qualifying body whose candidates have dwindled to half a score in the year under adverse criticism is very strong. But it needs to be kept in some check for various reasons. The ending of a medical corporation is a judicial act and has to be performed not by the General Medical Council but by the Privy Council, and it is highly important that in the part which the Council plays in the preliminary process it should act slowly and with something of judicial deliberation. Besides, for good or evil, the Privy Council and the General Medical Council on rare occasions have to coöperate under the Medical Acts. It is highly desirable that they should facilitate each other's work and respect each other's point of view. Opinion seemed very finely divided, but the time for the rising of the Council came. The standing order was suspended to allow Sir William Turner to propose a third course—viz., to postpone an immediate answer to the Privy Council, pending a representation to the Royal College of Surgeons in Ireland and the Apothecaries' Hall of Ireland, that they should make an effort to reconstruct another conjoint board on a new basis satisfactory

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o the Council. This proposal seemed to commend itself as he best way out of a difficult situation, and Mr. Tichborne vithdrew his motion in its favour. But it came as such a sur-)rise to the ardent opponents of the motion for appointing :xaminers that the discussion had to be adjourned. And so he body concerned remains, and is likely to remain some ime longer, in a state of suspended animation.

TUESDAY, JUNE 2ND.

THE session of the General Council of Medical Education ınd Registration opened to-day in the new hall of the Council n Oxford-street, London. Mr. Wheelhouse, as chairman of he business committee, intimated that the Council were vithout a President, Sir Richard Quain's term of office having :xpired on May 26th, and proposed that in the meantime Sir Dyce Duckworth, senior treasurer and senior officer of the Council, should take the chair and preside over the meeting. This proposal was at once adopted, and Sir Dyce Duckworth took the chair. Mr. Wheelhouse introduced Sir William Roberts as the successor of Dr. Wilks in the representation of the University of London; Sir John Banks introduced Mr. William Thomson as the new direct representative for Ireland in room of the late Dr. Kidd; and Sir John Banks also introduced Mr. Charles R. C. Tichborne, the successor of Dr. Charles F. Moore in the representation of the Apothecaries' Hall of Ireland.

Re-election of Sir Richard Quain as President.

Sir WILLIAM TURNER moved:—

"That Sir Richard Quain, Bart., be re-elected President of the Medical Council till the expiration of the term for which he has been nominated a member of the Council by the Crown."

In putting this motion before the Council he desired, he said, to recall what took place on May 26th, 1891, when Mr. Carter proposed, and he (Sir William Turner) seconded, the election of Sir Richard Quain to the Presidential chair. The services of Sir Richard Quain to the Council dated from 1863, and he was at the time, as he is now, the senior member of the Council. He had taken an active part in its affairs from the time he was first chosen, not only in its general business, but also in certain special duties which had been imposed upon him. The Council had had experience of him as their extremely active and economical treasurer and they had known him as Chairman of the Pharmacopœia Committee. But there were other reasons which weighed at any rate with some of them. They knew Sir Richard Quain as a man abounding in amiability, as one of the most delightful and pleasant of their colleagues, and as a man with an infinite capacity for taking trouble. The Council chose him upon that occasion. Since then they had had five years' experience of him as President, and no one could say that he had shown any want of diligence or ability in the conduct of their affairs. They had to bear in mind that the President's duty was by no means confined to the meetings of the Council. In fact, he was inclined to say that the President's duty and responsibility were in all probability much greater in the intervals between sessions than in the sessions themselves. In explanation of the terms of the motion he had moved he might say that Section 9 of the Medical Act of 1886 laid it down that the Council should elect a president for a term not exceeding five years and not extending beyond the expiration of the term for which the member concerned had been appointed to the Council. He might just add that he knew Sir Richard Quain was extremely anxious to see issued the new edition of the Pharmacopœia. His whole heart had been in the work for so many years, and he knew it would be a matter of great pride and gratification to him if he were in the presidential chair when the new edition was produced.

Mr. WHEELHOUSE seconded the motion.

Sir JOHN BANKS said that Sir Richard Quain was one of his oldest and dearest friends in the world, and he endorsed everything that had been said in his praise.

Mr. BRUDENELL CARTER and Sir PHILIP SMYLY having spoken briefly in support of the motion it was carried by the Council by acclamation.

Sir Richard Quain, who had temporarily retired, was formally introduced to the Council by the mover and seconder, and received a cordial welcome from Sir Dyce Duckworth and the rest of his colleagues when he took the chair.

The PRESIDENT, having thanked the Council for re-electing him, proceeded with the customary inaugural address.

The President's Address.

Sir RICHARD QUAIN, in his opening remarks, expressed his gratification for the honour which the Council had unanimously conferred on him in placing him in his present position on their assembling to-day for the sixtieth session of the Council. He passed in review the great names that had and still continue to be members of the Council and, continuing, said:—

"It is quite true that some things may have been left undone that ought to have been done, and that some things have been done that might have been left undone, or done in a better form; but it must be remembered that the Medical Council is a modern creation, that the laws under which it exists aimed at bringing together a number of elements which had previously had a separate and independent existence, that each of these several elements followed its own traditional method, which it believed to be the best, and that consequently it has taken much time to amalgamate these bodies and to secure that unity which has been most desirable and towards which much progress has been made. In the early days of the Council we had to witness what was described by Sir Dominic Corrigan as 'the battle of the shops'; but few traces of such battles now exist, and I earnestly hope that we have seen the last of them. Difficulties, too, have arisen with regard to the statutes under which we act. There are many members of the profession who think that we should have much larger power than we possess. On the other hand, there are those who think that our powers are all-sufficient and who would resist their extension. My impression is that by patience and perseverance—'moral suasion'—and a steady exercise of the powers which the Council possesses we shall be able to accomplish all that we need or that public opinion would sanction."

[He then referred to the progress and improvement since the early days of the Council in all its proceedings: the advance of medical education and the higher reputation with the public of medical students and medical practitioners. Referring to the incidents of his stewardship since the last meeting of the Council he said:—]

"It may be mentioned that there have been eleven cases of unprofessional conduct inquired into, of which three, together with one that could not be dealt with during the last session of the Council as the matter was being held in a court of law, will be submitted for your consideration. There is also a report of the Dental Committee on the first case of 'covering' by a dental practitioner. Some of these cases are of a very special character and will involve the grave and patient consideration of the Council. Since the last sitting a practitioner at Leeds, whose name was removed from the Register on November 25th, 1887, has been prosecuted and fined for continuing to style himself 'Dr.,' the fine being paid to the Council. A person, without any qualification, styled himself 'Dr. Bell,' practising in London, has been prosecuted for using the titles 'M.D.' and 'Dr. of Medicine,' and fined, the penalties in this instance going to the Receiver of the Metropolitan Police. A penalty, at first retained by the Staffordshire Potteries Stipendiary, has been paid over to the Council as the result of the action of our solicitor. In two other cases conducted by a society, penalties have been recovered, and in one instance remitted to the treasurers of the Council. There have been numerous applications for registration by dentists who failed to register when the Register was open which have been inquired into and reported on by the solicitor. The executive committee will submit a report on the disciplinary functions and penal powers of the licensing bodies, in accordance with the resolution passed by the Council at its last session. The Council will desire to be informed as to our proceedings with reference to the Pharmacopœia. On this subject I can inform the Council that whilst progress has been continuous it necessarily has been slow, in consequence of the great care that is being bestowed upon the work. The pharmacopœia committee, since its appointment, has held several meetings—namely, three in July, 1895, two in November, and two in April, 1896. The subjects which have been brought under consideration have been those relating to the general construction, the omissions and the additions, the weights and measures, nomenclature, dosage, and the classification of the monographs into sections (ten) for revision purposes. Four such sections are in type, two of them having been revised, and two wait revision. This

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section contains many hundreds of monographs and comprises a large proportion of the work. The committee has already had occasion to invite the assistance of the pharmacological referees, Dr. Lauder Brunton, Dr. Ralph Stockman, and Dr. Walter Smith, and has received valuable information in answer to questions from the committee. The work is not yet sufficiently advanced for the committee to take advantage of the courtesy of the chemical and botanical referees, but as soon as the materials are ready the committee will gladly avail themselves of the services of Professor Thorpe, Professor Tilden, Professor Emerson Reynolds, Dr. Thiselton Dyer, and Mr. Holmes. The Pharmaceutical Society's Pharmacopœia Committee has been engaged more or less continuously in replying to the many questions of the Pharmacopœia Committee of the Council, and has already sent in three reports. The committee has decided to introduce the metric system of weights and measures side by side with the imperial throughout the general text and to employ the metric system alone in the paragraphs relating to analysis. Under present circumstances to forecast the period at which the new Pharmacopœia will be issued is impossible. In the meantime it has been found necessary to order 500 additional copies of the present issue.

"The Council has already been kept fully informed of the steps which have followed the communication to the Privy Council of the Council's refusal to appoint Assistant Examiners in Medicine to the Apothecaries' Hall, Dublin.

"Our legal advisers will report to the Council as to the action which has been taken by the Privy Council in the matter, and an application, which has already been presented by the Apothecaries' Hall in accordance with the suggestion of the Lords of the Council, will come on for early consideration.

"With regard to the important business which now lies before the Council, I may say that, having been just appointed to my present office, I cannot do more than refer to the various valuable reports which have been prepared by the various committees, and which will in due course be submitted to the Council.

"From the Examination Committee we may expect a codification of the Council's recommendations in regard to professional examination, prepared as a result of the recent visitation and inspection of these examinations; from the Education Committee a like report in regard to professional education, another on preliminary education, and possibly reports on minor matters; from the Public Health Committee the report on the Examination for the Diploma of Public Health of the University of Oxford, the last of the cycle of inspections, and a revised table of recommendations; from the Dental Education and Examination Committee a report on an alleged case of laxity in admitting an American dental graduate *sine curriculo* by one of the licensing bodies, remitted to that Committee for report at the last meeting of the Council, and a report by the committee, specially constituted for the purpose, on the so-called midwifery diplomas.

"The last of the dental licensing examinations has just been visited, but as the remarks of the bodies have not yet all been received—indeed there has not been sufficient time—the reports thereon by the Dental Education and Examination Committee will be presented in November."

Referring to the changes in the *personnel* of the Council, Sir RICHARD QUAIN said they missed from amongst them Dr. Kidd, who was always ready to help the Council with words of wisdom emphatically expressed, more especially with reference to educational matters, in which he took very great interest. His place in the Council would be occupied by Mr. William Thomson, who brought to them a very high reputation and special fitness for the duties which he would be called on to perform. They had also been deprived of a most valued member in Dr. Wilks by reason of his elevation to the Presidency of the Royal College of Physicians of London. His place had been filled by the appointment of Sir William Roberts, F.R.S., whose high and special attainments, great ability, sound judgment, and experience could not fail to bring valuable aid to the deliberations of the Council. At the last moment a further vacancy had been created by the resignation of Dr. Charles Moore in consequence of severe domestic sorrow. Dr. Moore's place had been filled by the appointment of Mr. Charles R. C. Tichborne, an eminent chemist and sanitarian, the Governor of the Hall. In conclusion he again thanked them for the distinguished honour which they had conferred upon him, for he regarded the holder of the office of President of the Council, chosen as he is by the representatives of all the educational and licensing authorities, by the representatives of the Crown, and by the direct representatives, as the representative of the medical profession in Great Britain and Ireland.

On the motion of Mr. WHEELHOUSE, seconded by Mr. BRYANT, the President was thanked for his address.

Business Committee.

This committee was constituted as follows—viz., Mr. Wheelhouse (chairman), Sir William Turner, Mr. Bryant, and Dr. William Moore.

Examination Results.

Mr. MILLER, clerk to the Council, presented a series of tables showing the results of professional, preliminary, and other examinations during 1895.

Medical Education and Examination.

Mr. TEALE moved:—

"That the present system of accumulated examinations and the enormous increase in the number of rejections resulting from it are not only unjust to the student, but damaging to medical education; therefore:—That the time has arrived when the General Medical Council should consider:—(*a*) How far examinations and occasions of rejection can be reduced in number; (*b*) how far, whilst maintaining effective examinations in those subjects which it is essential that every medical man should 'know' and 'retain the knowledge of,' it is possible to withdraw from the sphere of public examination several other subjects which it is desirable that every medical man should 'know about,' but with the details of which he need not permanently burden his mind, the 'bird's-eye survey' of such subjects being ensured by compulsory short courses of lectures, with class examination certified by the teacher."

[*We have printed Mr. Teale's eloquent and forcible speech at full length in another place* (p. 1547).]

Dr. PETTIGREW had much pleasure in seconding the motion. The importance of the subject could scarcely be exaggerated. It really raised the whole question of their medical education and examination. He thought the present system had broken down. From the number of rejections one of two things was evident—either that the education of the present day was imperfect or the mode of examination was too high or not adapted to the requirements. He thought the fault was in the system of examination and that they had proof thereof in the enormous number of rejections. He remembered his late master, some twenty years ago, saying to him that there was too much examination and too little education, and really, after all, it was education, and not examination, that made or marred a man. What mattered it to a man how often he had been examined. He was not made a better man thereby. Education should, therefore, be the beginning, middle, and ending in this country. It was the duty of this Medical Council to see that the medical education of the country was conducted on proper lines. It appeared to him that for many years they had been putting the cart before the horse in exalting the examinations and depressing the education. The result of this had been fatal in many ways. Time was when they had originality and power in the imparters of medical education. Now medical education was in the hands of teachers little better than coaches. It was the examination that was leading, not the education; this was bad. Examinations nowadays conduced to a system of cram that was to be deplored. Everyone knew that a smart student might get up sufficiently well in many subjects to pass examinations, but they knew also that he did not know any of them well. He was like a sponge: he took in and gave out, but there was nothing of a permanent character or of individuality about his acquirements. What they had to do was to get the student to understand the subjects he was taught. The present system destroyed the reasoning powers of the student, and when they had finished with him he was a poor creature. Generally he was not a man of thought or resource or a leader of men. They must get their students to think and reflect in order to make them capable. He therefore thought the time had come when the Council should turn over a new leaf. It might suit the convenience of those who were wedded to specialities to advocate the present system, but what he said was this, it was a wrong system and most unfair to the student, who had to pay the penalty as regards time, energy, and money. As to the time allowed for the medical studies of the present day it was notorious that the five years required by the Council were becoming inadequate. He agreed with every word that Mr. Teale had uttered, and he hoped the Council would make his proposal a rallying point, and from

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this day forth they would make a new departure that would be more fair to the student. He also hoped that the Council would give the subject the most careful consideration and deal with it in the most deliberate manner.

Sir WILLIAM TURNER said that the Council had been favoured with two academic essays—one read and the other spoken. Mr. Teale's reading what he had to say in support of his motion was introducing into the procedure of this Council something quite new. The Council had been accustomed to make speeches—good, bad, or indifferent—but they had not been accustomed to submit essays, and he thought that it was a mistake to make the innovation. But this motion proposed by Mr. Teale was itself a purely academical one. There was not one single practical suggestion in it. Mr. Teale had not even suggested a committee to consider it. He (Sir William Turner) was not in the least degree wishing to throw doubt on the importance of many of the matters that had been brought before them, but owing to the method in which they had been brought forward the Council obtained no practical standpoint for their consideration. The Council as a Council was incompetent to enter into such a discussion as they had been invited to. They had committees, their education and examination committees, and he submitted that the points raised were points which should be submitted to these committees. In conclusion, he submitted that the motion, being purely academical and not practical, there was no use in discussing it.

Dr. LEECH, after a pause, rose and declared that, although he agreed with much that Mr. Teale had said, he could not support the motion. As to the relegation of examinations to the various colleges he could not see that it would be of any service. He should not like to see it carried out because he thought that it would not strengthen education, but would do it harm.

Mr. BRUDENELL CARTER was of opinion that many of the evils complained of would rather tend to remedy themselves in course of time. The great extension of medical teaching and examination in recent years had, he thought, tended to the employment of a larger number of teachers and examiners than were really qualified for what they had to do. The deficiency in the examiners was nowhere more noticeable than in the written questions which were put before candidates. When they got questions written in clear good English they should get candidates who would answer them better. As he could not help thinking they were at the present time in a transition stage he should deprecate any relaxation of the standards that it was the Council's duty to enforce.

Dr. GLOVER said he should be very sorry if the Council came to the conclusion that Mr. Teale had spent an hour too much in the preparation of his statement or a minute too long in its delivery. No man had taken more interest in this subject than Mr. Teale had done, and he should be sorry indeed if the Council dismissed the motion without further consideration. He should suggest that it should be referred to the Examination Committee for consideration and report. It was the Council's business to make education so nearly perfect that the examiners should have less to do, while the proportion of rejections should be far less than it was at the present time. It might not now be a disgrace to be rejected, but rejection all the same was a disaster to a man. Dr. Leech had pointed out that the Preliminary Examination in Arts had not advanced or developed *pari passu* with medical subjects, and he (Dr. Glover) believed that if the Council could make the entrance examinations such as would test men sufficiently they would do the profession and the public much benefit.

Dr. MCVAIL thought that the climax of Mr. Teale's speech came at the end, but in face of the reflection about what medical men of other days would say of medical education in these days it might be an equally fitting subject of speculation to wonder what Stephenson would say if he could look upon the modern locomotive. For his part he was altogether on the side of the moderns in the matter of medical education and examinations. This Council was a council of medical education, but how could it educate except by examining? In his opinion it could only be a council of education by examination. Progress had been made in medical science and education since 1861, and were the public not to get the benefit of it? It was absurd to suppose that the present day requirements could be as easily met as were the requirements of 1861, and they should continue to lay it down that a man must be rejected until he knew the prescribed subject. It was always certainly a serious matter for a student to be rejected, but he thought they had proof in the reports of their inspectors and visitors that the questions at examination were not only fair and suitable, but creditable to those who were responsible for them. It was interesting to hear Mr. Teale. He was to-day a voice from the past, but if this Council gave such an expression of opinion as Mr. Teale hinted at and Dr. Glover demanded they would be doing nothing less than saying that they were to go back in civilisation for half a century.

Mr. WHEELHOUSE wished to call attention to one point which had been made by both inspector and visitor, and that was that so far as this matter of examination was concerned if the Council could devise a means of subdivision of subjects by which a decrease of examinations could be secured, a great deal would be effected. As a visitor himself, he for one had to regret that the examinations had been divided and subdivided until a man lost himself in the multiplicity and did not know whether he was really through when he came to what he thought was the end of the examinations.

Dr. BRUCE regarded the subject of examinations as a very practical one, and on this occasion it had been introduced to the Council by a man than whom there was none in the Council more practical. The Council should see to it that they had a system which would secure the passing of the men best fitted for the profession.

The PRESIDENT thought there was no time remaining for further discussion. There was no doubt that the motion was a declaratory one, and the Council should decide what they should do with it.

Sir WM. TURNER thought that in view of the large amount of business the Council had to dispose of this session, it would be better to proceed to a vote.

Dr. MACALISTER, who was not at all satisfied that there was justification for the presence in the motion of such terms as "enormous increase," "unjust to the student," "damaging to medical education," moved as an amendment, "That the Council, without committing itself in any way to the views expressed in the motion, refer it to the Examination Committee for consideration and report."

Dr. BATTY TUKE formally seconded the amendment.

Mr. TEALE asked if Dr. Pettigrew would accept the amendment.

Dr. PETTIGREW thought it would not be quite fair to dispose of the matter in the rapid manner contemplated. He thought they should adjourn the discussion.

Mr. TEALE, who was willing the matter should go to a vote, briefly replied. He said he felt that he was raising a very, very serious matter, and he had not taken action without much consideration. As to the motion being an academical one, of necessity it must be academical, because it was raising questions that had grown up and were growing. He was not the voice of the past, but rather the voice of the future, for they would find that these questions would continue to grow.

The amendment, having been accepted by the mover and seconder of the motion, was agreed to, and on being put to the Council as a substantive motion was carried.

The Council adjourned.

WEDNESDAY, JUNE 3RD.

The Council met again to-day, with Sir RICHARD QUAIN in the chair.

The Apothecaries' Hall of Ireland.

The entire sitting was devoted to a consideration of the affairs of the Apothecaries' Hall of Ireland and an application by that body for the appointment of examiners in medicine and surgery. The subject was introduced by Mr. MILLER, Clerk to the Council, reading a report of the proceedings in the recent appeal to the Privy Council prepared by Mr. Farrer, the Council's solicitor, and the following application from the Apothecaries' Hall—viz.:—

"Apothecaries' Hall of Ireland,
"40, Mary-street, Dublin,
"May 25th, 1896.

"SIR,—As you are doubtless aware, the question of appointing Assistant Examiners in Surgery for the Examinations of the Apothecaries' Hall of Ireland came before the Privy Council on Monday, 11th inst.

"Towards the close of the argument their Lordships made a suggestion that the Hall should again approach the General Council with a view to the appointment of Examiners not only in Surgery but in Medicine, and should so place themselves in the hands of the General Council to such an extent as would enable that body to be satisfied that

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the examinations would be for the future a complete and sufficient test for the purposes of the Act of 1886.

"Their Lordships further intimated that in their opinion the proper course would be for the Hall to submit names of proposed Examiners in Medicine for the General Council to approve, and directed the case to stand over to see whether this would be done. The Hall are now prepared to act on this suggestion. They venture respectfully to assure the General Council that their desire is by every means in their power to raise to and maintain at a high level the sufficiency of their Examinations, and they will coöperate with the General Council in taking any steps which are requisite towards that end.

"So far as Medicine is concerned they suggest for consideration the following gentlemen:—

"James Byrne Coleman, M.B, Master in Surgery, Examiner in Medicine, Royal University, Ireland, Physician to Jervis-street Hospital.

"E. B. Townsend, M.B., T.C.D., Professor of Medicine to Queen's College, Cork, Physician to Cork Infirmary.

"*Or*,

"H. Auchinleck, M.D., F.C.S.I., Physician to Mercer's Hospital, Dublin.

"If the Medical Council should prefer to substitute any Examiners in Medicine for those above named, the Apothecaries' Hall of Ireland will be pleased to defer to the wishes of the Council in that respect.

"I have further to ask that the Council will be so good as to appoint the following gentlemen as Assistant Examiners in Surgery:—

"Francis T. Heuston, M.D., R.U.I., F.R.C.S.I., and M.C.R.S.I., Surgeon to the Adelaide Hospital.

"F. Conway Dwyer, M.B., Bac. Surg., T.C.D., Surgeon to Jervis-street Hospital.

"I have not given the names of the examiners whom the Hall will appoint in other subjects, as I do not understand that this is required. Our representative at the Medical Council is, however, furnished with a list of our examiners, and will, if necessary, be prepared to submit them for approval in the same way that I now submit the names of the Examiners in Medicine and Surgery.

"The Apothecaries' Hall of Ireland believe that if the Medical Council will appoint Assistant Examiners in Surgery and Medicine, such examiners will, with the examiners to be appointed by the Hall, constitute an Examining Board who will maintain a standard of efficiency satisfactory to the Medical Council.

"The Apothecaries' Hall have refrained from submitting the names of examiners in other subjects, as they feel that the Medical Council would prefer to be relieved of the responsibility of themselves appointing examiners in any subject in which the Hall are competent to examine without the assistance of the Medical Council. At the same time, if there are any suggestions which the Medical Council think right to make with reference to the examiners to be appointed by the Hall or the examination generally, the Apothecaries' Hall of Ireland will be prepared to adopt them, and have given instructions to their representative on the Council to that effect.

"I am, Sir, your most obedient servant,

"CH. R. C. TICHBORNE, Governor.

"To the President of the General Medical Council."

Mr. TICHBORNE, the new representative of the Apothecaries' Hall, then addressed the Council. He explained that he had drafted the following motion:—

(*a*) "That the application contained in the memorial of May 25th, presented by the Apothecaries' Hall of Ireland to the Medical Council, that the Council should appoint Assistant Examiners in Medicine and Surgery, be agreed to.

(*b*) "That the names of the proposed Examiners in Medicine and Surgery respectively be approved.

(*c*) "Or, if the Council think fit, that any other examiners be appointed in those subjects."

And he proposed now to move the first portion of it. He would not go into the details of the question because they were familiar to the members of the Council. It was stated that the Apothecaries' Hall of Ireland was the oldest examining body in the United Kingdom. He did not say that, but it had been stated by those who had investigated the matter. All he said was that the Hall was a very old corporation and that during the whole period of its existence there was no record of an apothecary having misconducted himself in a professional respect. Besides that they found that they had had connected with them many very eminent men. In fact, the history of chemistry in Ireland was the history of the Apothecaries' Hall. It might be said that that had nothing to do with the question, but that was not his opinion, because they did not find that men held a very distinguished position in their profession, unless their early training had been such as to make them familiar with the subject in which they had particularly excelled. It was an indication that there was sound practical education. He need hardly say that the Hall was very anxious and had done its best to keep up that sound practical education. When the first report appeared containing adverse criticism as to the conducting of the examinations Mr. Chance and himself carefully considered the scheme of the examinations and revised it. They endeavoured to carry out every direction of the Council, and in many cases they went even further than the Council asked them. The scheme was approved by the visitors and inspectors, who in the reports referred to it in the most complimentary manner; therefore, at any rate, their intentions were good. The one weak point, according to the reports, was the examination in medicine, and he thought that logically they had met it. They said: Very well, they were quite ready to be relieved of the responsibility. If the Council would appoint the examiners in medicine they were perfectly agreeable; in fact, they never practically appointed their own men. The men they appointed and who were objected to as regards their examination were appointed, not because they were apothecaries, but because they were clinical physicians holding the highest positions in the hospitals of Dublin. He believed that the function of the Council was to consider the remuneration of the proposed examiners, and they left that entirely in the hands of the Council.

Sir JOHN BANKS in seconding the motion said that he had the most thorough reliance upon the Apothecaries' Hall carrying out what they proposed. He believed that they would raise the standard of education and that they would maintain it. In addition to that he would say that the examiners proposed were all known to him as men of the highest character and he was satisfied that they would do everything in their power to meet all the requirements of the General Medical Council.

Sir PHILIP SMYLY called attention to certain statements made by Sir Robert Reid in the course of the hearing of the appeal before the Privy Council, and complained of their not being justified by the facts. The Royal College of Surgeons in Ireland had never had any voice in the election of examiners in medicine, and they were not therefore responsible in any way for the conduct of the medical part of the examination. These appointments were made solely by the Apothecaries' Hall, who were alone responsible for them. He would ask the Council to remember that by a rule of this body the examiners in medicine of the Apothecaries' Hall must be medical officers of a clinical hospital. That handicapped the Apothecaries' Hall, because they had to take physicians who were hospital physicians. They had no such men in their own body, and they had consequently to go outside. They appointed the best men they could get, and yet after each course of examinations they were remonstrated with because the examination was not sufficient. For this reason, and for this reason alone, the Royal College of Surgeons in Ireland separated from the Apothecaries' Hall. He hoped the Council would consider the matter very carefully, and not wipe out an ancient institution without proper inquiry and investigation.

Mr. BRYANT said he approached this subject with a very great feeling of responsibility. They must all feel that the result of their deliberations would have an important influence not only upon the Apothecaries' Hall as an examining body but upon the power and prestige of the Council. Hitherto the decisions of the Council had received the support of the courts, but here for the moment they had got a little check and they were asked to reconsider an important decision they had arrived at at the last meeting. He asked his colleagues whether anything had been said or done since the meeting which should induce them to alter their decision. When they came to the decision they knew what they were doing. They knew that this examining body had failed on repeated occasions to conduct a satisfactory examination and they knew that the effect of their decision might be to put an end to the Apothecaries' Hall as an examining body. That fact was prominently in their minds at the time. As to the Privy Council, it was evident that they desired to get out of a rather disagreeable and difficult position. He did not think that the Privy Council wished them to be frightened or scared out of their decision. The Council was perfectly free. No pressure had been put upon it; and he hoped that the Council would consider it right to stick to the conclusion at which they had arrived after long discussion and deliberation. If they did not they would seriously jeopardise their own position and would be regarded as incompetent for the discharge of the duties imposed upon them.

Mr. WHEELHOUSE, who was one of the Visitors to the examination of the Hall, said he was surprised to hear Mr. Tichborne speak of the good men who had been connected with the Hall. What atom of educational power did the Hall possess? They had no hospitals, no schools, and no means of teaching surgery, medicine, or midwifery; they had no means of doing anything except examining those persons who had been educated by other people. Therefore if the great men connected with the Hall were of any moment at all it was because they had been thoroughly well educated in other places and not in the Apothecaries' Hall of Ireland. In his visit he had seen the earnest and steady desire to improve the examination on the part of the governing body. He had seen an increasing

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improvement in the examinations themselves, but he still believed that until the examinations were put upon a higher level than any which he saw they did not reach the level that was reached by almost all, if not all, the other examining bodies in the country.

Mr. TEALE asked Mr. Muir Mackenzie whether, supposing on the passing of the Medical Act of 1886 the Apothecaries' Hall, unable then to join with any other body, had asked the General Medical Council to complete their position by appointing examiners in surgery, the Council would have had the power to refuse the application.

Mr. MUIR MACKENZIE replied that in a certain sense the Council would have had the power to refuse, but refusal in such cases could not be regarded as *bonâ-fide*. In reply to another question Mr. Muir Mackenzie said that the Privy Council had expressed no opinion on the application but simply adjourned its consideration.

Dr. GLOVER said he was one of the minority on the last occasion. He did not believe there was any serious difference between the Privy Council and the General Medical Council and he hoped members would not be led away by any feeling that they were in collision with the Privy Council. He believed that they were in entire concurrence with the Privy Council, the only anxiety of their lordships was that medical matters of this nature should continue to be settled as they had been for the last quarter of a century—by the Council and by the Council alone. He thought that it was unfortunate that the Examination Committee should have suggested that the Royal College of Surgeons in Ireland should separate from the Apothecaries' Hall; such a suggestion was entirely *ultra vires* and had no sanction from the Council.

Sir DYCE DUCKWORTH asked whether the Council did not accept the report of the Examining Committee containing the suggestion and thereby become responsible for it.

Dr. GLOVER said he should be glad to have this most important matter settled.

At the end of a long informal conversation on the point it was announced by Sir William Turner that while the Council dealt with certain specific recommendations in the report they did not formally approve the report.

Dr. GLOVER said he was glad this had been made clear, for the misapprehension had had considerable effect upon the Privy Council. The proposed examiners, he went on to say, would be virtually the examiners of the Council and would conform to their regulations, and in the circumstances he thought the Council would be justified in giving the Apothecaries' Hall another chance.

Mr. WILLIAM THOMSON, the new direct representative for Ireland, said he had given the matter most careful consideration, and had come to the conclusion that in the interests of the public and the profession the application should not be granted.

Sir DYCE DUCKWORTH said that as chairman of the Examination Committee he was fully acquainted with this Irish case, and the story of the Apothecaries' Hall of Ireland was a very old story, for it was a body whose examinations had been declared inadequate twenty years ago. They were asked in the application before the Council to set upon its legs again a body that was certainly crazy. It had been an argument in favour of it that its licentiates served the poorest of the people in Ireland, but on inquiry he found that the poorest class in the country were well provided with medical advice by gentlemen holding the diploma of the Conjoint Board or the triple qualification of Scotland rather than by licentiates of the Apothecaries' Hall. The special necessity for supporting this body therefore disappeared. They had heard a most admirable speech from Mr. Thomson, and if what he said fairly represented the opinion of the profession in Ireland he should like to know what would be the opinion of the profession throughout the kingdom and whether this committee were to sit and consider and endeavour to infuse a new life into this crazy, crumbling body. It must be remembered that the Apothecaries' Hall of Ireland was a body that during the last four years the General Medical Council had condemned utterly. His belief was that the Hall had lived its day and done its work and that the Council ought not in any way to relieve the Privy Council from doing its duty respecting it. He agreed with Mr. Bryant that nothing had occurred in the last six months to alter the opinion they formed last year. There was no occasion for them to do anything. They were not asked by the Privy Council to do anything. The Hall, however, came and said, "Give us examiners." They were asked to prop up this body, which was not worthy on any grounds whatever. They would not be doing their duty to the profession and the public if, for no reason whatever, they should go back upon their former decision and do the dirty work of the Privy Council. Let them show that they were men, not children, that they had the courage of their opinions, and that they would do their plain duty without fear and without favour.

Sir WALTER FOSTER pointed out that for the first time in its history the General Medical Council was face to face in a difficulty with the Privy Council. The point at which they had arrived was one that might lead them into a position which would be one of humiliation and, possibly, of considerable difficulty with reference to all such questions in the future. For himself, he was grateful to the Privy Council for the course they had adopted. In dealing with the case as they had done they had behaved with great discrimination. The Apothecaries' Hall, it must be remembered, was a body which had been recognised by two Acts of Parliament, and placed side by side with all the other licensing bodies in the United Kingdom. While it might have continued an independent existence it had instead followed the direction of the Act of 1886 in seeking combination with the Royal College of Surgeons. For its very virture in so doing were the General Medical Council to say that they would not do for it what they did in 1886? He thought that would be an ungenerous and unjust position to take. It was one he could not vote for, for it would be the suppression by a side issue of one of the licensing bodies maintained by the Act of 1886. If they refused the application that was now before them the case would go back to the Privy Council, and that Council might appoint the examiners asked for. If they did, that would place the General Medical Council in a very unfortunate position, for the examination of the Apothecaries' Hall would be established as a State examination, with all the advantages that the sanction of Royal authority could give it. Moreover, the General Medical Council would have from time to time to report to Parliament how the State was doing its duty as an examining body. They would have the Apothecaries' Hall competing in Dublin with the other bodies, and that he thought would be very undesirable in the interests of the profession. It was unfortunate that they should not have the three licensing bodies in that city forming a joint board. An opportunity to secure combination existed in present circumstances, and before they went back to the Privy Council the General Medical Council ought to try and bring their friends in Dublin together. Rather than give a vote in direct negative of the application, he hoped the Council would find its way out of the difficulty by the adoption of a course that would lead to the creation of a strong combined examining board in Dublin.

Dr. THORNE THORNE was convinced that there was never any want of sympathy with the Apothecaries' Hall of Ireland. The General Medical Council had been very long-suffering with it. Yet the Hall was in the position of being the only body in the United Kingdom that had been reported for inefficiency. That was a very great stigma on its reputation. The decision to refuse appointment of examiners had been very deliberately arrived at, and since it was come to nothing new had emerged. Even the suggestion to appoint examiners in medicine as well as surgery was old and had been deliberately rejected. His impression of the Privy Council's decision was that they did not want in the slightest degree to interfere with the General Medical Council's decision or discretion in the matter, and he believed that if the Council said that they could not change their minds the Privy Council would be absolutely and fully satisfied with what they said. He believed that the Privy Council left the Council's discretion intact. It had been said during the case that one could not help feeling that the General Medical Council were much better judges in this matter than the Privy Council. There was not a suspicion or a hint that the General Medical Council had failed to do their duty. Everything that he had heard had convinced him that the Council were right, and with the testimony of the Privy Council that they had done their duty he saw no reason why the Council should change their opinion.

Professor GAIRDNER did not think the Apothecaries' Hall were justified in asking for examiners in medicine—the subject for which they themselves were responsible. He was

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against giving them such a prop. It was not in accordance with the spirit of the Act that they should get it. As a matter of fact it would be flying in the face of the Act if the Council were to appoint examiners to supplement deficiency in the subject for which they were legally responsible. He thought that they should tell the Privy Council that it was not within their duty to prop up weak bodies.

Dr. MCVAIL'S view was that the Council was not limited to the appointment of examiners where an independent body could not form a combination with another such body. The Act provided that such examiners should be provided as would make examinations efficient. It might be right that the Hall should cease to be a licensing body, but they should not try to drop it by refusing the present application. Rather let them go to the Government for an Act to get rid of it. He should vote for the motion.

Dr. MACALISTER said that as the Apothecaries' Hall took action under Clause 19 of the Act, they charged the Council with having failed to discharge their duty. But the duty of the Council was to maintain the standard of the examination, and he could not see how that could be done by making appointments on the nomination of the doubtful body. If they were to appoint as desired they would be selecting men who would not only be examiners, but would be inspectors and visitors at the same time, an arrangement that on the face of it was impossible. He thought their answer to the Privy Council must be that they had given that Council's suggestion most careful consideration, but that as its adoption would not enable them to maintain their statutory duty they could not accede to it. If they gave such an answer he thought the Privy Council would have the answer they desired.

Dr. HERON WATSON thought it would be only fair to the Apothecaries' Hall to give their application every consideration. Some of the members of the Privy Council had apparently thought more consideration was necessary.

When Dr. Heron Watson resumed his seat a motion was made for the suspension of the Standing Orders, so as to enable the Council to sit beyond the usual hour of adjournment with the object of finishing the subject under discussion; and in securing assent to it the President mentioned that if the matter was not disposed of to-day it could not be resumed on Thursday, as consideration of penal cases was to proceed on that day.

Sir WILLIAM TURNER would have been pleased if the representative of the Royal College of Surgeons in Ireland could have given the Council some hint that would lead them out of the difficulty they were in. His belief was that it was quite within the power of that College to so reconsider the whole situation that the Conjoint Board for Ireland could be put on a basis which would prove satisfactory. During its brief existence the Conjoint Board had not been on a satisfactory basis, and he thought that that had led to all the difficulties they had had to contend with in this Irish case. It was the opinion that the College had only to look after the matter of surgery and the Apothecaries' Hall that of medicine. That seemed to him to be an absolutely erroneous principle to regulate the functions of the Conjoint Board. What he held was that the partners were equally responsible for efficiency in both subjects. Even at this late stage he had to appeal to Sir Philip Smyly whether it was not possible to arrive at an adjustment on their own side of the Channel. Why should they come to the General Medical Council to have the differences between the bodies adjusted? Or why should they go to the Privy Council? They might with a little sweet reasonableness adjust their differences within their own halls. It would be a very judicious thing if they were to take this matter into consideration, for he must confess that he did not like the position of having to vote for the motion that was before the Council. Yet if he voted against it and it was lost the matter would go back to the Privy Council. He liked that even less, for he should not care to see the Privy Council stepping in and appointing the Examiners in Medicine and Surgery that the Apothecaries' Hall were applying for. It was quite within the bounds of probability that, if the General Medical Council refused, the Privy Council, although knowing nothing about the matter, would appoint. He found that the Privy Council attached great importance to the largeness of the minority on the last vote, and if the minority continued as large was there not the likelihood that they would not hesitate to appoint? Of course, a board appointed by the Privy Council would loom into such importance that the Boards of the Royal Colleges of Physicians and Surgeons would sink into insignificance, and therefore it was a most important question for these bodies whether their action should lead to the creation in Dublin of an examining board with State sanction. As there was no other proposal before the Council if he had to vote he should vote in favour of the motion, little as he liked it.

Mr. BRUDENELL CARTER, as the representative of the Society of Apothecaries of London—the only analogous body represented on the Council—pointed out that it was the opinion of his society that if the Dublin application were refused it would weaken their position. That being so, he had a divided duty on this subject, for if he were influenced solely by what he considered to be the good of the public, he should vote against the motion.

The PRESIDENT thought there was something worthy of consideration in Sir William Turner's suggestion. He should be sorry indeed if the General Medical Council got into difficulty with the Privy Council.

Sir WILLIAM TURNER thought he might venture to propose an amendment to the motion. He moved: "That the Council defers for the present any expression of opinion on the application of the Apothecaries' Hall of Ireland for the appointment of assistant examiners in medicine and surgery, and directs communications to be made to the Apothecaries' Hall of Ireland and the Royal College of Surgeons of Ireland with a view to the reconsideration of their respective positions, so that such a combination may be effected between them as may ensure that an efficient standard of examination will be maintained by the Conjoint Board of Examiners as would be satisfactory to the Medical Council."

This proposal was seconded by Mr. TEALE.

Mr. TICHBORNE asked whether, if the two bodies were to combine, the Medical Council would appoint the examiners.

Sir WILLIAM TURNER replied in the negative. The existing combination between the Irish Surgeons and Apothecaries' Hall would not be at an end for six years, for it would continue in existence for the sake of those who had entered for its diploma previous to the separation in June last. What he would like to see was the strengthening of the combination in such a way as to bring out a mutual sense of responsibility. He thought the Privy Council would be willing to wait to see what might come out of the reconsideration he suggested.

Sir PHILIP SMYLY said the Royal College of Surgeons had given him no instructions on the matter involved in Sir William Turner's suggestion, but from what he knew—and speaking in presence of the President of his College—he could not help feeling that the College separated from the Hall because the former were held responsible when they had no voice whatever as regards medicine. The College would not, he thought, open this question again unless they were to get a very important part in connexion with the appointment of examiners.

Sir WILLIAM TURNER: That is a matter of arrangement between the two bodies.

Dr. MCVAIL suggested that Mr. Tichborne should withdraw his motion in favour of Sir William Turner's proposal.

This suggestion was assented to, and the President was proceeding to put Sir William Turner's proposal to the vote when

Dr. MACALISTER said that he wished to discuss the motion as involving not only the rehabilitation of the Apothecaries' Hall, but a new departure for the Council to make in intervening between two independent licensing bodies.

Dr. LOMBE ATTHILL thought the Council ought to adjourn. The usual hour of sitting had been exceeded, and if they went on discussing the case they might have an all-night sitting.

Dr. MACALISTER moved the adjournment.

Dr. BATTY TUKE seconded.

The Council divided, when there voted for the adjournment 17; against, 10.

The Council accordingly adjourned.

THURSDAY, JUNE 4TH.

The Council met again to-day, Sir RICHARD QUAIN presiding. The first thing done was to pass a new standing order to regulate the procedure in penal cases where a decision is postponed, and, that matter settled, the Council proceeded to adjudicate upon the charges of professional misconduct in the programme of business. Our report of what was done will appear next week.

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Medical News.

UNIVERSITY OF LONDON.—The following candidates have passed the M.B. Pass Examination, May, 1896:—

FIRST DIVISION.

Briggs, John Arthur Oswald, St. Bartholomew's Hospital.
Genge, George Gilbert, St. Thomas's Hospital.
Heath, Arthur, St. Bartholomew's Hospital.
Legg, Thomas Percy, St. Bartholomew's Hospital.
Leicester, John Cyril Holdich, B.Sc., University College.
Waldron, Francis Thomas, London Hospital.
Wells, Thomas Henry, Middlesex Hospital.

SECOND DIVISION.

Clough, James Arthur, Leeds Medical School.
Davies, John Edgar Philip, B.Sc., St. Mary's Hospital.
Ducat, Arthur David, St. Bartholomew's Hospital.
Ganner Joseph, Mason College.
Gerrard, Alfred Henry, University College.
Griffiths, John Alban Kendall, University College.
Gullan, Archibald Gordon, University College, Liverpool.
Hibbert, Joseph Coote, University College.
Hugo, James Henry, St. Bartholomew's Hospital.
Instone, Noel, Guy's Hospital.
Johnston, Robert Macfie, University College.
Leon, John Temple, B.Sc., St. Mary's Hospital.
Le Pelley, Amelia Maitland, London School of Medicine for Women.
Lyle, Herbert Willoughby, King's College.
Mackenzie, Rachel Elizabeth W., London School of Medicine for Women.
Maughan, James, Royal Infirmary, Liverpool, and University College, London.
Murray, John Hanna, University College.
Nolan, Harold, Guy's Hospital.
Rait, John Walter Forbes, University College.
Skey, Arthur Richard Harrie, St. Bartholomew's Hospital.
Smith, Graham Udale, King's College Hospital.
Stevenson, Thomas Henry Craig, University College.
Thomas, Evan, University College.
Townend, Richard Hamilton, London Hospital.
Warde, Wilfrid Brougham, St. Bartholomew's Hospital.
Wilson, Francis Kenneth, Westminster Hospital.
Wise, Harry Mortimer, Guy's Hospital.

AN Exhibition of Manufactures, Appliances, nd Inventions for the Saving of Life is to be held at the entral Hall, Holborn, from July 9th to 18th next in aid of ıe Guy's Hospital Fund. Demonstrations by members of ıe St. John Ambulance and the Life-saving Society will be iven and many other attractions will be offered.

LITERARY INTELLIGENCE.—The following are mong the new works announced as nearly ready by Messrs. . & A. Churchill:—"On the Pathology of the Contracted ranular Kidney and the Associated Cardio-Arterial hanges," by Sir George Johnson, M.D., F.R.S, with venty-nine illustrations. "On Gallstones or Cholelithiasis," y Dr. E. M. Brockbank. "A Contribution to the History ! the Respiration of Man," being the Croonian Lectures ır 1895, by Dr. William Marcet, F.R.S., illustrated with agrams (in preparation).

ROYAL MEDICAL BENEVOLENT COLLEGE.—The llowing is a list of the successful candidates at the election ıld on May 29th:—Pensioners: Rhoda H. Bishop (Pugh ınsioner), 9727; Robert Whitby, 4430; Richard D. Larke,)15; Margaret T. Mackenzie, 2421; William Downes, 2396; aroline F. Dain, 2244. Foundation Scholars: Frederick O. eese, 7750; Frank C. Anderson, 6711; Frank S. Cannell, 646; Maurice B. Tribe, 6350; Albert Winter, 5879; Guy . S. Taylor, 5313; T. S. B. F. de Chaumont, 4713; Walter . V. Scott, 4599; Robert H. Hilliard, 4522.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—t a meeting of the Fellows held on Monday, June 1st, for .e election of President, Vice-President, Secretary, and ɔuncil of the College for the ensuing year, the following ɛntlemen were elected:—President: W. M. Thomson, .R.C.S. Vice-President: Kendal Franks, F.R.C.S. Secretary: Sir Charles A. Cameron, F.R.C.S. Council: rchibald H. Jacob, F.R.C.S., Edward Hallaran Bennett, .R.C.S., Henry Gray Croly, F.R.C.S., Sir Philip Crampton nyly, F.R.C.S., Robert Lafayette Swan, F.R.C.S., Sir Wm. okes, F.R.C.S., Henry Rosborough Swanzy, F.R.C.S., Sir ıornley Stoker, F.R.C.S., William Ireland Wheeler, .R.C.S., Austin Meldon, F.R.C.S., D.L., Wm. Carte, .R.C.S., Sir Charles A. Cameron, F.R.C.S., Frederick lcock Nixon, F.R.C.S., Richard D. Purefoy, F.R.C.S., harles Bent Ball, F.R.C.S., Henry Fitzgibbon, F.R.C.S., rthur Henry Benson, F.R.C.S., Francis T. Heuston, .R.C.S., and John Lentaigne, F.R.C.S.

AT the annual general meeting held on Friday, the 29th ult., Sir Arthur Watson, Bart., Q.C., and the Right Hon. A. J. Balfour, M.P., were elected Vice-Presidents of the Royal Medical Benevolent College.

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—An ordinary meeting was held on May 15th at King's College, Professor Thane being in the chair. Mr. Keith showed specimens from subjects preserved in formaldehyde which gave rise to a discussion in which the general opinion was that while this substance was very useful for the viscera, it rendered the muscles brittle and easily destroyed. Mr. Keith also demonstrated the relation of the spinal accessory nerve to the jugular vein and transverse process of the atlas, and read a note on the ligamentous bands lying over the infraspinatus muscle. Mr. Hertslet showed two specimens of Rudimentary Ribs on the seventh and eighth vertebræ respectively. Dr. L. Freyberger showed a specimen of Congenital Malformation of the Heart and Thoracic Veins. Professor Wardrop Griffith showed a specimen of Diverticulum of the Larynx and of Fusion of the Occipital Bone with the Atlas. Professor Symington read a paper on the Anatomy of Genu Valgum Adolescentium, and gave a demonstration of sections of the brain of the Echidna. Professor Sherrington gave a lantern demonstration of the Skin Areas supplied by the various Spinal Nerves in Macacus Rhesus. Professor Paterson read a paper on the Cutaneous and Muscular Supply of the Spinal Nerves in Man.

MEDICAL MEN AND FRIENDLY SOCIETIES.—The delegates of the Oddfellows Friendly Society held their annual conference in Bristol last week. At the meeting on May 28th Mr. C. S. Reyworth of Lincoln proposed: "That the Parliamentary agent be instructed to use his best endeavours to obtain a clause in the Friendly Societies Act enabling medical men to take positions as doctors of friendly societies' medical associations without let or hindrance." A long debate followed, and it was alleged that medical men were now starting rival associations and canvassing for members. A delegate, Mr. P. G. Walton, said that in these days they heard a great deal about combination of labour. Were not medical men quite as much justified as any other body of men in combining? Was there any law which would allow trades unions to join together to obtain a certain rate of wages and to deny that right to other classes? It became a fight between themselves and the medical men as to which would obtain the victory. He agreed with a previous speaker that the law of supply and demand would settle the matter. The whole question had been before the Friendly Societies' Conference and a resolution had been passed "that the committee of this conference be requested to consider the present action of the medical profession towards medical societies." The resolution was rejected by 235 to 195, a majority of 40.

DIPHTHERIA IN LONDON.—The prevalence of diphtheria in London during the four weeks ended May 16th was greater than in the four weeks ended April 18th by over 100 notifications. The number in the later period was 890, yielding a weekly average of 222 cases, against an average of 196 in the April period. The deaths were, however, lower—namely, 161 against 183, and the per case mortality was 18·1 as compared with 23·3 per cent. There were four sanitary districts with 50 notifications and upwards, totalling to 283 in all, as compared with three districts totalling to 197; while in the earlier period all save one of the sanitary areas were invaded. The several four-weekly periods up to May 16th have witnessed notifications as follows: 988, 1054, 1009, 785, and 890, and the period in 1895 corresponding to the latter saw 946 notifications. In the week ended May 23rd the deaths from diphtheria in London were as many as 56, as compared with 36, 41, and 43 in the three preceding weeks, and were, moreover, 26 in excess of the corrected average for the twenty-first week of the ten years 1886–95. Last week the deaths fell to 40, but they were still 10 above the average for the corresponding week of the decennium. In the two weeks there occurred 15 deaths in Islington and 13 in Camberwell. Of the total 96 deaths, 89 were of persons aged between one and twenty years. Last week 75 admissions to hospital were notified, against 101, 104, and 99; and on Saturday last there remained under treatment 704 patients. In the fortnight there occurred in Greater London 22 deaths from the disease, and 7 of these belonged to Plaistow registration sub-district.

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PRESENTATION TO A MEDICAL PRACTITIONER.—Dr. Henry C. Moore, of Dandenong, Victoria, Australia, where he had practised for upwards of sixteen years, on his leaving was the recipient from the residents of the district of a handsome illuminated address and a purse of sovereigns.

A COMPLIMENT TO A MEDICAL PRACTITIONER.—Mr. Joseph H. Wilson, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., of Warren, New South Wales, was entertained in the Shakespeare Hall by a numerous company of the inhabitants, the Mayor of Warren presiding, at a complimentary evening entertainment prior to his departure for Europe for some time, with the view, however, of returning to permanently reside at Warren.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Public Health (Scotland) Bill.

IT is understood that when the Public Health (Scotland) Bill has been read a second time it will be referred to a Grand Committee mainly composed of Scottish members. If this course be adopted the proceedings, unlike those of the committee of the House of Lords which dealt with the Bill, will be conducted in public.

Poor-law Officers' Superannuation Bill.

When this Bill comes up for consideration on report clauses will be moved extending the scope of the measure to Ireland and providing a system of superannuation for nurses and attendants on the sick in the employment of Poor-law guardians.

Cycling Mishap to a Minister.

Mr. Ritchie, President of the Board of Trade, returned from the Whitsun holidays with a sprained ankle which he got while cycling in the country. He was only able to walk into the House with the aid of two stout sticks, and when the Light Railways Bill, which is under his charge, came on and divisions were frequent the Speaker made a dispensation in his favour and allowed him to record his vote at the table instead of going to the division lobby each time.

HOUSE OF COMMONS.

MONDAY, JUNE 1ST.

The Snowdon Railway Accident.

In reply to a question Mr. Ritchie, President of the Board of Trade, stated that the engineers were of opinion that the accident on the Snowdon Railway was caused by the locomotive mounting the rack, probably in consequence of a subsidence of the permanent way due to the melting of snow in a cutting. As the line was not constructed under any statutory authoritery the provisions of the Railway Acts as to inspection did not apply, and the Board of Trade had no power in the matter. On the recommendation of the company's engineers no passenger traffic had been carried since the date of the accident, and none would be carried pending the adoption of certain additional precautions suggested by the engineer to prevent the engine mounting the rack.

TUESDAY, JUNE 2ND.

Diseases of Animals Bill.

A large part of this day was devoted by the House of Commons to the consideration in Committee of the Bill of the Government to make statutory the present regulations prohibiting the importation of live cattle from abroad, and while a great number of amendments were proposed not one of them was carried, and the measure consequently proceeds to the third reading stage in exactly the same form as it was introduced.

Mr. Sydney Buxton, Under-Secretary for the Colonies in the late Administration, put forward an amendment enabling the Board of Agriculture to exempt from slaughter at the port of entry cattle arriving from any of the British colonies. He laid special emphasis on the case of Canada and said that the experience of three and a half years went far to prove the Canadian contention that if disease existed at all in Canadian cattle it was not contagious pleuro-pneumonia.

Mr. William Allan (Gateshead) said that the Canadian cattle were free from disease when shipped, but sometimes on board ship they caught what was called a "sea chill," which produced inflammation of the nostrils corresponding to human catarrh. From this they recovered after being a few weeks in this country.

Mr. Walter Long, President of the Board of Agriculture, in resisting the amendment, said that at the request of his predecessor in office an exhaustive inquiry into the question of the health of Canadian cattle was held by Sir Henry James and Dr. Burdon Sanderson, and anyone who read the evidence taken by those gentlemen must come to the conclusion that it was clearly established beyond all doubt that contagious pleuro-pneumonia existed amongst cattle imported from Canada. He was confident that the Canadian Government did their best to save their herds from infection; but their great difficulty was that they had a frontier thousands of miles in extent, and that on the other side of that frontier, in the United States, pleuro-pneumonia existed, as the Canadian Government admitted. The Canadian Government did their best to protect themselves from the importation of the disease from the United States; and the Government of the United States took exactly the same view of the action of the Government of Canada as the Canadian Government took of the action of the Imperial Government—namely, that contagious pleuro-pneumonia did not exist in their country and that the prohibition of their cattle was unnecessary and harsh. But it was not the fact to say that there had been no cases of the disease discovered amongst Canadian cattle since 1893, when the inquiry was held. Eight cases were discovered in 1893, six in 1894, and two in 1895. There could be no doubt whatever, from the evidence of the scientific advisers of the Board of Agriculture, that the disease found amongst the cattle was not, as the Canadian Government asserted, simple pleuro-pneumonia or transit pneumonia, as the hon. member for Gateshead contended, but contagious pleuro-pneumonia; and that being so, it was impossible for the Agricultural Department, in justice to the stock owners of this country, whose interests they were bound to safeguard, to accept the amendment.

When the amendment was taken to a division 57 members voted for it and 140 against it.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ALEXANDER, B. ADOLPHUS, L.D.S.R.C.S.Eng., has been appointed Dental Surgeon to the Western Skin Hospital, Great Portland-street, London.

BLABER, P. L., L.R.C.P., M.R.C.S., has been appointed Junior Obstetric House Physician to St. Thomas's Hospital.

BLOUNT, G. B. C., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Electrical Department at St. Thomas's Hospital.

BROMET, E., M.A. Cantab., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Physician to the Hospital for Women, Soho-square, W.

CHANING-PEARCE, A., M.B., B.S. Lond., has been appointed House Surgeon to the Kent County Ophthalmic Hospital, Maidstone.

CONFORD, G. J., B.A., M.B. B.Ch. Oxon., L.R.C.P., M.R.C.S., has been reappointed House Surgeon to St. Thomas's Hospital.

CROUCH, H. C., L.R.C.P., M.R.C.S., has been reappointed House Surgeon to St. Thomas's Hospital.

DE SANTI, PHILIP R. W., F.R.C.S., has been appointed Lecturer on Aural Surgery to the Westminster Hospital Medical School.

DIXON, C. A., M.R.C.S., L.R.C.P., has been appointed Junior Anæsthetist to the General Infirmary, Leeds.

DURRANT, C. E., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

DYBALL, B., L.R.C.P., M.R.C.S., has been reappointed Assistant House Surgeon to St. Thomas's Hospital.

FRAZER, W. D., L.R.C.P., M.R.C.S., has been reappointed Assistant House Surgeon to St. Thomas's Hospital.

HANWELL, G. L., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

HARTLEY, J., M.B., B.Ch. Vict., L.R.C.S., L.R.C.P. Edin., has been appointed Junior House Surgeon to the Ancoats Hospital, Manchester.

HAYNE, LOUIS B., M.B., B.C. Cantab., has been appointed House Physician to the Victoria Hospital for Children, Chelsea.

HICHENS, P. S., M.A., M.B., B.Ch. Oxon., L.R.C.P., M.R.C.S., has been reappointed House Physician to St. Thomas's Hospital.

HILL, R. A. L., L.R.C.P., M.R.C.S., has been appointed House Surgeon to the Chichester Infirmary.

HODGINS, WALTER W., M.D., B.S. Durh., M.R.C.S., L.R.C.P., has been appointed Honorary Medical Officer to the Holloway and New Islington Dispensary.

JONES, MABEL, M.D. Lond., has been appointed House Surgeon to the Victoria Hospital for Sick Children, Hull, vice Miss D. Cox, M.B., resigned.

KENT, P. W., L.R.C.P., M.R.C.S., has been reappointed Assistant House Surgeon to St. Thomas's Hospital.

KNOCKER, W. D., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Electrical Department at St. Thomas's Hospital.

LAING, J. A., M.B., C.M. Edin., has been appointed Surgeon and Medical Officer to the Akaroa Hospital, New Zealand.

LAMBERT, P., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the No. 3 Sanitary District of the Newbury Union, vice F. H. Lyon, resigned.

LIGHTFOOT, CHAS. L., M.D., C.M. Edin., M.R.C.S., has been appointed Surgeon to the Northumberland, Durham, and Newcastle Eye Infirmary, vice H. W. Davies, resigned.

LYONS, EDWARD, M.B., B.Ch., B.A.O. Dubl., L.M. Rotunda, has been appointed Senior Resident Surgeon to the Jervis-street Hospital, Dublin.

MAUNSELL, JOHN, L.R.C.P., L.R.C.S. Irel., has been appointed Government Medical Officer at Enslow, Western Australia.

MORRISON, A., L.R.C.P., L.R.C.S. Edin., has been appointed Vice-Chairman of the Board for the Protection of Aborigines, Victoria, Australia.

NASH, E. H. T., L.R.C.P., M.R.C.S., has been appointed House Physician to St. Thomas's Hospital.

OLDFIELD, C., M.B. Lond., M.R.C.S., L.R.C.P., has been appointed Junior Anæsthetist to the General Infirmary, Leeds.

PALIN, E. W., M.A., M.B., B.Ch. Oxon., L.R.C.P., M.R.C.S., has been reappointed House Physician to St. Thomas's Hospital.

PATERSON, W. H. J., L.R.C.P., M.R.C.S., has been appointed House Physician to St. Thomas's Hospital.

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POTTER, E. FURNISS, M.D. Brux., M.R.C.S., L.R.C.P. Lond., has been appointed Acting Anæsthetist to the London Throat Hospital, Great Portland-street, W.

PRAIN, J. L., L.R.C.P., M.R.C.S., has been reappointed House Surgeon to St. Thomas's Hospital.

PRIDEAUX, C. S., L.D.S. Eng., has been appointed Honorary Dental Surgeon to the Dorset County Hospital, Dorchester.

RICHARDS, L. W., M.B., B.S. Durh., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

ROLSTON, JOHN R., L.R.C.P. Edin., M.R.C.S., has been appointed Honorary Surgeon to the Plymouth Royal Eye Infirmary, vice W. Square, deceased.

RUDDLE, R. G., M.D., Ch.B. Melb., has been appointed Medical Officer of Health for Mount Franklin Shire, Victoria, Australia.

SCANTLEBURY, GEO. F., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health for Moorabbin Shire, South Riding, Victoria, Australia.

SCOTT, C. H., M.B., Ch.B. Melb., has been appointed Medical Officer and Vaccinator for the District of Bourke, New South Wales.

SHUTER, R. E., M.B., Ch.B., Melb., has been appointed *pro tem.* Health Officer at Port Augusta, South Australia.

SLATER, H., L.S.A., has been appointed Resident Medical Officer, Quarantine Officer, and Public Vaccinator for the District of Karridale, Western Australia.

SMITH, J., B.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been reappointed Assistant House Surgeon to St. Thomas's Hospital.

STRANGE, R. G., L.R.C.P., M.R.C.S., has been reappointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

TAGGART, J. SCOTT, M.B., Ch.B. Vict., has been appointed Senior Resident Medical Officer to St. Mary's Hospital for Diseases of Women and Children, Manchester.

TAYLOR, G. E. O., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital.

THOMPSON, WALTER, F.R.C.S., has been appointed Senior Anæsthetist to the General Infirmary, Leeds.

TOOMBS, H. G., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital.

WALLACE, L. A. R., B.A., M.B., B.Ch. Oxon., L.R.C.P., M.R.C.S., has been reappointed House Surgeon to St. Thomas's Hospital.

WARWICK, JAMES, M.B., C.M. Aberd., has been appointed Resident Medical Officer to the Burnley Victoria Hospital.

WILSON, C. W. GRANT, L.R.C.P., M.R.C.S., has been appointed Senior Obstetric House Physician to St. Thomas's Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BOROUGH HOSPITAL, Birkenhead.—Junior House Surgeon. Salary £60 per annum, with board and lodging, but no wines, spirits, or beer.

BRENTFORD UNION.—Medical Superintendent of Infirmary and Medical Officer of Workhouse and Schools. Salary £250 per annum, with furnished residence in the Infirmary, rations, washing, &c., or £300, with furnished residence, washing, &c. Also Assistant Medical Officer, unmarried. Salary £100 per annum, with furnished apartments in the infirmary, rations, washing, &c. Applications to the Clerk to the Guardians, Union Offices, Isleworth, W.

CHESTER GENERAL INFIRMARY. — Visiting Surgeon, for two years. Salary to commence at £90 per annum, with residence and maintenance in the house.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. Salary at the rate of £30 per annum, with board and residence.

CRICHTON ROYAL INSTITUTION, Dumfries.—Third Medical Assistant. Salary to commence at £100 per annum, with board and residence. Applications to Dr. Rutherford, Medical Superintendent.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Four qualified Clinical Assistants and eight unqualified Clinical Clerks in the Out-patient Department.

HEREFORD COUNTY AND CITY LUNATIC ASYLUM.—Assistant Medical Officer. Salary £100 per annum, with board, lodging, and washing.

HOSPITAL AND DISPENSARY, Newark-on-Trent.—House Surgeon; unmarried. Salary £80 per annum, with board and lodging. Will be required to do the Dispensing, for which a further salary of £40 is paid.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Surgeon to Out-patients (non-resident), for six months. Salary 25 guineas.

LEWES DISPENSARY AND INFIRMARY AND VICTORIA HOSPITAL.—Resident Medical Officer. Salary £110 per annum, furnished apartments, coal, gas, and attendance. Applications to Hon. Sec., High-street, Lewes.

LONDON HOSPITAL, Whitechapel, E.—Medical Registrar. Salary £100 per annum. Also Assistant Physician.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N. — Assistant Resident Medical Officer, for six months. Residence, board, and washing provided.

NOBLE'S ISLE OF MAN GENERAL HOSPITAL AND DISPENSARY, Douglas, Isle of Man.—Resident House Surgeon. Unmarried. Salary £90 per annum, with apartments, gas, coals, and washing free. The House Surgeon is usually appointed by the committee of the House of Industry as medical attendant at that institution at a salary of £10 per year. Applications to Hon. Sec., 25, Athol-street, Douglas, Isle of Man.

PARISH OF CREICH (Sutherland).—Resident Medical Officer and Vaccinator. Salary as Medical Officer, to include medicines, £45 per annum; as Vaccinator, the statutory fees, with an allowance of £5 per year on certain conditions. Applications to Inspector of Poor, Bonar Bridge, Sutherland.

PARISH OF KINCARDINE, Ross.—Resident Medical Officer and Vaccinator. Salary as Medical Officer, to include medicines, £42 10s. per annum, as Vaccinator the statutory fees, with an allowance of £5 per year on certain conditions. Applications to the Chairman of the Parish Council, Ardgay, Ross.

ROYAL FREE HOSPITAL, Gray's-inn-road, London, W.C. — House Surgeon for six months. Board, residence, and washing provided.

ST. GEORGE'S AND ST. JAMES'S DISPENSARY, 60, King-street, Regent-street, London, W.—Surgeon.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician and House Surgeon, for six months. Board and lodging provided. Also Physician for Diseases of Women.

Births, Marriages, and Deaths.

BIRTHS.

FOULERTON.—On May 29th, at Carlisle-mansions, Victoria-street, S.W., the wife of Alexander G. R. Foulerton, F.R.C.S., of a daughter.

HOUGHTON.—On May 31st, at East Looe, Cornwall, the wife of Leonard F. Houghton, M.R.C.S., L.R.C.P., of a son.

LUND.—On May 29th, at "Sandywood," Pendleton, Manchester, the wife of Herbert Lund, F.R.C.S., of a son.

PLOWMAN.—On June 2nd, at Eagle House, Clapham-common, S.W., the wife of T. A. BARRETT PLOWMAN, M.R.C.S., L.R.C.P., of a daughter, prematurely.

ROBERTSON—On May 11th, at Alicedale, Cape Colony, the wife of C. Robertson, L.R.C.P., M.R.C.S., J.P., of a daughter.

SANDALL.—On May 27th, at Park-lane, Alford, Lincolnshire, the wife of T. Edward Sandall, B.A., M.B., B.C. Cantab., M.R.C.S., L.R.C.P., of a son.

SPEECHLY.—On May 21st, at Parkgate, Cheshire, the wife of H. M. Speechly, M.R.C.S. Eng., L.R.C.P. Lond., of a daughter.

MARRIAGES.

FRASER—PHIBBS.—On May 28th, at Highbury Congregational Church, Clifton, by the Rev. Andrew Mearns, Andrew Mearns Fraser, M.B., Portsmouth, son of Geo. Fraser, Reading, to Alfreda Mary, daughter of E. W. Phibbs, Clifton. No cards.

HOVENDEN—PHILLIPS.—On June 1st, at Holy Trinity Church, Selhurst-S.E., Arthur Cecil Hovenden, M.B., B.S. Lond., son of the late Thos. Henry Hovenden, Esq., of South Norwood, to Madeline Bessie, younger daughter of the late William Phillips, Esq., formerly of South-place, Finsbury, and Shepton Mallet.

MUIR—REID.—On June 2nd, at St. George's Church, Hanworth, Middlesex, Harold Muir, M.D. Lond., of Lowestoft, to Violet, second daughter of Nevile Reid, The Oaks, Hanworth.

READ—HUDSON.—On May 23rd, at All Souls, Langham-place, W., by the Rev. Canon J. H. Atcheson, Henry G. Read, M.R.C.S., L.R.C.P., L.S.A., L.D.S. Eng., of 1, Portland-place, W., to Mrs. S. T. Hudson, of Barling House, near Southend, Essex.

SHEPHERD—STACKHOUSE.—On June 3rd, at St. Peter's Church, Stainforth, near Settle, by the Rev. W. Shepherd (brother of the bridegroom), assisted by the Rev. J. Mathias, vicar of the parish, Henry Bowman Shepherd, L.R.C.P. Lond., M.R.C.S. Eng., of Peveril House, Castleton, near Sheffield, youngest son of the late Bowman Shepherd of Bradford and Kirkby Lonsdale, to Ellena, youngest daughter of the late Thomas Stackhouse of Taitlands, Settle.

DEATHS.

FEARNSIDE.—On May 28th, at Merrow, Bournemouth, Henry Fearnside, M.B. Lond., F.R.C.P., aged 73.

GAYE.—On April 18th, at Stawell, Victoria, Australia, Henry Searle Gaye, M.D. St. And., J. P., of Newton Abbot, Devon, aged 69.

JONES.—On May 3rd, at his residence, William Head, Victoria, W. H. Macnaughton Jones, B.A., M.D. Irel., of Victoria, British Columbia, aged 61.

MCLAREN.—On May 29th, at Newport-road, Cardiff, Kenneth McLaren, M.B. Lond., third son of the late John Wingate McLaren, of pneumonia.

REYNOLDS.—On May 29th, at his residence, Grosvenor-street, W., Sir John Russell Reynolds, Bart., M.D., LL.D., F.R.S., Physician in Ordinary to Her Majesty's Household, aged 68.

SHOPPEE.—On May 31st, at the residence of his father, Sidney Edward Shoppee, M.R.C.S., L.R.C.P., aged 24, second son of Edward Collett Shoppee, of Dudley House, Carleton-road, Tufnell Park.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (8th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.).

TUESDAY (9th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (10th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY (11th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Great Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (12th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.) Gt. Northern Central (2.30 P.M.).

SATURDAY (13th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (9th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Dr. S. West: Case of Splenic Anæmia (Spleno-megalic Primitive), with an Account of the Disease.—Mr. H. Gilford (communicated by Mr. J. Hutchinson): A Condition of Mixed Premature and Immature Development.

THURSDAY (11th).—OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-st., Cavendish-sq., W.).—8 P.M. Card Specimens:—Mr. S. Walker: (1) Tumour of Optic Nerve; (2) Cysticercus of the Conjunctiva.—Dr. B. Taylor: Cases of Cataract Extraction.—Mr. Lawford: Pigmentation of the Conjunctiva.—Mr. Silcock: Lymphangioma of Orbit.—Mr. Juler: Macroblepharon.—Mr. M. Gunn: Acute Bullous Eruption with Associated Affection of the Conjunctiva.—Mr. H. Spicer: Acute Double Optic Neuritis. 8.30 P.M. Papers:—Mr. Rockliffe: (1) Leuco-sarcoma of Choroid; (2) Cataract Extraction and Gout.—Mr. T. Collins: On the Origin of Ruptures in Detached Retinæ.—Mr. W. E. Cant: Cyst of Orbit.—Mr. Snell: (1) Cases of Acquired Nystagmus in Occupations other than that of Coal Mining; (2) Note on Electrolysis in Detachment of the Retina.

BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.)—8.30 P.M. Specimens will be shown by Mr. O'Callaghan and Dr. Lawrie. Paper:—Dr. F. Barnes: On Some Psychological Consequences of Suppressed Menstruation. A Note by Dr. Holland on a Successful Case of Transfusion.

FRIDAY (12th).—OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-st., Cavendish-sq., W.)—9 P.M. Prof. Snellen (Utrecht): The Influence of Light on Vision. (Bowman Lecture.)

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (8th).—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Mr. G. Stoker: Impaired Movement of the Vocal Cords.

WEDNESDAY (10th).—HOSPITAL FOR CONSUMPTION, &c. (Brompton).—4 P.M. Dr. Schorstein: Non-valvular Disease of the Heart.

LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Payne: Forms of Universal Dermatitis.

THURSDAY (11th).—LONDON POST-GRADUATE COURSE.—Brit. Inst. of Preventive Medicine, Gt. Russell-st., W.C., 3.30 P.M., Dr. Allan Macfadyen and Mr. A. G. Foulerton: Detection of pus, mucus, blood, and bile in urine.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Dr. F. Taylor: Clinical Lecture.

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-st., W.C.).—4 P.M. Dr. Colman: Treatment of the Common Complaints of Children

VICTORIA HOSPITAL FOR CHILDREN (Tite-street, S.W.).—4 P.M. Mr. R. Johnson: Hernia in Childhood.

FRIDAY (12th).—LONDON POST-GRADUAT COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Typhoid Fever and Diphtheria.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 4th, 1896.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
May 29	30·17	S.W.	55	52	119	80	48	...	Hazy
,, 30	30·14	N.E.	58	53	90	61	55	...	Cloudy
,, 31	30·22	S.W.	61	54	109	70	50	...	Hazy
June 1	29·96	S.E.	57	52	117	80	48	...	Hazy
,, 2	29·70	S.E.	66	57	127	85	55	...	Hazy
,, 3	29·72	S.W.	67	60	99	73	64	...	Hazy
,, 4	29·81	S.W.	67	62	119	78	59	0·54	Hazy

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

L.S.A. Lond.—The origin of the violation of Mr. Anderson's rights as a Licentiate of the Society of Apothecaries of London was that he attended Mrs. Marshall of Tobago both as a surgeon and as an apothecary. On being treated rudely by the husband Mr. Anderson retired from attendance on the case, which is one of necrosis of the inferior maxilla. For this retirement the patient and her husband brought an action against Mr. Anderson for £15 damages for negligence. It was proved by medical witnesses on both sides that there had been no negligence, that the patient had sustained no injury by the retirement, had recovered entirely through Mr. Anderson's treatment, and was nearly well when he retired. For the retirement from the case the judge gave damages of £10 and costs, made Mr. Anderson's charges for three months' attendance a counter claim, and deprived him of them on the grounds that a medical man has no right to refuse his services or to stipulate for payment for his services, or to retire from the case without the leave of the patient under any circumstances. The judge in this case, therefore, has violated Mr. Anderson's right to charge and recover for his services, and has punished him by damages and costs for the exercise of his rights as an apothecary. This illegal judgment was enforced by a levy on his effects, by imprisonment, excessive bail, and other violent measures. It is now declared that for these injuries done by judges Mr. Anderson has no right of remedy—i.e., that in the presence of judges Licentiates of the Worshipful Society of Apothecaries have no rights under their charter. (*Q. E. D.*) For full information *vide* THE LANCET of Feb. 29th, April 18th and 25th, and May 9th and 16th for articles on the Origin, History, and Objects of the Civil Rights Defence Committee, the secretaries of which (5, Mitre-court, Temple, E.C.) will be happy to send the reports post free and to give every possible information.

J. Kirkby.—We are obliged for our correspondent's communication and enclosures, but we fear that to comply with his request adequately would require too much space. The fallacies that surround the question and the unfounded assertions that are made over and over again by those opposed to this beneficent practice are legion. No amount of evidence can alter the fixed ideas that have taken possession of some minds. Read McVail's "Vaccination Vindicated," and Edwards' "Small Pox and Vaccination."

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THE WRIGHT DEFENCE FUND.

To the Editors of THE LANCET.

SIRS,—The following additional subscriptions have been received or promised for the above fund since the issue of THE LANCET of May 16th. This brings up the amount to £52 15s. As this is far short of the sum required, the Committee have decided to keep open the subscription list a few days longer and solicit further subscriptions. I have had many suggestions from those who have kindly sent subscriptions in reference to Mr. Wright belonging to a defence union. It is, of course, to be regretted that he was not a member of a defence association, for then in all probability the case would never have been heard of after the first lawyer's letter. The fact of two defence associations being in existence makes many of us careless in not joining any. If we could only have one large association with paid officers we should be able to work the lot for a subscription of 5s. per year, and then there would be no excuse for any one not joining. Thanking you for your cordial coöperation,

I am, Sirs, yours faithfully,

Wigan, June 3rd, 1896. WM. BERRY.

Mr. Cooke (Aspull)	1	1	0	Dr. Rees (Wigan)	0	10	6
Dr. Adam (Liverpool) ...	1	1	0	Mr. Barwise (Southport)...	0	10	6
Mr. Chronnell (Hindley) ..	1	1	0	Mr. Whitaker (Horwich)...	0	10	0
Dr. Barron (Liverpool) ...	1	1	0	Dr. Rigby (Adlington) ...	0	10	6
Mr. G. E. Walker, F.R.C.S. (Liverpool)	1	1	0	Mr. Aspinall (Ainsdale) ...	0	10	6
Mr. Cowan (Wigan)	1	1	0	Mr. H. D. Harthan (Salford)	0	10	6
Dr. Dreschfeld, F.R.C.P. (Manchester)	1	1	0	Dr. Robt. Patrick (Bolton)	0	10	0
Mr. Kirk (Hindley)	1	1	0	Dr. Kenyon (Wigan) ...	0	5	0
Mr. Hall (Nice)	1	1	0	Dr. Storrs (Southport) ...	0	7	6
				Mr. Gibson (Southport) ...	0	5	0
				Previous list	38	18	0

An Unhappy Victim has omitted to enclose his name and address.

M.R.C.S.—The public notice is not to be commended.

A DISGRACEFUL ADVERTISEMENT.

THE *Umpire*, a Manchester paper, of May 17th, 1896, contains the following communication in its advertisement columns:—

"INTERESTING LETTER.

"I, Dr. Daniel Sutherland, Surgeon to the New Medical Hall, 243, Sauchiehall-street, Glasgow, hereby intimate to all whom it may concern that I have long studied and treated Confidential Complaints and weaknesses as a principal part of my Practice, both here and in Edinburgh, though never formerly made known by Advertisement, and it is possible this notice may be construed as a breach of professional etiquette; but I think it very pardonable when I consider the number of gentlemen constantly consulting me with their Constitutions injured, and Complaints aggravated, after being for months and years the dupes of Quacks and Druggists. I consider it a righteous necessity in the Public interest to advertise the fact that a Member of the Profession proper devotes his time to the study and treatment of these special Complaints. Gentlemen are therefore inexcusable if they fall into the hands of empirical pretenders. I make free to assure gentlemen entrusting me with their confidence that they may rely upon the highest professional honour, and skilled, conscientious treatment whether they visit me at 243, Sauchiehall-street, Glasgow, or communicate with me by letter, which will have my immediate attention.

"I am, faithfully,

"DANIEL SUTHERLAND.

"Licentiate of the Royal College of Physicians, Licentiate of the Royal College of Surgeons; also of the Faculty of Physicians and Surgeons. For seven years Councillor and Trustee of the City of Edinburgh; and Manager of the Royal Maternity Hospital, Edinburgh; President of the Scottish Christians, Evidence Society; Medallist (Royal College of Surgeons) 1867; awarded Queen's Prize (Science of Chemistry, Kensington Museum, 1863; Public Honours (Royal College of Surgeons) 1869, &c., &c.

"Book free for six stamps on confidential complaints written by Dr. Sutherland as above."

A correspondent has sent us this extract, asking if the corporation to which Mr. Daniel Sutherland claims, beneath his signature, to belong, should not take notice of such a flagrant breach of etiquette. We cannot find any person of the name in the current Register, but a Mr. Daniel Sutherland was struck off on May 20th, 1885. This may be the offender.

W. G. M.—We do not recommend individual practitioners.

"THE TREATMENT OF PLEURITIC EFFUSION."

To the Editors of THE LANCET.

SIRS,—Referring to the query of "Ubique" in THE LANCET of May 30th upon the above subject I venture to suggest that in the case mentioned it would be advisable to make an opening in the chest and provide for permanent drainage. I should put in my self-retaining tube figured in THE LANCET of the same date. The object for providing permanent drainage is to allow of the contact of the visceral and parietal pleural surfaces. This by the pressure of contact would at first tend to lessen the amount of fluid thrown out, and later by adhesion to stop its formation altogether, after which the tube would be no longer necessary. This, I think, would be an improvement upon the repeated tappings which have hitherto been necessary, and the lung would not suffer from constant pressure of fluid.

I am, Sirs, yours truly,

Cardiff, June 2nd, 1896. CORNELIUS A. GRIFFITHS, F.R.C.S.Eng.

MILITARY MEDICAL RECOLLECTION.

To the Editors of THE LANCET.

SIRS,—During active service in the Straits Settlements in 1875, when stationed at Qualla Jumpole, I knew a soldier in the 10th Regiment who was keen to kill a tiger. Having heard from a native that his buffalo had been killed the night previously he hurried to the river of the above name, and after waiting for some time he saw a tiger on the opposite side of the river approaching the dead buffalo he had partially devoured the night before. The sight was too much for "Tommy's" nerves, and having discarded his rifle and ammunition he fled back to camp, about two miles away, went straight to bed, and was successfully treated by me for a typical attack of typhoid fever.

I am, Sirs, yours truly,

Newcastle-on-Tyne, May 24th, 1896. J. HOYSTED.

H. A. B. will be very ill-advised to complain to the General Medical Council of anyone unless he is able to *prove* the subject of complaint.

"THYROID FEEDING."

To the Editors of THE LANCET.

SIRS,—In reply to your correspondent "P. W." I have had experience in thyroid feeding and would suggest as follows: That the quantity given in the first week should not exceed one fresh gland in divided doses. Thus, one-quarter of a fresh gland may be given as a start on alternate mornings. It is preferable, in my opinion, to increase the dose by diminishing the intervals rather than by increasing the amount of each individual dose. One-quarter of a fresh gland will be found a full adult dose for a start at any rate. For myself, I would recommend unless there are special reasons to the contrary, that one or other of the various preparations of thyroid gland be used in preference to the fresh gland, for the reason that patients then regard it more as a medicine and are far less likely to overdose themselves. If, however, the fresh gland is for any reason decided upon it should be obtained from the butcher with the trachea still attached, and, for at any rate the first time, be examined and separated by the surgeon himself, otherwise strange mistakes are apt to arise and various other organs or glands to be substituted. Having obtained and cleaned the gland it may be administered either raw or very lightly cooked. In the former case it is sufficient to finely mince the amount of gland to be administered, season it if desired with pepper and salt, and give as a sandwich between bread and butter. In the latter case an easy way to prepare the gland is to fry it much in the same way as kidneys are cooked for breakfast but, of course, to a very much less degree. A very slight amount of cooking does not appreciably diminish the activity of the gland. That there is danger in excessive doses cannot for a moment be doubted by anyone who has once seen a case. Thus a patient of mine, a woman aged forty years, stout but otherwise healthy (I hope shortly to publish an account of her case), contrary to explicit directions, started by taking an entire gland lightly cooked on three successive mornings, and, to quote her own words, "I had a fearful trembling inside, my knees trembled and I could scarcely stand, my hands shook, and I had a fearful headache the first thing in the morning which used to wake me in the night with the pain." She left them off, but again, about a fortnight later, without my previous knowledge, ate two small glands at once in the morning. They produced the same effect on the same day. She left off again but seventeen days later she commenced taking capsules, eight of them being equal to one whole gland. One capsule caused a feeling of faintness on the same day, the pulse being 64 and the temperature 95·2° F. I may perhaps mention that other patients who had not previously taken the raw gland have taken one or more capsules in the day without ill effects. Apologising for the length of this letter,

I am, Sirs, yours truly,

MURTAUGH HOUGHTON,

Late Resident Medical Officer, Manchester Consumption Hospital.

Ilford, May 25th, 1896.

ERRATUM.—The address of the Red Cross Germicide Co. is 61½, Fore-street, E.C., and not as stated in our New Invention notice of May 23rd. We are asked to state that the inhaler, which is the invention of Dr. Siemon, has been patented in England.

During the week marked copies of the following newspapers have been received:—*South Wales Daily News, Cromer Post, Bath Chronicle, Sussex Daily News, Leicester Post, Brighton Gazette, Northern Whig, Worcestershire Chronicle, Devon Gazette, Liverpool Daily Post, Bradford Observer, Epicure, Belfast News Letter, Eastern Morning News, Croydon Guardian, Bolton Chronicle, Yorkshire Post, Western Daily Mercury, Sheffield Daily Telegraph, Carlisle Express, Times of India, Birmingham Post, Liverpool Courier, Kingston News, Pioneer Mail, Mid-Surrey Gazette, Bristol Mercury, Builder, Preston Guardian, Leeds Mercury, Blackpool Gazette, Architect, Scotsman, Daily Chronicle, Lincolnshire Echo, Tit-Bits, Retford Times, Light, St. Mary's Hospital Gazette, Bradford Daily Telegraph, Formby Times, Reading Mercury, Local Government Chronicle, Weekly Free Press and Aberdeen Herald, Mining Journal, Hertfordshire Mercury, City Press, Nottingham Daily Guardian, Surrey Advertiser, Local Government Journal, Gloucestershire Chronicle, West Ham Herald, Dover Express, Coalville Times, Hemel Hempstead Gazette, Guernsey Standard, Worcester Echo, Evening Post (Jersey), Public Opinion, Rossendale Free Press, Kelso Mail, Civil and Military Gazette (Lahore), Dundee Advertiser, Thanet Guardian, Harwich Chronicle, Macclesfield Courier, North British Agriculturist, &c. &c.*

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THE LANCET

SPECIAL SUPPLEMENT

IN SUPPORT OF THE

METROPOLITAN HOSPITAL SUNDAY FUND

Published in aid of the Appeal to be made on Sunday, June 14th, 1896.

THE HOSPITALS OF THE METROPOLIS AND THEIR CLAIMS ON THE PUBLIC.

ONCE more it becomes our duty to lay before the readers of THE LANCET and the general public, for whose beneficent consideration this Annual Special Supplement is as much prepared as it is for that of our customary professional audience, the claims of the Metropolitan Hospital Sunday Fund upon the sympathy and practical assistance of all London.

We have made this appeal for the Fund on ten previous years. Therefore, although we have approached the subject from different directions on different occasions, and have dwelt at length now on this and now on that phase in the history of hospital work in the metropolis, we feel that to many the subject has, perchance, become threadbare. It may even have lost its interest for them altogether through this familiarity, inasmuch as our main tale must always be the same. Vary the rendering of it how we will the gist of what has to be said in these Supplements is now what it has been on the previous occasions, and the following words will sum it up:—The hospitals of London do noble work; the amount done by them is out of all proportion to their incomes; the slender incomes, being derived mainly from fortuitous charity, are precarious and liable to fluctuations; London, the city of untold wealth, should be able to furnish not only adequate but regular hospital accommodation for its suffering poor; Hospital Sunday furnishes the inhabitants of the metropolis with a regular and annual opportunity of showing their appreciation of the splendid work done by these medical charities; therefore, Give, GIVE, GIVE.

We propose this year to ask our readers to consider the Metropolitan Hospital Sunday Fund in particular from the following points of view. The Fund is one of the most important sources of income that many of the London Hospitals possess. By the annual reccurrence of its benefits the good done by it is enormously enhanced, for the regularity of the donations adds to their value inasmuch as it imports a sadly wanted element of order into hospital finance. And we also submit that as the metropolis grows the Fund should grow with equal steps, constituting itself a kind of universal rate, given out of good will. More forcible appeals, and pleas more likely to attract the public compassion, could easily be put forward, but a mere perusal of the figures in the various tables will tell the tale of the merciful work done. We shall on this occasion confine consideration of the Fund to the limits just indicated, feeling that in this way unanswerable arguments will be supplied to all why the collection of 1896 should not be allowed to drop below the large sum collected in 1895.

THE PECUNIARY POSITION OF THE METROPOLITAN HOSPITALS.

The tables which are here incorporated show the statistics of hospital work in the metropolitan area during the year 1895, under the various heads of General Hospitals, Special Hospitals, Cottage Hospitals, Dispensaries, and Convalescent Homes. Of a great proportion of these institutions the same thing may be said—their income is not as large as their expenditure. In some, and these are the largest and best known, the disproportion is notable, regular, and increasing, while in others matters are not so dark in hue; but in all the life of the institution is carried on under a perpetual pecuniary stress. All the work of organisation and administration and all the work of ministering, alleviating, and healing, and all the work of teaching, are made wearisome by the dragging strain of poverty. Let us consider what this means. The labour that goes to the due organisation of a hospital is not light. When we see the same labour displayed in the management of a group of business houses or a few railway stations we give public praise to the men at the head of affairs and sometimes public honour. Yet in most of these cases the work is done in affluence and with the direct stimulus of greater wealth to be obtained in the future, while the work of the hospital official is done under the repression of a chill and apparently hopeless penury.

The stress of this poverty is more directly felt by the lay management of the hospitals, but the medical officers who are in many cases associated with the non-professional boards in the administrative work also fall beneath it—it not infrequently blights their efforts in behalf of their patients, while every medical school in London owns its cruel influence. Nor have we exhausted the disabilities under which hospital work is done beneath the eternal shadow of impending bankruptcy by pointing out how much the irksomeness is increased by the penury. Not only is the anxiety of the managers thereby enormously aggravated, but they are driven to expensive courses, which in their turn lead to still greater depletion of the exchequer. For what is more expensive than being poor and having a precarious source of income? It is universally allowed that uncertainty of income leads to irregular expenditure or rather that the expenditure of such incomes is apt to be regular enough in that it will be maintained steadily at the

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rate warranted by the highest annual receipts: the irregularity is manifested in the proportion of the sums spent to the income in bad years. This is so well recognised that in certain classes of the community whose earnings are capricious a condition of general indebtedness to their fellow men is practically condoned which would be considered utterly discreditable to persons earning their livelihood in more methodical callings. It is also elementary knowledge that debt leads to debt and so prevents retrenchment. All schemes for economy that are intended to bear practical fruit pre-suppose in those who enter upon them more than an absolute freedom from debt; they include the possession from some source or other of a surplus wherewith to buy in the cheap market that is open to ready money and to carry out alterations—costly, perhaps, at first, but bound to be economical in the end. In such a scheme not only must all arrears be wiped out by payment or arrangement, but facilities for trading at a greater advantage in the future must be obtained.

The pecuniary position of our hospitals should be regarded in the same way. The counsel of perfection is that a sum of money should be obtained which would place all the institutions upon a sound working basis by freeing them from debt, and which should also be large enough to endow them to the extent which experience shows to be that by which their average annual income is disproportionate to their necessary annual expenditure. The Metropolitan Hospital Sunday Fund bears a certain relation to such a perfect and perfectly Utopian scheme. It is a source of regular income representing about a million of capital. It is a stop-gap, it is a makeshift, it is a jury-mast, but by its aid work goes on that would otherwise cease and the ship of medical charity is enabled to persevere on its storm-ridden course.

THE PROGRESS OF THE METROPOLITAN HOSPITAL SUNDAY FUND.

The Metropolitan Hospital Sunday Fund has apparently settled down to contribute a certain sum annually to the expenses of the metropolitan hospitals—i.e., £40,000 inclusive of donations. The following figures show the progress of the Fund, and some of the reasons accounting for the fluctuations are appended, the donations being separated off from the totals:—

Progress of the Hospital Sunday Fund.

Year.	Totals.	Donations.	Year.	Totals.	Donations.
1873	£27,700	£1844	1885	£34,320	[illegible]
1874	29,936	1505	1886	40,399	[illegible]
1875	26,396	1424	1887	40,607	[illegible]
1876	27,042	1339	1888	40,379	[illegible]
1877	26,082	947	1889	41,744	[illegible]
1878	24,904	1199	1890	42 814	[illegible]
1879	26,501	1120	1891	45,330	[illegible]
1880	30,423	1567	1892	41,512	[illegible]
1881	31,856	1638	1893	39,290	[illegible]
1882	34,146	2106	1894	43,679	[illegible]
1883	33,935	1980	1895	60,361	[illegible]
1884	39,329	6410[1]			

[1] In 1884 £4500 was received from the managers of the International Health Exhibition.

[2] In 1885 a special donation of £1000 was received from James Wakley, Esq., M.D., Editor of THE LANCET.

[3] In 1886 a further special donation of £1000 was received from James Wakley, Esq., M.D.

[4] In 1887 a legacy of £1000 was paid by the executors of the late James Wakley, Esq., M.D.

STATISTICS OF HOSPITAL WORK IN LONDON DURING THE YEAR 1895.

TABLE I.—GENERAL HOSPITALS.*

N.B.—The figures referring to out-patients in these Tables represent the number of VISITS *paid by out-patients—*NOT *the* NUMBER *of out-patients*

Name of Hospital.	Hospital Sunday Fund award.	In-patients.	Relieved.	Cured.	Convalescent homes.	Remaining under treatment.	Died.	Out-patients' visits.	Accidents and emergencies
	£								
Charing-cross	1 444	2,117	784	904	200	150	172	133,992	11,280
French	564	756	185	490	18	45	35	15,135	598
German	827	1,426	224	716	336	104	93	45,282	2,254
Great Northern Central	516	1,421	1,093		97	103	143	60,461	8,537
Guy's	890	6,249	5,143		621	408	572	78,762	37,645
Hampstead	151	270	—	—	3	20	8	1,015	155
Italian	110	237	—	232	4	9	5	13,424	—
King's College	2,200	2,717	947	1,068	191	190	237	54,550	13,966
London	5,156	9,955	3,156	5,104	816	604	1,091	302,258	21,066
London Homœopathic	192	565	169	234	75	69	32	—	—
London Temperance	963	1,066	213	709	47	74	99	17,161	8,838
Metropolitan	687	971	240	527	52	61	106	90,776	21,759
Miller Hospital and Royal Kent Dispensary	358	—	—	—	—	—	—	—	—
North-West London	522	683	140	400	29	40	57	45,707	8,600
Poplar	557	1007	—	—	46	50	59	27,231	945
Royal Free	1,237	1,802	1,582		152	120	150	83,458	13,475
St. George's	2,063	4,191	2,872		1,138	299	382	98,384	12,874
SS. John and Elizabeth	137	94	69	—	16	45	30	—	—
St. Mary's	2,750	3,968	586	2,478	295	250	344	52,699	16,905
Seamen's Hospital Society	1,265	2,375	591	1600	—	188	158	47,754	5,000
The Middlesex	2,956	3,280	2,639		300	280	337	110,728	26,203
Training Hospital, Tottenham	—	529	58	345	5	24	77	11,825	3,104
University College	1,787	3,151	626	1,879	338	166	215	154,704	31,044
West Ham	372	441	44	290	—	33	66	82,912	8,296
West London	825	1,730	1,485		—	82	163	75,507	6,701
Westminster	1,581	2,142	1,846		266	158	138	60,000	7,000
	£30,110	53,142	8,327	16,961	5,045	3,572	4,869	1,663,725	265,154
Estimated to supply omissions	—	437	7,182	11,905	60	22	31	76,090	7,747
Total	£30,110	53,579	15,509	28,866	5,105	3,594	4,900	1,739,815	272,901

* We reproduce the term "General Hospitals" as employed by the Council of the Metropolitan Hospital Sunday Fund.

[5] Including legacy of £1003 14s. from the executors of the late Thomas Crouch, Esq.

[6] In 1891 donations of £5000 from the late Duke of Cleveland, K.G., and £1000 from Sir Savile Crossley, Bart., were received.

[7] In 1892 Sir Savile Crossley, Bart., gave a further £1000; and a legacy of £105 was paid by the executors of the late Dr. H. E. Pitt of Brighton.

[8] In 1893 Sir Savile Crossley, Bart., gave a further donation of £1000.

[9] In 1894 a legacy of £5000 (less duty) was paid by the executors of the late W. J. Whitaker, Esq.; and Sir Savile Crossley, Bart., gave a further donation of £1000.

[10] In 1895 Messrs. Barnato and Friends gave a donation of £1000; £3400 was received from the Stock Exchange through Messrs. Price, Vaughan and Co., and Messrs. Burdett and Harris; Lord Iveagh gave a donation of £1000; Sir Savile Crossley, Bart., gave a further donation of £1000; and Mr. J. B. Robinson gave £1000.

From these figures it will be seen that twelve years ago the Fund made a sudden leap to the point which it was to maintain for the next decade. In 1884, owing to a magnificent donation of £4500 from the managers of the International Health Exhibition, the sum received was advanced from £33,935 in 1883 to £39,329. Falling somewhat the next year, it was righted again by donations and has since

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mained at an average figure of a little over £40,000. 1 1895 the fund took an enormous upward leap owing to the enerosity of the Stock Exchange and of a group of financiers eaded by Mr. Barnato. £13,000 was obtained from a few dividuals, Mr. H. C. Burdett, whose personal exertions ere responsible for this splendid result, being the channel rough whom this munificence reached the fund. Consquently the total reached over £60,000, being £15,000 in cess of the previous highest collection. It will be this year e earnest endeavour of all to spare no pains to prevent 1885. The increase of last year being due to individual benevolence, not to receipts from general offertories, cannot be counted upon, and it will behove all to work as if no such fortunate increment were again likely to occur. Secondly, there have been quite recently urgent appeals made on behalf of a few hospitals, and these appeals have been generously answered. Many persons having responded to the special calls will feel themselves quit of their liability towards medical charities for this year, so that the field from which the harvest is to be reaped will be found smaller if not less

TABLE II.—SPECIAL HOSPITALS.

Name of Hospital.	Hospital Sunday Fund award.	In-patients.	Relieved.	Cured.	Convalescent homes.	Remaining under treatment.	Died.	Out-patients' visits.	Accidents and emergencies
	£								
City of London for Diseases of Chest	1,402	918	822		8	117	96	65,693	—
Hospital for Consumption	2,214	1,272	1,108		191	187	197	72,646	—
North London ,,	495	434	—	—	—	60	29	19,590	—
Royal Hospital for Diseases of Chest	550	701	631		—	65	57	23,844	—
Royal National Hosp. for Consumption	413	778	409		—	180	34	—	—
Alexandra Hospital for Hip Disease	247	159	16	50	27	66	9	1,442	—
Children's Home Hospital (Barnet)	55	143	24	96	20	13	7	—	26
Belgrave Hospital for Children	220	270	—	—	—	24	19	15,652	—
Cheyne for Incurable ,,	206	67	4	3	14	50	10	—	—
East Lond. Hosp. for ,,	688	1,238	832	484	111	—	239	66,310	19,596
Evelina Hosp. for Sick ,,	619	782	559		—	60	163	28,264	520
Home for Incurable ,,	96	37	—	—	—	28	3	—	—
Home for Sick ,,	206	218	48	151	95	41	9	3,963	—
Hospital for Sick ,,	1,100	1,616	488	644	245	121	220	74,224	—
North-East. Hosp. for ,,	412	—	—	—	—	—	—	—	—
Paddington-green for ,,	206	298	253		56	26	15	39,661	2,602
Victoria Hospital for ,,	825	1,132	878		—	63	133	37,858	—
"The Vine"	41	—	—	—	—	—	—	—	—
British Lying-in Hospital	55	—	—	—	—	—	—	—	—
City of London ,,	110	490	—	489	—	21	1	—	—
Clapham Maternity	28	318	318	—	—	—	—	16,451	—
East-end Mothers' Home	85	230	—	227	1	10	4	2,590	—
General Lying-in	83	—	—	—	—	—	—	—	—
Queen Charlotte's Lying-in	495	1,124	—	1,118	—	—	6	9,590	—
Chelsea Hospital for Women	275	526	196	319	178	34	11	9,640	—
Hospital for Women	564	—	—	—	—	—	—	—	—
Grosvenor Hosp. for Children and Women	151	135	—	—	—	13	3	9,142	—
New Hospital for Women	275	534	162	287	—	39	2	26,446	—
Royal Hosp. for Children and Women	344	—	—	—	—	—	—	—	—
Samaritan Free	784	568	178	347	50	41	22	29,787	—
Cancer	962	805	715	—	10	80	82	11,584	—
London Fever	825	692	—	601	—	105	16	—	—
Jordon for Fistula	55	234	21	204	—	8	1	3,960	—
St. Mark's ,,	83	—	—	—	—	—	—	—	—
National for Diseases of Heart &c.	124	167	103	27	—	12	10	16,177	—
Female Lock	247	709	610	—	—	99	1	—	—
Male ,,	—	—	—	—	—	—	—	—	—
Hospital for Epilepsy &c.	82	90	—	—	5	20	—	9,988	—
National for the Paralysed &c.	1,169	804	396	160	148	158	51	32,119	—
West-End for Nervous System	110	217	178	32	—	40	7	30,140	—
Central London Ophthalmic	50	170	—	—	—	—	—	24,939	—
Royal Eye	206	—	—	—	—	—	—	—	—
Royal London Ophthalmic	770	2,184	—	2,000	10	57	3	131,450	2,000
Royal Westminster ,,	187	468	461		—	14	—	30,030	—
Western ,,	45	220	30	190	10	—	—	20,141	2,202
City Orthopædic	110	190	29	128	—	32	1	10,000	—
National ,,	66	206	150		—	56	—	2,668	—
Royal ,,	110	184	42	70	2	50	—	7,000	—
Royal Sea Bathing Infirmary	550	510	262	127	—	102	6	—	—
Hospital for Diseases of Skin	28	35	21	10	—	4	—	13,027	—
Western Skin	—	—	—	—	—	—	—	5,540	—
St. Peter's for Stone	69	448	438		—	14	10	30,792	—
Central London Throat and Ear	76	257	35	200	6	10	6	38,735	—
Hospital for Diseases of Throat	41	—	—	—	—	—	—	—	—
Royal Ear	8	217	57	160	10	318	1	8,714	—
Phillip's Memorial Homœopathic	48	—	—	—	—	—	—	—	—
The Dental	165	—	—	—	—	—	—	59,819	—
National Dental	117	—	—	—	—	—	—	34,669	—
Estimated to supply omissions	£19,494 —	22,795 4,983	4,265 5,564	8,124 7,679	1,197 841	2,388 388	1,484 217	1,071,205 302,581	28,946 b 190
Total	£19,494	27,778	9,829	15,803	2,038	2,776	1,701	1,373,786	32,136

ck-sliding. The executive of the Fund cannot be blind to e factors that will be working against them in their tempts to keep the receipts at the now high level. we glance back at the figures of eleven and relve years ago we see that the point of £40,000 was ached practically in 1884, almost exactly the same m being contributed as was contributed nine years ter—viz., in 1893—but this inflation was succeeded by little collapse, the receipts falling again to £34,320 in fertile. These are the chief two reasons why there must be no grave disappointment if the sum of £60,000 be not reached this year. Nor must there be any discouragement of future effort, and one more glance at the figures in illustration of the progress of the Fund will show why. When, twelve years ago, the Fund quite unexpectedly received a large augmentation a drop took place the next year from the high level reached; but this drop was merely the recoil precluding the forward spring, for in the following year—viz.,

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886—the sum of £40,000 was for the first time reached, at which figure the receipts have since been maintained.

Year by year the admirable and eloquent appeals of the London clergy of all denominations are directed to the raising of this money. Year after year their appeals make clear to their congregations that in their opinion the claim of the hospitals upon the public is imperative and one to which no professingly religious person can close his or her ears. And they speak from knowledge. The figures we place before our readers to-day constitute in themselves knowledge, but most of our metropolitan clergy have a deeper, closer intimacy with the working of the medical charities of London than can be gained by the study of a wilderness of figures. They not only prepare themselves to urge the claim of the Fund by obtaining every information even to the smallest details with regard to the general and medical work of the hospitals, but, ungrudging of the draft upon their already over-occupied time, they personally visit the institutions in their neighbourhood and see for themselves the work that is done in them. The advocates of the Metropolitan Hospital Sunday Fund from the London pulpits are fitted in every way for their task. They know how good the cause is for which they speak. But in spite of all this year after year—in spite of the excellence of the case to be pleaded and the sympathetic skill of the pleaders—the sum subscribed remains approximately the same. It is true that last year a sudden spurt was taken and that the fund rose by nearly one half, viz., to upwards of £60,000. It should not be allowed to go down again, but, having regard to the source of the sudden influx of funds, we are bound to admit that we can hardly anticipate that the larger sum will be reached—we can only hope. For years certain congregations have made up between them a certain sum, and we cannot pretend to see any reason why they should this year elect to contribute more. They may, nay, we hope will, and we propose to furnish them in this Supplement with two main reasons why they should.

The first of these reasons is the absolute necessity of the various medical charities of the metropolis for a regular income. The second is the fact that the Fund performs many of the functions of a central board for the management of the hospitals of London, and that the formation of such a board is very generally considered to be the first step towards the solution of the immense financial problems that vex the souls of the managers of the hospitals. There are many other reasons which will appear to most people, and not unnaturally, more cogent. The cause of the sick is one that will seem to demand more stirring language, and the arguments founded on humanity and blessed charity will suggest themselves as a more suitable way of appealing for support to the Fund than our more practical if less sentimental request that subscriptions should be given to enable the management of the hospitals to do their good work in a more business-like manner. Need we say that we are fully aware of the claims of the suffering poor; that neither the bitterness of their sorrows nor the sanctity of all endeavour to alleviate them escapes us? But we credit our readers with similar knowledge and similar sentiments. We simply design to furnish information to prove that the support of the Metropolitan Hospital Sunday Fund which would be dictated by loving-kindness is also most clearly indicated by common sense and common thrift.

THE VOLUNTARY SYSTEM.

It will be seen that the two reasons which we have just given why the claims of the Metropolitan Hospital Sunday Fund should receive the deliberate as well as the generous attention of the public can only be advanced if we presuppose that the existent system of support by voluntary contributions is the right one. It is the system of which we are all exceedingly proud. The spontaneity of the large annual gifts and bequests to our hospitals stands out pre-eminent in a not unselfish age as a grand testimony to the right-thinking generosity of the people at large, as a proof not to be gainsaid that the sympathy of the rich with the poor and of the whole with the sick is not merely of the lip, but proceeds from the heart also. Yet it would be wrong to bolster up such a system, however morally splendid, if it were found to be unworkable in a practical world.

Most of the hospitals are practically at their wit's end for money. Now it may be asserted: If so, the voluntary system must have broken down. The endowed charities must have lost or misspent their endowments, and they, together with the unendowed which have ceased to justify their existence in the eyes of the charitable, must come upon the rates. We do not think so. This is not the place to discuss the problems of State-supported hospitals and the need for a hospital board and no attempt will be made to do so. But a few words more may be said to show that in the opinion of those who know the voluntary system is the best and that in many directions the Metropolitan Hospital Sunday Fund exactly fills the gaps which even those proudest of it feel to exist in that system.

In the year 1890 the House of Lords appointed a Special Committee to investigate the whole subject of hospital accommodation in the metropolis, and that Committee, after deliberation which extended over two years, during which it received the assistance of a large number of highly competent witnesses versed in the various branches of the subject, produced a report. Although dealing with a great number of topics this report was mainly directed towards proving how greatly the work of the hospitals would be expedited, how enormously it would be advanced, by improved organisation, by a knitting together, in fact, of all the institutions into one coöperative whole. In accordance with this view the Committee made a recommendation that a Central Hospital Board should be formed and should be empowered to receive and publish hospital accounts, to advise upon new schemes, and to act generally as the authorised representatives of the public in the way of observing and appreciating and criticising hospital management and work. This proposal, notwithstanding the high authority by which it was recommended, has at present borne no fruit. Yet there is, in fact, no other thing possible if we still continue to employ the voluntary system. State aid, which is looked upon by many who would willingly take another view as the only remedy that the future leaves us to expect, would be fraught with many grave evils. It is the boast of our country that her hospitals are supported by voluntary contributions and are consequently free from the meshes of officialism. No man can obtain appointments at our hospitals in return for services rendered other than medical; the influence of politics is unfelt in our treatment of pneumonia; and red-tape is not a ligature that is employed in our wards. Yet inasmuch as many of our hospitals are on the verge of bankruptcy, their efficiency being seriously impaired by their poverty, the voluntary system must be held to have to some extent broken down. The demands of the sick have increased and the sources of revenue have decreased. The irregularity with which the impulse to give must necessarily act deprives the voluntary tribute of half its value. The voluntary principal is an admirable one, but it is jealous of system and prefers to act locally, impulsively, and irregularly. If certain much-needed qualities could be introduced into voluntary hospitals, if they could be brought to regard each other as coöperating for charitable ends not merely competing with each other for public subscriptions, if they could be brought to realise certain common principles of administration, a new era of prosperity might be assured to them. In almost these identical words we have recently summed up certain phases in the career of the metropolitan hospitals, and said that for these ills one panacea has been proposed—the creation of a Central Hospital Board.

THE FUND AS AN ORGANISING BODY.

Now it is precisely as an economising agency that the Fund has achieved its greatest success. At present there is but little prospect of the creation of any such central board, but the Council of the Metropolitan Hospital Sunday Fund has been in a position to accomplish much by way of suggestion and criticism to advance the interests of coöperation among the various charities. Nor is this all. The Council, has exercised a gentle but by no means ineffective supervision over hospital expenditure, and by comparison and scrutiny enforces the doctrine that every pound of revenue must be represented by its equivalent in the form of service or of necessaries supplied to the objects of the charity. In this way it accomplishes what no private benefactor could do were he never so assiduous to the ungracious task of criticism. The Council speaks with the authority of numbers and is comparatively free from the suspicion of partiality in its strictures. In this way it effects what has never before been attempted, and in a very considerable measure it succeeds in a task in which success, though of vast importance, is singularly difficult of attainment. Its contributions thus have a double value. They aid in the support of the assisted institutions and they contribute very materially to the economy of the whole revenues from whatever source derived.

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A FARTHING RATE.

There remains now but one thing for us to do—to plore the benevolent public to remember that as the size the metropolis increases, so the Fund should grow, if the ntributions are to be taken to represent a voluntary rate, meet the wants of our sick poor.

The recent census of London has shown that in the riod between 1891 and 1896 the metropolis increased in pulation to the extent of 221,000 souls. This is a number ual to the entire population of a very large provincial town. o assist the appreciation of the figures, we have prepared agrams showing by proportionate areas the proportionate agnitudes of Newcastle-upon-Tyne and New London, by hich last expression we intend to signify the addition which as been made to the population of the County Council's ondon within the past five years.

FIG. 1.

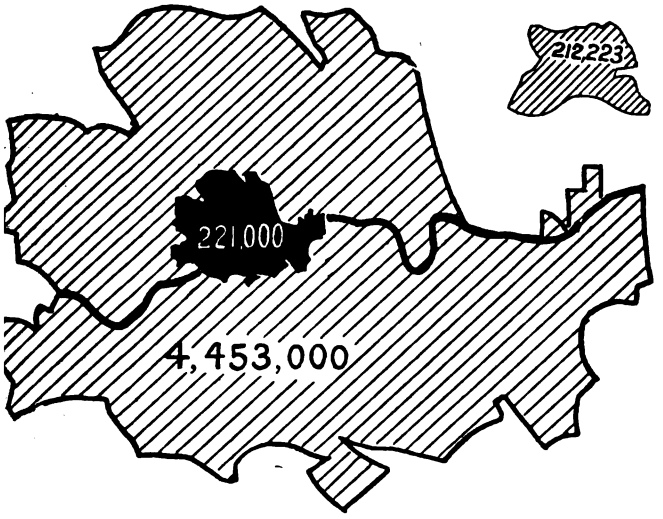

FIG. 2.

IG. 1.—The County Council's London: the dark patch represents "New London."
FIG. 2.—Newcastle-on-Tyne.

This great development has not been accompanied by any rresponding growth in our greatest charity—the Metro-olitan Hospital Sunday Fund. In point of fact, the annual llection shows no growth at all. From time to time the nount placed at the disposal of the Council of the Fund ceives a welcome augmentation from the bounty of some rivate individual, but the sum collected in the churches as actually less in 1893 than in 1884, and had it not been r private munificence the Fund would have been sadly ippled last year. It is worth while to make the attempt realise what the significance of this may be.

And first let us take the collection at its best and pportion it over the population of the metropolis. In 1890 ne amount collected by offertory was nearly £39,000 and the opulation nearly 4,200,000, so that the average contri-ution of every individual would amount to something *ss than one farthing*. For the purpose of this estimate is assumed that only the County Council's London is nterested in the hospitals of the metropolis. But that very far from the fact. Outside the official boundary es a densely populated zone inhabited by Londoners, lthough nominally appertaining to the adjacent rural istricts, and to this area are extended in no small measure he benefits of the metropolitat hospital system. Were the opulation of Greater London taken into account for the urposes of our present estimate the modest farthing would hrink considerably. Let it, however, suffice to assume, ithout refining upon the figures, that Londoners are pre-ared to support this great charitable work to the extent of n annual subscription of one farthing a head.

This is by no means an unfair way of estimating the result, or although it is quite true that a charge of whatever kind listributed evenly over the entire population in proportion to he number of heads would bear very unduly upon the poor, et if, on the other hand, the benefits conferred by hospitals re considered, it will, of course, be found that these are in preponderating measure realised by the most numerous and east wealthy classes of the community The families, including children, of the poor are no less dependent than the families of the rich upon medical attendance, and to a very large extent in the case of poor people this necessity is supplied by hospitals. An estimate of population, therefore, affords the best means of realising how the benefits of the hospital service are distributed, for no class is excluded from these benefits; and when it is realised that the return made in the form of the Metropolitan Hospital Sunday Fund works out at something less than one farthing a head it will, we think, be freely admitted that there is good reason for regarding it, not only as inadequate to the needs of the hospitals, but also as unworthy of the community which contributes it.

THE SMALL CONTRIBUTOR.

This is a view of the facts which should commend itself especially to persons of moderate or restricted means. To such the Metropolitan Hospital Sunday Fund affords a peculiarly fit opportunity of tendering support to the medical charities of London. A small subscription given in this way possesses both actually and sentimentally a value that it could not otherwise have. It is no small thing that the widow contributing her mite upon this occasion should be able to feel that it becomes part and parcel of a Fund large enough to form an indispensable part of the charitable revenues of this great city and yet drawn almost entirely from sources such as her own benevolence has opened up. Thousands of persons in London are so situated. The subscription list with its regulation guinea is not for them, and were it not for the recurrence of the Fund collections they would stand quite aloof, wishing well to their suffering neighbours, but being powerless to promote their well-being in any way.

It is from this class that the revenues of the Metropolitan Hospital Sunday Fund are chiefly drawn. Large contributions are the exception and rightly so. For although the Fund has claims upon the rich it has especial claims upon the poor, and the comparatively poor are so much the most numerous class that they preponderate by reason of their numbers, and must continue so to do as long as the Fund continues to command the general confidence and support of the people at large. It would, indeed, be a sad day when the struggling many withdrew from the support of this charity and left it to be carried on by the opulent few. The resources of the opulent are much more restricted than those of their poorer neighbours, and it is upon the sympathy of the many that any great undertaking must be built which, like that advocated to-day, requires ample and continuous pecuniary support. The days of "princely" munificence are past, the new word has not yet been coined, but the new order has appeared, and in due time we shall recognise by a suitable word that *the munificence of the masses* has in these later times replaced that of princes and has become the mainstay of all spontaneous movements upon a large scale.

THE GROWTH OF THE FUND AND THE GROWTH OF THE CITY.

The Hospital Sunday Fund, therefore, must as the first condition of success commend itself to the conscience and approval of the great public, and its success in the past affords strong evidence that it has not failed in this respect. But this is precisely the point at which it becomes difficult to understand why during the past few years there has been no regular increase in the annual collection. The growth above depicted imports growth of the need supplied, growth of the contributing community, and growth of the available resources. The enormous fact brought to our sight by these diagrams needs no insisting upon. In five years a town as large as Newcastle-on-Tyne has been added to London. In compensation for the additional responsibility that this increase of population has laid upon our hospitals proportionate subscriptions should have been added, and should continue to be added to the Fund. The £60,000 that was reached last year by a bound should now be easily forthcoming as a regular subsidy. But we cannot count upon this. We can hope for it and work for it, and even expect it, because of the justice of the expectation, but it may not arrive. The total subscriptions may recede again to £40,000, and lest it should so happen, let us consider the circumstances to which may be attributable the deficient interest in the objects of the charity.

One reason, and only one, affords a possible explanation.

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The churches we know have not wearied in any measure of this good work, but that the public may to some extent lose sight of it is credible. The very fact that the collection comes round with the regularity of an anniversary makes it easy for it to slip into a matter of routine, and as such to lose more or less of the human interest in which it takes its rise. If we are right in this surmise then the remedy for the shortcoming which we have at present to deplore must be sought in bringing home with force the forgotten facts concerning the medical needs of London.

This is a task which devolves mainly upon the clergy of various denominations, and they will certainly not be wanting in its performance. Whether it may be possible for them to increase the urgency of their appeals is a question upon which we do not presume to offer an opinion. If it be so, then we doubt not that they will fill the position, feeling with us that the object is worthy of their best and greatest efforts. The great public needs to be aroused both to an apprehension of the facts and also to a sense of responsibility

were relieved, 57,796 were cured, and 6730 died. But, as we have implied, the sense of personal interest is a less worthy, and in this case we are convinced that it is a less influential, motive than the sense of sympathy with the sufferers, for whom our hospitals afford the only available refuge. That tale of 103,249 in-patients speaks of untold suffering and absolutely invaluable relief; the 6730 deaths mean what no words can express in the way of softening the death-bed sorrows of the poor. But what these figures do not in any way pourtray is the suffering borne without the aid of skilled attendance and the elaborate appliances which the hospitals afford. Great as is the work actually done it leaves much unaccomplished and even unattempted by reason of the starved condition of the institutions. This is the voiceless grief, which more than any words, appeals to those who know the facts. This, if it could be painted in such wise as to be understanded of the people, would evoke a response such as has never yet been made to the advocacy of the Metropolitan Hospital

TABLE III.—COTTAGE HOSPITALS AND CONVALESCENT HOMES.

Name of Hospital.	Hospital Sunday Fund award.	In-patients.	Relieved.	Cured.	Convalescent homes.	Remaining under treatment.	Died.	Out patients' visits.	[illegible]
	£								
Metropolitan Convalescent	894	3,358	1,297	2,023	—	33	—	—	—
Bexhill ,, ...	412	1,622	451	1,137	—	34	2	—	—
All Saints ,, ...	757	3,545	1,923	1,441	—	116	5	—	—
Mrs. Gladstone's ,, ...	188	705	—	—	—	13	—	—	—
Hahnemann ,, ...	55	132	52	80	8	26	—	3,452	—
Hanwell ,, ...	27	—	—	—	—	—	—	—	—
Herbert ,, ...	41	403	226	141	—	25	2	—	—
Herne Bay (Baldwin-Brown) Convalescent..	34	324	—	—	—	—	—	—	—
Homœopathic Convalescent	14	184	—	—	—	—	—	—	—
King's College ,, ...	120	530	88	399	—	21	1	—	—
Mrs. Kitto's ,, ...	124	299	—	—	—	—	—	—	—
London and Brighton Female Convalescent	76	2,307	—	—	—	—	1	—	—
Mary Wardell Convalescent	139	247	—	—	—	—	—	—	—
Morley House ,, ...	289	793	798	—	—	67	—	—	—
Princess Frederica's Convalescent	21	148	—	—	—	—	—	—	—
[illegible]									
St. Andrew's (Clewer) Convalescent	234	611	507		—	65	9	—	—
Do. (Folkestone) ,, ...	344	1,932	—	—	—	59	—	—	—
St. John's Home for Convalescent Children.	82	256	—	—	—	—	—	—	—
St. Joseph's Convalescent Home	61	449	325	120	—	54	4	—	—
Convalescent Home for Poor Children, St. Leonards-on-Sea	179	788	—	—	—	39	1	—	—
St. Michael's Convalescent	55	197	—	—	—	—	—	—	—
Seaside ,, ...	206	—	—	—	—	—	—	—	—
Beckenham Cottage Hospital	69	118	9	91	—	11	7	—	—
Blackheath and Charlton Cottage Hospital	96	163	38	96	2	12	13	3,177	35
Bromley, Kent ,, ..	103	218	49	132	5	17	3	—	—
Chislehurst, Sidcup, &c. ,, ..	55	133	17	87	4	10	4	—	—
Eltham ,, ..	41	80	12	54	4	7	3	—	12
Enfield ,, ..	55	92	4	73	6	5	7	—	10
Epsom and Ewell ,, ..	96	111	13	89	21	6	9	—	11
Hounslow ,, ..	49	80	22	41	—	11	8	—	30
Reigate and Redhill ,, ..	66	215	27	137	20	20	6	—	41
Sidcup ,, ..	41	94	20	63	5	5	2	210	18
Warley ,, ..	11	37	—	37	—	4	—	—	—
Wimbledon ,, ..	55	117	14	88	—	10	1	100	18
Woolwich and Plumstead ,, ..	41	72	19	40	2	3	8	—	—
Establishment for Gentlewomen	151	127	2	78	—	12	3	—	—
National Sanatorium for Consumption ..	88	239	103	—	—	—	3	—	—
Invalid Asylum	76	191	—	—	—	24	2	—	—
Firs Home	55	45	15	—	—	14	16	—	—
St. Catherine's Home	48	32	29	12	1	12	3	—	—
	£5,500	20,989	5,651	6,458	78	740	123	6,939	175
Estimated to supply omissions	—	908	2,998	6,669	—	38	6	3,726	—
Total..	£5,500	21,897	8,551	13,127	78	778	129	10,665	175

for the support of the medical charities of London upon an adequate scale, and we venture, therefore, to submit a few considerations bearing on these points.

THINGS THAT THE PUBLIC SHOULD READ, MARK, AND LEARN.

The great public comprises a very wide range of classes and conditions of men, but none on whom the many-sided charity which comes to-day to the fore has not pressing claims. Of that largest class of all, distinguished neither by poverty nor riches, we have already spoken. To them the hospital is not simply a form of charity, but in a real and even an emphatic sense a resource, since in many emergencies they must and do resort to it for the relief of their own necessities. From this point of view the record of work done in the London hospitals during the past year constitutes an eloquent appeal. We take the following illustrative figures from the returns furnished to us by the hospitals:—In-patients treated 103,249, of whom 33,889

Sunday Fund. But if the materials for such an appeal are lacking experience is not wanting from which they could be supplied. Among the working classes there are but few persons of adult age who cannot tell of instances of cruel suffering patiently, and often heroically, borne in poverty and distressing circumstances which might have been greatly relieved if hospital accommodation had been available for its treatment. Such instances give point, and even poignancy, to the reflection that great as is the good work done by the hospitals of the metropolis it is unequal to the vastly greater requirements of growing London. And yet the Metropolitan Hospital Sunday Fund, as represented by offertories, does not grow.

THE IMPARTIAL WORK OF THE FUND.

No class of the community is beyond the reach of some claim on the part of the Metropolitan Hospital Sunday Fund. If the poor by special knowledge of the ways to which it administers have special reason to value

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its ministrations, the well-to-do, upon the other hand, are under a peculiar obligation to contribute to its support. It must never be forgotten that rich as well as poor appear as patients in the hospital wards. In this respect no distinction is drawn between one class and another when it is a question of accident or unforeseen emergency. The club man struck down by a cab in Piccadilly is equally welcome with the labourer crushed by a crane at the London Docks, and to the one no less than to the other the prompt aid which the hospitals afford is at such a conjuncture a question of life or death. Nor should it be forgotten in this connexion that to rich and poor alike the benefit accrues of the great schools of medicine which find in the hospitals of the metropolis the unsurpassed instruments of clinical instruction. It is, therefore, not upon a *different footing* that the appeal is rested which is to-day made to the wealthier classes, as well as to the preponderating number of the poorer classes. The difference is rather a difference of knowledge and experience. To the poor the problem is familiar, its urgency and its extent are well known and easily understood, whereas the resources which are available for dealing with it are much less perfectly apprehended. The rich may have some difficulty in appreciating with what crushing weight the burden of sickness bears upon people of narrow means, but at least they know that a contribution of £40,000 a year is a mere bagatelle when drawn from the length and breadth of London, and that it does not in any sense represent what the churches of the metropolis would accomplish under a genuine impulse of the enthusiasm of humanity.

It may indeed be said that wealthy Londoners are accustomed to contribute largely to the sustentation funds of the various hospitals, and that their contributions to this particular fund amount only to a small part of their whole benefactions flowing in these channels. And this is perfectly true. By financial and personal help, as by service upon committees and the like, the laymen of London take a noble part in hospital work. And we should be sorry indeed to say a word in disparagement of that personal interest in the well-being of some particular institution which is happily so widely diffused throughout English society. But this notwithstanding, the Metropolitan Hospital Sunday Fund has very special claims to the consideration even of those whose interests are most deeply involved in behalf of this, that, or the other institution. None more than these persons feel the painful sense of inability to respond to all the deserving claims that come before them, and none more than they yearn for larger means of help or the power by a sound economy to make such means as they command go farther and effect more good. The Metropolitan Hospital Sunday Fund exactly meets such a want.

TABLE IV.—DISPENSARIES.

Name of Dispensary.	Hospital Sunday Fund award.	Out-patients' visits.
Battersea Provident	£96	39,088
Bloomsbury ,,	16	—
Brixton, &c.	83	26,524
Brompton Provident	37	7,885
Camberwell ,,	137	100,149
Camden	19	—
Chelsea, Brompton, and Belgrave Provident	65	4 715
Chelsea Provident	18	—
City	120	—
City of London and East London	28	47,079
Clapham General and Provident	48	10,967
Deptford Medical Mission	20	15,958
Eastern	52	6,395
East Dulwich Provident	27	3,868
Farringdon General	62	—
Finsbury	76	40,035
Forest Hill	52	6,362
Gipsy Hill and Upper Norwood	—	—
Hackney Provident	10	—
Hampstead ,,	60	—
Holloway and North Islington	89	27,822
Islington	62	50,003
Kensal-town Provident	12	7,210
Kensington	96	9,930
Kilburn, Maida-vale, and St. John's-wood	59	3,678
Kilburn Provident Medical Institution	40	19,517
London	25	—
London Medical Mission	96	8,450
Margaret-street Infirmary for Consumption	—	—
Metropolitan	55	39,042
Notting-hill	30	1,227
Paddington Provident	55	6,875
Pimlico ,,	25	17,753
Portland-town	27	—
Portobello-road Provident	10	—
Public	69	14,823
Queen Adelaide's	55	22,810
Royal General	55	14,717
Royal Pimlico Provident	62	—
Royal South London	82	12,217
St. George's and St. James's	72	—
St. George's (Hanover-square)	59	9,240
St. John's-wood and Portland-town	40	20,000
St. Marylebone General	62	28,603
St. Pancras and Northern	62	19,200
South Lambeth, Stockwell, & North Brixton	62	12,909
Stamford-hill, Stoke Newington, &c.	76	35,670
Tower Hamlets	59	17,256
Walworth Provident	16	4,335
Wandsworth-common Provident	12	—
Westbourne Provident	21	9,215
Western	83	22,864
Western General	186	—
Westminster General	43	—
Whitechapel Provident	33	19,989
Estimated to supply omissions	£2,916 —	764,320 509,971
Total	£2,916	1,274,291

Give, Give, Give.

And that is our appeal on behalf of the Metropolitan Hospital Sunday Fund for this year.

The rich should give out of their bounty, and not only because they are rich, but because they are directly benefited by the hospitals.

The poor should give out of their poverty, and they need no reminding what the hospital means to them when they are sick.

To the benevolent-minded no scheme can commend itself as more worthy of their aid than a fund to benefit their suffering and poorer brethren.

In the eyes of the practical and inquiring, no less than in those of the benevolent, the Fund must find favour, for it represents order in the distribution of charity, while it strengthens the voluntary system of hospital support, of which we are all properly proud.

To all orders of mind, to all social grades, and to all creed alike the Metropolitan Hospital Sunday Fund must appear as a noble charity, splendidly directed, economically managed, justly administered, practical, and humane. Therefore, to all but one word remains to say—Give, GIVE, GIVE.

SUMMARY OF TABLES.

—	Hospital Sunday Fund award.	In-patients.	Relieved.	Cured.	Convalescent homes.	Remaining under treatment.	Died.	Out-patients' visits.	Accidents and emergencies
General Hospitals	£30,110	53,579	15,509	28,866	5,105	3,594	4,900	1,789,815	272,901
Special Hospitals	19,494	27,778	9,829	15,803	2,038	2,776	1,701	1,373,786	32,136
Cottage Hospitals and Convalescent Homes	5,500	21,892	8,551	13,127	78	778	129	10,665	175
Dispensaries	2,916	—	—	—	—	—	—	1,274,291	—
Total	£58,020	103,249	33,889	57,796	7,221	7,148	6,730	4,398,507	305,212

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A SYNOPSIS

SHOWING APPROXIMATELY THE NUMBER OF INDIVIDUALS (270 IN ALL) ENGAGED IN THE WORK

A GENERAL HOSPITAL

OF ABOUT 500 BEDS.

Medical Staff.

HOSPITAL.

Consulting Staff	4
Physicians and Surgeons	8
Assistant Physicians, Assistant Surgeons	8
Medical Officers to Special Departments	5
Anæsthetists	2
Medical and Surgical Registrars	2
Casualty Officers, Medical and Surgical	2
Resident Medical Officer	1
House Physicians and House Surgeons	8
Clinical Clerks, Dressers	40
Dispensary Department	6

CONVALESCENT HOME.

Resident and Visiting Staff	3
Dispenser	1
	90

Governing Body.

President	1
Vice-Presidents	9
Treasurers	2
Board of Management	24

Administrative Staff.

Secretary	1
Office Clerks	3
Collector	1
House Steward	1
Kitchen Department	5
Laundry Department	6
Domestic Servants	6
House Porters	6
Hall Porter	1

Religious Staff.

The Chaplain	1
Visiting Ministers	3
	70

Nursing Staff

HOSPITAL.

Matron	
Night Superintendent	
Ward Sisters	
Staff Nurses	
Probationer Nurses	
Ward Maids	

CONVALESCENT HOME.

Matron	
Nursing Staff	
Domestic Servants	
	11

TOTAL 270

THE METROPOLITAN HOSPITAL SUNDAY FUND.

Amounts received and disbursed in the year 1895.

Dr. — RECEIPTS *for the year ending 31st October, 1895.*

1895.	£ s. d.	£ s. d.
To Balance at Bank of England, 1st Nov., 1894	2,384 19 10	
,, Balance in hands of Secretary	12 2 0	2,397 1 10
,, Collections made at Sundry Places of Worship	38,338 15 8	
,, Collections at Schools	31 15 11	
,, Donations, including £14 14s. 0d. for Surgical Appliances	7,636 10	
,, Donations, Messrs. B. I. Barnato and others	10,000 0	
,, Donations, Members of the Stock Exchange	3,400 0 0	
,, Legacy: the late Crosby Lockwood, Esq.	50 0 0	
,, Dividend on £45,346 1s. 3d. Guesdon Bequest 2¾ Consols (¾ year)	904 1 9	60,361 4 2
		£62,758 6 0

Cr. — PAYMENTS *for the year ending 31st October, 1895.*

1895.	£ s. d.	£ s. d.
By Awards to 116 Hospitals	54,666 18 0	
,, Awards to 5 Institutions	412 10 0	
,, Awards to 58 Dispensaries	2,917 10 6	
,, Surgical Appliances	1,908 3 4	59,905 1 10
,, Rent	170 0 0	
,, Fuel, Gas, and Office Cleaning	23 2 2	
,, Furniture	1 15 0	
,, Printing and Stationery	258 19 8	
,, Stamps and Postage	85 6 10	
,, Advertisements	274 4 6	
,, Salaries and Wages	201 2 9	
,, Auditors' Fee (Messrs. Hart Bros., 1894)	10 10 0	
,, Sundries	4 10 11	1,624 11 10
,, Balance at Bank of England	1,216 10 11	
,, Balance in hands of Secretary	12 1 5	1,228 12 4
		£62,758 6 0

Audited and found correct, this 22nd day of November, 1895.

(Signed) W. H. PANNELL & Co., *Chartered Accountants*, Basinghall-street, E.C.

*** In the preparation of the voluminous statistics of hospital work which have been here digested and exhibited in collected form (and which have been specially supplied to us in response to our applications, and are quite independent of any returns made to the Metropolitan Hospital Sunday Fund Committee) we have been greatly indebted to a large number of secretaries and other officers of the various medical charities of the metropolis. To them we desire, as on many previous occasions, to tender our sincere thanks.—ED. L.

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The Croonian Lectures:

A CONTRIBUTION TO THE STUDY OF THE BLOOD AND THE CIRCULATION.

Delivered before the Royal College of Physicians of London,

BY GEORGE OLIVER, M.D., F.R.C.P. LOND.

LECTURE II.[1]

Delivered on June 4th, 1896.

ANIMAL EXTRACTS.

MR. PRESIDENT AND GENTLEMEN,—Some preliminary observations with the arteriometer having afforded me evidence that certain of the animal extracts (such as those of the suprarenal bodies, the thyroid gland, and the brain-tissue) when administered to healthy subjects by the mouth modify the calibre of the arteries, I was led to avail myself of the resources of the laboratory in order to determine the matter. I had been particularly struck with the constrictive effect of suprarenal extract and the dilating influence of thyroid extract on the radial calibre. In this investigation I had the invaluable coöperation of Professor Schäfer.[2] The extracts employed were those derived from the suprarenal bodies, the thyroid gland, the spleen, and the pituitary body. They were prepared for the most part with water (in the earlier part of the inquiry with glycerine) and either from the fresh glands or from glands dried rapidly at 38° C. The suprarenal extract is the only one of the series which has been investigated in any detail; but as the effects on the blood pressure have been determined in a preliminary way in the others I will refer to them before describing more particularly the physiological action of the suprarenal extract.

We found that the intravenous injection of thyroid extract produced a marked fall in the blood pressure, although the beats of the heart remained the same in frequency and strength. Therefore, it may be inferred that the lowering of the blood pressure was the direct result of increase in the calibre of the arteries, an inference which derives support from the observation which had previously been made with the arteriometer. This direct action on the vascular system is, however, probably only one of the various physiological relations borne by the gland to the organism; but it may be connected with important functions, such, for instance, as the heat-regulating function. In support of this position it may be mentioned that animals on which thyroidectomy has been performed and the subjects of myxœdema are particularly prone to suffer from subnormal temperatures. Furthermore, it has been demonstrated by Lorrain Smith that thyroidectomised animals react to change of temperature with abnormal rapidity, as indicated by the shortening of the time required for the augmented emission of carbonic acid which follows exposure to a low temperature.[3] It is, therefore, not unlikely that in myxœdema the withdrawal of the internal secretion of the thyroid which acts directly in dilating the vascular system may in a measure account for the reduction of the temperature so frequently observed and for the development of other signs of lowered vitality. We are not, however, prepared to assert that this effect of thyroid extract on the arterial wall is specific, for we have found that a similar result is obtained by the intravenous injection of decoctions of some other glandular organs—i.e., the parotid and sub-maxillary glands of the dog.

We have observed that the intravenous injection of spleen extract produces a somewhat characteristic curve of blood pressure consisting of a preliminary fall succeeded by a gradual rise, and by as gradual a return to the normal. The significance of this curve has not been as yet investigated. On the other hand, the pituitary and suprarenal extracts were found to possess the property of exciting powerful contraction of the arteries and of raising the blood pressure to a very marked degree. The action of both these extracts on the vascular system is not only different in character from that of the thyroid and spleen extracts, but is more energetic. Moreover, though they possess the common property of constricting the arteries, they themselves present certain points which differentiate the one from the other, such as the following: (1) The pituitary extract, though the effect of it is well marked, is less active than the suprarenal, for a much larger dose of it is required to produce the same rise of blood pressure; (2) the pituitary curve of blood pressure rises more slowly and is maintained for a longer time than the suprarenal curve; the active principle is, therefore, less readily eliminated from the blood than that of the suprarenal; (3) the pituitary extract also differs from the suprarenal when injected into a dog with intact vagi in failing to inhibit the heart's action; and (4) the pituitary does not possess the characteristic action of suprarenal extract in accelerating the heart's action in an animal with cut vagi or when atropinised; on the other hand, it then generally diminishes slightly the frequency and at the same time augments the beats of the auricle and ventricle.

The action of the two extracts coincides, however, in the following respects: (1) the rise of blood pressure is the combined effect of (*a*) contraction of the arterioles and (*b*) augmentation of the heart's beats; (2) the effect on the heart and the arteries is direct or peripheral, for it occurs equally well with the cord cut or the bulb destroyed, and when added to Ringer's circulating fluid and perfused through the vascular system of the frog with the nervous centres destroyed the flow of fluid is greatly diminished; and (3) boiling for a short time does not destroy the activity of the extracts. The action of suprarenal extract on the circulatory system may be divided into that which affects the heart and that which affects the arteries.

(*a*) *The effects on the heart* have been derived from observation of the isolated frog-ventricle and of the mammalian heart, the former being brought under the influence of the extract by perfusion in Ringer's circulating fluid and the latter by intravenous injection. The heart of the common frog was tied in the usual manner to a perfusion cannula and fed through this with the circulating fluid in the apparatus elsewhere described.[4] It was observed that when the ventricle failed to beat the suprarenal circulating fluid invariably produced spontaneous contraction; that when the contractions only recurred after long intervals it accelerated and regulated the rhythm; that when successive groups of contractions (Luciani's groups) appeared with varying asystolic intervals it increased the number of the contractions in each group until the rhythm became uninterrupted; and that when the ventricle was beating feebly it tended to increase the strength of the contractions. Furthermore, it was found that with a certain proportion of the extract the time of the pause between two successive contractions is markedly reduced, and with a further proportion of it the pause may be entirely obliterated and the beats succeed one another without any apparent interval. A further stage in this action which obtains with solutions of still greater strength (1 per cent. and upwards) is that the beats begin to run the one into the other, one contraction succeeding another before the completion of the preceding diastole. The result is that the dilatation is imperfect and may ultimately be almost entirely or quite abolished, so that eventually the heart stops in systole. If now, however, the suprarenal circulating fluid is washed away with the ordinary circulating fluid the heart may completely recover and the same experiment may be repeated several times in the same fashion. The effects of the extract on the mammalian heart were observed in dogs, cats, and rabbits. The contraction of the auricle and ventricle were separately recorded by means of the apparatus described in the paper which has appeared in the *Journal of Physiology*.[5] The effects produced were found to be entirely different, according as the vagi are intact or are cut or paralysed by atropine. When the vagi are uncut the most striking effect is to slow or even to entirely abolish for a time the contraction of the auricles. Their action, after the period of latency necessary for the passage of the solution to the heart, is rapidly stopped in diastole; in other words, they are powerfully inhibited. But usually this inhibition of the auricles is preceded by a short period of augmentation.

[1] Lecture I. was delivered on June 2nd and published in THE LANCET of June 6th, and Lectures III. and IV. were delivered on June 9th and 11th respectively.

[2] The results of this research have appeared in the Journal of Physiology, vol. xvi., 1894, and vol. xviii., 1895.

[3] On Some Effects of Thyroidectomy in Animals, by J. Lorrain Smith, M.D.; Journal of Physiology, vol. xvii., p. 378.

[4] Journal of Physiology, vol. xviii.

[5] Journal of Physiology, vol. xviii., 1895

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When the auricles are inhibited the ventricle continues to beat with an independent slow rhythm. On the other hand, when the vagi are cut, or when the animal is atropinised, the effect of the extract on the heart is exactly reversed—namely, the contractions of the auricle and ventricle are markedly augmented and accelerated. Therefore, it is obvious that the inhibitory effect of the extract is not derived from a direct action upon the heart. It would seem, therefore, from these observations that suprarenal extract exerts a powerfully stimulant action on the heart.

(*b*) *The effects on the arteries.*—That contraction of the arteries and arterioles is a prominent effect of the extract has been abundantly demonstrated by the application of Mosso's plethysmograph to the limbs and of Roy's oncometer to the spleen and kidney, by perfusing Ringer's circulating fluid containing the extract through the arterial system of the frog after destruction of the nervous system and noting the result of the passage of the extract in altering the rate of flow through the bloodvessels, and by direct ocular evidence of the large and small bloodvessels. This contraction is so great as to produce an enormous diminution in the volume of an organ such as a limb or the spleen or the kidney, and in the case of the frog with its nervous system destroyed almost complete cessation of the flow of circulating fluid through the arterioles. Consequently the blood pressure rises very considerably, even though concomitant vagus action causes a great diminution in the rate of the heart's action. Though this increase of the blood pressure is large while the vagi remain uncut, it becomes enormous—it may reach four or five times its original level—when they are cut or when their cardiac ends are paralysed by atropine; then the arterial pressure becomes so great as to passively expand the larger sized arteries until they are seen to swell almost to bursting and to be proportionately elongated. The arterial contraction and the consequent rise of blood pressure are so decided that the strongest stimulation of the depressor nerve does not inhibit the contraction and reduce the pressure. Contraction of the spleen took place invariably and to a far greater degree than obtained with the limbs.[6] Though we were unable to record any plethysmographic observations on the intestines it may be fairly assumed that the great rise of the blood pressure which invariably follows the injection of the extract is in all cases due very largely to the contraction of the arterioles of the splanchnic area. We have proved that this contraction is not indirectly produced through the vasomotor centre, but is an immediate effect on the muscular tissue of the smaller arteries in mammals, for it occurs equally well after destruction of the bulb or section of the cord, or, in the case of the arm, after severance of the brachial plexus, and in the frog with the brain and spinal cord completely destroyed. In this sketch a portion only of the ascertained facts, the effects of the extract on the organs of circulation can only find place. It may, however, be further stated that we ascertained that the active principle is contained entirely in the medulla of the gland, is absent from the organ in advanced Addison's disease, is dialysable, and is not destroyed by boiling for a short time, or by acids, or by peptic digestion, but may be destroyed by long boiling or by alkalies, and that it is not neurine or a salt of neurine, as was supposed by Cervello[7] and Marino-Zucco.[8] It has so far eluded isolation. Mr. Moore has pointed out that it is probably identical with a substance which was first described by Vulpian[9] as peculiar to the medulla of the suprarenals (its reactions not being afforded by any of the other glands), the solutions of which assume a rose-red colour on exposure to the air or to oxidising reagents.[10]

We have observed that the intravenous injection of digitalis and ergot produces quite insignificant effects on the heart and the arteries by the side of those obtained from the smallest dose of the extract which we have employed. We have, however, found one substance which furnishes an effect practically identical, and that is nicotine. This fact is of some interest, because Krukenberg in 1885 described a substance which he obtained from the suprarenal bodies having a chemical formula almost identical with that of pyridine,[11] and nicotine may be regarded as a pyridine derivative. The active principle of the adrenals is, however, not pyridine, for the observations of Lauder Brunton and Tunnicliffe[12] have shown that the physiological action of that body is quite different from that of the suprarenal extracts, but it is not improbable that it may eventually be shown to be an organic alkaloid the nucleus of which is pyridine. Perhaps the most interesting and important fact in regard to the active principle of the adrenals is the extreme minuteness of the dose that is necessary to produce the results just described, and in this respect it undoubtedly agrees with what is known in regard to the potency of nicotine. Our experiments have shown that so small a portion of the extract as is equivalent to 5½ milligrammes (0·0055 gramme) of the dried gland will induce the maximum effect on the heart and the arteries of a dog weighing 10 kilogrammes, or ½ milligramme for each kilogramme of body weight. How infinitesimally small, therefore, must be the proportion of the active principle injected in such a diminutive dose of the gland will be apparent when deductions are made for the cortex (¾ of the gland in weight), which we have proved to be devoid of physiological activity, and for the proteid and other material (⁹⁰⁄₁₀₀ of the dried gland) which are not dialysable. So that it follows that a maximal effect is produced by not more than fourteen-millionths of a gramme of the active adrenal material per kilogramme of body weight—an infinitesimal dose indeed.[13]

Finally, the evidence which the arteriometer has yielded bearing on the effect of adrenal treatment on the circulation in man may here be very briefly quoted. That evidence entirely coincides with the physiological facts. It has been repeatedly observed that when circulatory compensation was impaired, as in anæmia and in other asthenic conditions, to which reference was made in the first lecture, the exhibition of the adrenal preparation was followed in a few days by restoration of the postural radial measurements, and this observation has been repeatedly checked by the different effects produced by omitting the treatment and by resuming it. The accumulation of a large number of concurring observations in which small doses of the dried medulla of the gland[14] have been prescribed in various forms of vasomotor (splanchnic) inadequacy has led to the conviction that suprarenal treatment in such cases is a useful addition to our therapeutic resources, and that it should be applied rather from this wider view based on its physiological action than merely from the exclusive one suggested by Addison's disease.

The foregoing observations tend to show that the ductless glands furnish to the blood certain materials of great potency which are necessary for the purpose of modifying in various ways the circulatory mechanism. It can, therefore, no longer be said that the whole of that office should be allotted to the nervous system. Doubtless the master-tissue exerts the dominant influence, and internal secretion derived from the ductless glands is but a comparatively subordinate agent. Though subordinate, it is, however, a modifying agent of some importance to the nutrition of the tissues and the well-being of the organism—a fact which becomes pathologically patent enough whenever one of these glands becomes the seat of degeneration. Inasmuch, however, as observation has shown that the activity of the products they elaborate is not destroyed by the digestive act an avenue is thus provided for the operation of the remedial power of physiological medicine.

MASSAGE.

It is agreed by all authorities on massage that the circulation of blood through the manipulated tissues is accelerated and increased. This fact has, moreover, been clearly demonstrated experimentally on dogs and cats by Lauder Brunton and Tunnicliffe, who determined the amount of blood which issued from the efferent vein derived from the group of muscles manipulated, the observation having been made immediately before, during, and at various intervals after the application of the massage. These observers established the following conclusions:—"1. During the massage of muscles the flow of blood through them is increased. 2. Immediately after the cessation of

[6] In a paper on the Rhythmic Contractility of the Spleen, read before the Royal Society last January, Professor Schäfer and Mr. Moore showed that suprarenal extract caused an enormous contraction of the spleen followed by an increase of the rhythmic waves.

[7] Archives Italiennes de Biologie, tome vii., 1886.

[8] Chemisches Centralblatt, 1888.

[9] Comptes Rendus, tome xliii., 1856.

[10] I must particularly refer you to the results of Mr. Moore's work on this subject carried out in the Physiological Laboratory of University College, communicated to the Physiological Society, and published in the Journal of Physiology of last year.

[11] Virchow's Archiv, Band ci., 1885.

[12] Journal of Physiology, vol. xvii., p. 272.

[13] Shäfer: Brit. Med. Jour., vol ii. 1895.

[14] The medulla was rapidly dried at 38° C. and immediately formed into pills with an impervious coating so as to preserve the product from atmospheric changes.

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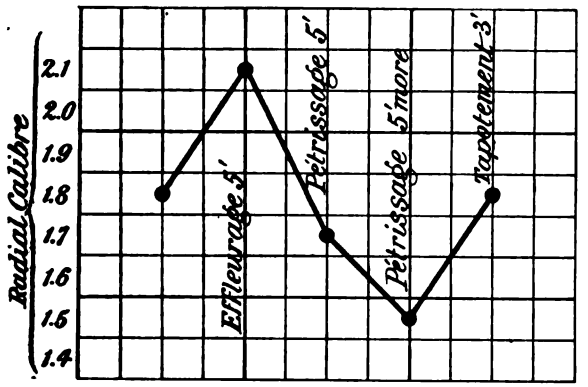
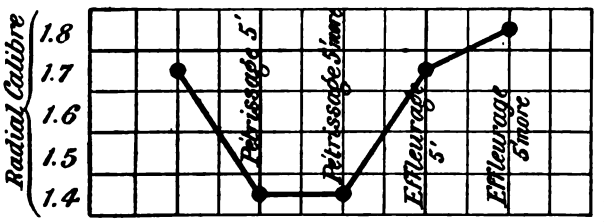
massage an accumulation of blood occurs in the massaged muscles; this is rapidly followed by an increased flow through the muscles. 3. The massage of a considerable muscular area causes first a slight rise in the general blood pressure; this is followed by a fall which in some cases amounts to one-fifth of the initial blood pressure.[15] The results of my observations in man coincide with these conclusions. The local effects on the radial pulse are easily learnt by applying the various forms of massage to the muscles of the forearm. Figs. 6 and 7 show that the lighter and superficial manipulations (such as stroking, effleurage) and vibratory movements or percussion (such as what is known as hacking, punctation, slapping, &c.) raise the radial blood pressure and calibre, and that the intermittent rolling and squeezing of the muscular tissue (pétrissage) reduce them. The immediate effect of all the forms of massage is to raise the blood pressure and to enlarge the calibre of the artery. This preliminary stage is maintained for some time while the more superficial and vibratory manipulations are being

FIG. 6.



Effects of different forms of massage on the radial calibre.

FIG. 7.

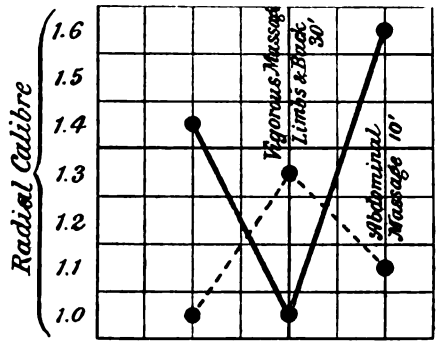


Effects of different forms of massage on the radial calibre.

employed, but it is very transitory indeed when that form of massage is applied which freely moves the muscular tissue and is quickly followed by a very decided and sharp reduction of the radial calibre.

From this it would seem probable that the first effect of massage in its various forms—and an effect which is, moreover, maintained throughout the application of the superficial and vibratory manipulations when limited in duration—is to induce vasomotor contraction in the terminal vessels, and thus to raise the blood pressure and the calibre in the intermediate arterial tubing between them and the heart. This may, therefore, be regarded as the vasomotor tonic aspect of massage, when that process assumes the forms of stroking, vibration, and percussion, which therefore raise arterial tension.[16] When, however, the muscular tissue is freely manipulated and rolled the vessels therein dilate, and the flow of blood through them is increased and accelerated by the rapid manipulations acting in the manner of a supplementary heart, and the blood pressure and calibre of the radial and other systemic arteries, being thus short circuited as it were, fall. This is the vasomotor relaxant effect of massage which reduces arterial tension. When the muscles of all the limbs are manipulated the radial calibre and pressure fall (see Fig. 8). There may be perceived a larger ictus after the manipulations, but it is unsafe to infer therefrom that the radial calibre is increased, for arteriometric measurement has shown that when the pulse tension is reduced the pulse-stroke generally feels larger, though the calibre of the vessel is actually diminished. How is this reduction brought about? The diversion of the blood to the capacious periphery located in the muscles is no doubt a leading cause of it. But there is some evidence that points to the conclusion that this may not be the sole cause. Figs. 8 and 9 illustrate this point.

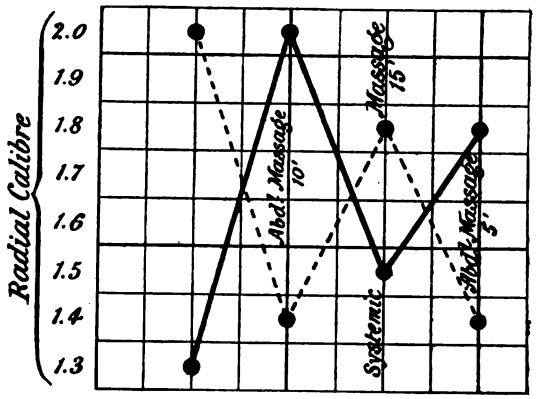
FIG. 8.



Effects of systemic and abdominal massage on the radial calibre. Male, aged thirty-nine years. General wasting. Recovered 1st. from rest, massage, and Swedish movements in three weeks.

It has been observed that when vigorous massage is applied to the limbs and the back for twenty or thirty minutes, the normal postural variations of the radial calibre and pressure are very apt to become—if they do not invariably become—reversed, so that they measure less in the sitting than they do in the recumbent posture, and when this happens it has been found that manipulation of the abdomen for eight or ten minutes restores the normal formula of the pulse. It would, therefore, seem probable

FIG. 9.



Effects of systemic and abdominal massage on the radial calibre. Male, aged twenty-five years. Neurasthenia.

that massage, when confined to the systemic muscles, disposes to the accumulation of blood within the capacious venous system of the abdomen. It will be observed that in Case 2 (Fig. 9), a neurasthenic subject, the normal postural radial measurements were reversed before the application of massage; that abdominal massage for ten minutes restored

[15] On the Effects of the Kneading of Muscles upon the Circulation Local and General. By T. Lauder Brunton, M.D. Edin., F.R.S., and F. W. Tunnicliffe, M.D. Lond. Journal of Physiology, vol. xvii., 1894. Klein also showed that kneading of the muscles of a rabbit's leg produced a fall of the blood pressure.—Skandinav. Archiv für Physiologie, Band i., p. 247, 1887. These observations have recently been confirmed by Reid Hunt, Journal of Physiology, vol. xviii., 1895, p. 389.

[16] Dr. W. Balfour eighty years ago wrote: "Percussion, instead of repelling, creates an afflux of nervous energy and sanguineous fluid to the part. Vessels in a state of atony are thereby roused to action and circulation is promoted."—Illustrations of the Power of Compression and Percussion in the Cure of Rheumatism, Gout, and Debility of the Extremities and in Promoting Health and Longevity, by Wm. Balfour M.D. Edin., 1816.

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them; that the reversed postural formula was reproduced by massage of the systemic muscles; and that the normal measurements were once more restored by manipulation of the abdomen. In corroboration of the position that abdominal massage may raise the blood pressure there are also the observations of Glovetzky. This observer made a large number of experiments on men and dogs to show the effects of abdominal massage on the circulation. He found that the upper half of the body increased in weight after the *séance*, as shown by Mosso's balance, and plethysmographic measurements proved that during the sitting both the upper and lower extremities increased in volume, but returned to their normal size after the massage. The blood tension and the intra-cranial pressure invariably rose during the massage and the elevation lasted for a certain period afterwards.[17] While referring to abdominal massage it should, however, be remarked that though a short application of it may restore the normal contraction of the vessels supplied by the splanchnic nerves the continuance of it beyond a very limited period is apt to defeat the aim in view, for then it is not improbable either that the contractility of the vessels becomes exhausted and dilatation of them is thus favoured or the heart's action is lowered through reflex over-stimulation, so that it would seem to be best, as a rule, to apply massage to the abdomen in some of its vibratory forms and for a brief period only and after the general massage has been performed.

How far is massage comparable with exercise? It has been pointed out that in exercise—local and general—the volume of the limb is considerably increased from the afflux of blood, and probably also from the infiltration of watery fluid from the gorged vessels into the substance of the muscles. Volumetric observation of the arm has shown that massage when applied for a short time—e.g., for from seven to ten minutes—generally induces a slight diminution of the limb.[18] Therefore it would seem probable that any watery exudation that may flow from the blood during the manipulations is pressed forwards from the lymph spaces into the lymphatics. In the fourth lecture it will be shown there exists some evidence in favour of the view that in massage the blood does yield an effusion of fluid as in exercise, but that it is dispersed by the process as rapidly as it is exuded, and consequently the volume of the manipulated limb is not increased. This, then, is the only point in which it has been found that the local effects of massage differ from those of exercise.

The practical outcome of these observations, which probably coincide in the main with the teaching of general experience in regard to massage, seems to be the following. Massage should not be prescribed and performed in a mere perfunctory routine fashion, as is to be feared it too often is; but, like other therapeutic measures, it should be applied with due discrimination. The leading features of the circulation are the best indications for the selection of the kind of manipulations to be adopted, for the limitation of the time of their application, and for the distribution of them, whether mainly to the viscera or to the systemic muscles. When, for example, the vasotonic effects are sought for the manipulations should partake chiefly of the nature of vibration or percussion, and in those cases in which muscle-kneading is resorted to percussion should terminate the process. When, on the other hand, the aim is to reduce arterial tension and to relieve the ventricular effort the deep movements should be preferred throughout and should be applied only to the limbs and back, and the abdomen should not be manipulated.

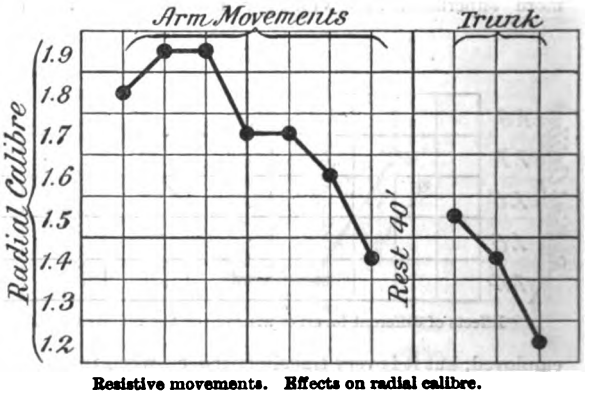
RESISTIVE MOVEMENTS.

It is scarcely necessary to remind you that for many years it has been known that certain exercises in which the operator offers resistance are of special value in the development of the muscles and in the acquirement of muscular tone and vigour. The system of exercises of this character to which I refer is known as the Swedish system. Nearly fifty years ago Saetherberg of Stockholm applied this method to the treatment of heart disease and reported his results some fifteen years later,[19] and following him one or two other observers have shown the value of resistive gymnastics in cardiac disease. But the method has only of late years acquired prominence as a definite therapeutic mode of treating failing compensation of the heart since the brothers August and Theodor Schott modified it in certain respects and applied it under proper restrictions either in conjunction with, or apart from, the baths administered at Bad Nauheim. The few observations to be adduced refer only to the physiology of these exercises, or, rather, as to how the results which are believed by some to be obtained from them are brought about.[20] Two somewhat conflicting theories are entertained. On the one hand, Dr. Theodor Schott ascribes it to reflex stimulation of the cardiac inhibitory nerves, causing the heart to beat more forcibly and more slowly; on the other hand Dr. Bezly Thorne,[21] Sir William Broadbent, and Dr. John Broadbent refer it to dilatation of the arteries supplied to the muscles.[22] I have merely to submit a few observations on several healthy subjects—ranging in age from thirty-two to forty-six years—which may be regarded as having a bearing on one of these views.

In one case, a healthy medical man aged thirty-seven years, the five arm movements were distributed over thirty minutes, the intervals of rest being equal to the duration of the exercises. At the termination of the first exercise the calibre was found to be two points and the pressure ten points higher; but after each of the four subsequent exercises the calibre and the pressure were observed to fall rapidly, and at the close of the observation the former was found to be nearly 1 m.m. and the latter thirty points lower than the initial records. The frequency of the pulse fell from 88 to 82 (sitting).

In another case, a healthy man aged forty-six years subjected for thirty minutes to the arm exercises followed by forty minutes' rest and then succeeded by the three trunk movements, there was also an initial rise of radial calibre and pressure followed by a rapid fall; and after the long interval of rest this reduction was further intensified by the trunk movements (Fig. 10). The pulse-rate fell from 84 to 74 sitting.

FIG. 10.



Resistive movements. Effects on radial calibre.

In a subject aged twenty-six the volume of the arm was measured before and after four arm exercises of two minutes, each interrupted by one minute of rest. The initial volume of 1648 c.c. was increased to 1696 c.c. and the increment was entirely removed by the application of massage for fifteen minutes, and was replaced by the resistive movements for ten minutes (Fig. 11). It has been observed that the increased volume caused by the resistive exercises may persist for several hours.

These observations in healthy subjects have shown that the slow resistive exercises adopted by Dr. Theodor Schott produce the following effects on the limb and on the radial pulse: (1) an increase in the volume of the limb; (2) at first a rise and then a decided fall in radial blood pressure and calibre; and (3) a reduction of the frequency of the pulse.

[17] See a Treatise on Massage, by D. Graham, M.D., New York, 1890.

[18] The diminution is by no means invariable. I have repeatedly measured an increased volume of the arm after vigorous massage for fifteen minutes. Apparently the initial contraction of the peripheral vessels which causes the diminution is soon replaced by dilatation of them when the volume of the limb increases, even though centripetal or amatriptic massage has been thoroughly applied.

[19] Hygeia, 1862, quoted by Dr. Hermann Nebel of Frankfort, THE LANCET, April 11th, 1896.

[20] It is beside my purpose to touch upon the disputed clinical question as to whether either the immediate or the remote effect of the exercises is to actually reduce the dilatation of the cardiac chambers or only to apparently do so. Reference should be made to an instructive contribution by Dr. Leith bearing on this point and on the physiology of the resistive exercises in THE LANCET of March 21st, 1896.

[21] Brit. Med. Jour., vol. i., 1896, p. 653.

[22] The Practitioner, vol. liv.

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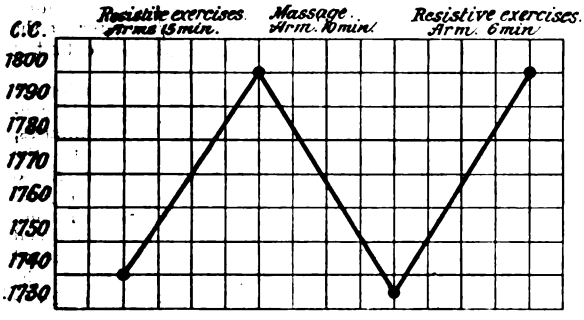
The reduction of the radial pressure and calibre is no doubt due to the diversion of a large volume of blood to the capacious muscular periphery. The immediate increase of the volume of the limb is direct proof of this fact; but, as in ordinary exercise, the persistence of the enlargement for many hours shows that it is not due entirely to the temporary filling of the vessels within the muscles, but probably arises from an infiltration of fluid derived from the blood into the

FIG. 11.



Resistive movements and massage; contrary effects on arm-volume.

muscular tissue. This position is, moreover, confirmed by the results of an examination of the blood to which reference will be made in the last lecture. It is, therefore, obvious that this system of regulative movements produces all the local physiological effects of exercise; but it prominently differs from ordinary exercise in one respect—namely, in the slowing of the heart's action.

It has been shown that in general exercise the condition of the radial artery does not truly indicate the degree of tension that exists within the central arterial system from the augmented propulsion of blood into it, for the blood pressure at the point of observation is reduced by the dilatation of the branches which at higher points convey the increased flow of blood to the muscles. In the early stage of exercise the radial tension is increased; but this increase is transitory and is replaced by a reduction when the muscles begin to monopolise the blood supply. Exactly the same thing occurs as a result of the resistive exercises. As a matter of fact it is known that in general exercise there is an increase of the mean blood pressure, notwithstanding the enormous diversion of blood to the muscles.[23] But if the resistive movement method is but a form of exercise, why should it slow the heart while exercise accelerates it? It may be presumed that there is in both a rise in the mean blood pressure. According to Marey's law there should be in both a slowing of the heart's action. In exercise it is obvious that the operation of this law is disturbed by other concomitant conditions, which determine an acceleration of the vascular pump, and by the increase of the respiratory movements. Now when the resistive exercises are practised the greatest care is taken not to allow the movements to accelerate the patient's breathing, and he is directed to breathe calmly and regularly, so there is eliminated from this mode of exercise the main, if not the sole, cause of the acceleration of the heart which is invariably present in ordinary exercise, and the slowness of the vascular pump is just as likely, perhaps more likely, to be due to a slight rise in the intra-aortic pressure as to reflex cardiac inhibition (the theory of Dr. Theodor Schott). The former view, which was pointed out by Dr. Saundby,[24] is more in accord with our knowledge of the physiology of exercise than the latter; and, moreover, it affords a reason why the exercises are regarded by Dr. Schott and others as unsuited to cases of myocarditis, of aortic aneurysm, and of advanced arterio-sclerosis. The examination of the radial pulse by means of the finger and of the sphygmograph affords but equivocal evidence bearing on this point, and from what we know of the anatomical relations of the radial artery to the muscles, and of the physiological influence of the circulation through the muscles on the radial tension, it becomes, I think, somewhat doubtful if the radial pulse can afford trustworthy evidence of any alteration in the blood pressure which may be induced in the large arteries by the exercises.

[23] A Text-book of Physiology by Professor M. Foster, F.R.S., p. 350.
[24] Brit. Med. Jour., vol. ii., 1896, p. 1081.

It should be observed that the retardation of the heart's action as well as the copious delivery of blood into the muscular periphery must greatly limit and reduce any rise of arterial blood pressure that may take place. Hence these modulated movements throw less strain on the central arteries than ordinary exercise. The slowing of the heart is, therefore, a favourable sign; for it is an indication that the rise of blood pressure is being reduced by inhibition and that the ventricle is not being subjected to an injurious strain by the exercises, and is duly responding to them in a more complete delivery of the blood. Doubtless the immediate relief to the loaded heart afforded by this therapeutic method should be ascribed to the aspiration of a large volume of blood into the capacious muscular periphery by means of the tonic contraction of all the systemic muscles, so gentle and so maintained as just to fall short of stimulating the respiratory centre.[25] The blood thus determined to the periphery must gradually return to the heart; and if the relief obtained is entirely due to this diversion of the blood it will be of comparatively short duration. But there is some reason to believe that the volume of the blood is reduced during its sojourn through the muscles, and if the fluid withdrawn from the blood lodges for some time in the muscular tissue the intervals of relief should be prolonged.

The total outcome, therefore, of the exercises is a transference of blood from the venous to the arterial side of the circulation and a probable reduction of the volume of the blood. My observations support Dr. John Broadbent when he says: "The slow movements of each limb bringing into action different groups of muscles in turn causes a flow to those muscles. The contraction of the muscles being slow and gentle does not rapidly force out the contained blood or compress the veins, so that by the time each group of muscles has been brought into action the vessels in them are dilated and full of blood. Hence a large amount of blood has been withdrawn into the muscular system; this gives relief to the heart, tending to empty the left ventricle and enable it to contract down more completely on its contents. At the same time the peripheral resistance is lessened by the vascular dilatation, so that the left ventricle is better able to drive the blood through the system. The backward pressure in the left ventricle being diminished the obstruction to the flow of blood through the lungs is lessened and the right ventricle is relieved. Further, the arterioles and capillaries being dilated will receive a larger proportion of blood, which will be transferred from the venous to the arterial side of the circulation. The venous stasis and turgescence which give rise to the hepatic enlargement are thus relieved and the liver diminishes in size."[26]

Since making these observations I have had but few opportunities of testing the application of them to patients. I am indebted to Dr. Kingscote of Salisbury for one such opportunity. In that case—an anæmic woman aged fifty-three—the arm volume was increased, but only to a little over 16 c.c., after the gentle application of the resistive movements to the arms only for twenty minutes (including the intervals of rest). The large area of cardiac dulness, superficial and deep, was undoubtedly lessened. The frequency of the pulse was reduced from 80 to 76 (sitting) and from 72 to 68 (recumbent). The reversed radial calibration (1·3 mm. sitting and 1·6 mm. recumbent) was restored after the movements (1·7 mm. sitting and 1·2 mm. recumbent), so that in this case it may be inferred that there was before the movements an excess of blood on the venous side of the circulation which disappeared after the movements. As a result of the exercises we have, on the one side, reduction of the cardiac dulness, and, on the other, a greater charge of blood in the systemic arteries and an increase of the limb volume.[27] I think it is not improbable that under physiological conditions the ventricular output is not, as a rule, ample enough to maintain the normal volume of blood in the arteries while they are being largely depleted by the increased drain into the muscles in a state of vigorous contraction, whereas when the ventricle is dilated—which involves dilatation of the other chambers of the heart—and can be incited to throw off the augmented load of residual

[25] Dr. Harry Campbell has also pointed out that the total delivery of blood to the right heart is lowered in consequence of the contraction of the muscles compressing the veins (splanchnic and systemic).—Brit. Med. Jour., vol. ii., 1895, p. 1325.
[26] On Treatment of Chronic Heart Disease by the Methods of Dr. Schott of Nauheim, by John F. H. Broadbent, M.D.Oxon.—Practitioner, vol. liv., 1895.
[27] This patient made favourable progress. See Fifteen Months' Practice of the Schott Methods for the Treatment of Chronic Affections of the Heart, by E. Kingscote, M.B. Edin., THE LANCET, March 21st, 1896.

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blood, the arterial tension may rise in spite of the increased flow into the muscles. That seems to me to be the reading of the facts which I have observed. When compensation is restored by the exercises "there is thus" as Sir William Broadbent says, "a transfer of blood from the venous to the arterial system, which is the exact reverse of the tendency attending most forms of heart disease."[28]

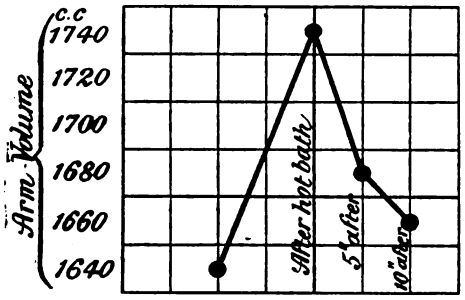
Before leaving this subject I must express my conviction that this strictly physiological mode of developing and invigorating the walls of the heart, when applied with proper care and discrimination, is a therapeutic method of some value, and is a distinct addition to our resources for the treatment of failing compensation of the heart. I have observed several times that it has restored compensation after the complete failure of drugs and that it is in suitable cases a useful auxiliary to other treatment. Like any other remedial method of decided power, it may do harm when inappropriately or improperly applied. In all cases I have found that the greatest caution should be exercised—especially in the early application of the method—to reduce the rate of the exercises to a minimum. There is often a disposition on the part of the operator to quicken the speed; that should always be deprecated unless this acceleration is fully warranted by the improvement attained. There is no reason why the principle which underlies this physiological method of treatment—namely, tonic contraction of successive groups of muscles—should not be attained in other ways and especially by mechanical means. Much may be done by the patient himself without an operator, and it has been found that auto-resistive exercises are useful in maintaining the advantage gained in the first instance by the ordinary application of the method.

BATHS.

The influence of baths on the circulation is too large a subject to be dealt with in the few minutes that can here be devoted to it. I will, therefore, touch quite briefly on only one or two points. Apart from the modifying influence exerted by the constituents of mineral waters, it may be said that the leading effects of baths on the circulation are due to temperature; and as the results of observation with the arteriometer coincide with the generally accepted views on the influence of baths and temperature on the vasomotor system I will merely state the conclusions which they support.

Hot immersion baths (from 100° to 105° F.) quickly reduce the radial calibre and pressure from the rapid dilatation which takes place in the arterioles and the cutaneous periphery. From this cause the volume of a limb taken immediately after the immersion is found to be considerably increased, but the increment rapidly subsides. In one example, the initial volume of 1640 c.c. was raised by the hot bath to 1744 c.c., which fell in five minutes to 1680 c.c. and in ten minutes to 1664 c.c. (Fig. 12). The

FIG. 12.



Hot bath. Transitory effect on arm-volume.

enlargement is obviously due to a temporary tergescence of vessels, and therefore differs from the persistent and larger one caused by exercise.

Warm immersion baths (from 96° to 100° F.) enlarge the radial calibre, though after a certain time the peripheral vessels become relaxed and filled and the radial is consequently reduced.

Turkish baths, like hot immersion baths, quickly congest the cutaneous peripheral vessels and the veins and consequently reduce the arterial pressure. When followed by the cold shower the arterial pressure immediately rises, and the radial calibre consequently increases, but may not quite attain its former size. It will be shown in the fourth lecture that the volume of the blood is frequently much reduced.

Hot foot-bath.—The well-known revulsive action of the hot foot-bath in reducing the arterial fulness in the upper part of the body has been illustrated by the arteriometer, for it has shown that an immersion of twenty minutes may reduce the radial diameter from 2·2 mm. to 1·3 mm. The same fact was demonstrated by Winternitz as the result of the warm sitz-bath, for he found that the plethysmograph indicated a reduction of the size of the arm,[29] and Schüller observed that the vessels of the exposed pia mater of the rabbit were diminished in size in proportion to the extent of the body immersed in warm water.[30]

Cold baths.—It has been observed that immersion in plain water of temperatures below 90° F. produces contraction of the systemic arteries within three minutes, the amount of contraction being proportionate to the reduction of the temperature. For example, a radial calibre of 2·2 mm. in a subject aged twenty-two years was diminished by 80° F. to 2·0 mm; 70° to 1·7 mm.; 60° to 1·5 mm.; 50° to 1·4 mm.; 40° to 1·3 mm. It would seem from the experiments of Schüller that the blood thus averted from the outer vascular area congests the vessels within, for on immersing rabbits into cold baths he observed dilatation of the vessels of the pia mater (exposed by trephining) in proportion to the extent of immersion.[31] This diversion of the blood from the surface is, however, but temporary and is followed by increased fulness of the systemic vessels after the immersion is over, or even while it continues if the subject is very vigorous. The local application of cold water—as in the cold sitz-bath—is also of considerable therapeutic power when the principal aim is to divert an increased quantity of blood to the brain and the cord, as when the vasomotor mechanism is impaired and gravitation determines anæmia of the nerve centres. According to the observations of Winternitz[32] the cold sitz-bath increases the volume of the arm as registered by the plethysmograph, so that it possesses the power of increasing the distribution of blood in the upper parts of the body. We have here a reasonable explanation of the clarifying effect of the cold sitz-bath on the mental haziness and dulness consequent on cerebral anæmia from impaired vasomotor compensation.

Shower, needle, and douche baths.—The influence of temperature *per se* is greatly modified by the mechanical agency of percussion and vibration, so that when the water is divided into innumerable fine jets, which impinge all over the surface of the body with a certain degree of force, or when it is applied in the form of the travelling douche accompanied by a vibratory form of massage, the vasomotor system is much more powerfully affected than by any form of still bathing, even though the water be charged with carbonic acid or saline matter. The therapeutic advantages of this form of bathing are very considerable, for it can be made to furnish all the tonic effects of cold bathing along with an agreeable temperature that may be adapted to individual requirements. A most intelligent appreciation of the curative value of this and of similar forms of tonic bathing now prevails at many health resorts where in times gone by a course of bathing often simply meant soaking in hot water with the consequent impairment of the vasomotor mechanism. The massage-douche and needle-bath is the form of bathing best of all adapted to counteract the enervating effects of city life with all its attendant worries and anxieties; and were it established in our large centres it would, I am persuaded, prove to be a boon to many sufferers from nervous exhaustion and would become even more popular and valuable than the Turkish bath.

Carbonic acid and saline baths also belong to the stimulant form of bathing. Fig. 13 illustrates the effect of a carbonic acid bath produced by Dr. Sandow's tablets on the volume of the arm. The subject was a young man aged twenty-three years. The volume of the limb after the twenty minutes'

[28] Practitioner, vol. liv., 1895, p. 394.

[29] Ueber Thermische Wirkungen auf die Blutvertheilung in die Hydrotherapie, Band i., 1890.

[30] Deutsche Archiv für Klinische Medicin, Band xiv.—A useful epitome of the experimental work on thermal therapeutics by Naümann, Schüller, and de Mosso in animals, and by Winternitz, Istamanoff, Mosso, and Bergesis in man, will be found in Professor Hayem's Leçons de Thérapeutique, les Agents Physiques et Naturels, 1894. This work has lately been translated by Dr. Hobart Amory Hare. (Edinburgh: Young J. Pentland.)

[31] Op. cit.

[32] Op. cit.

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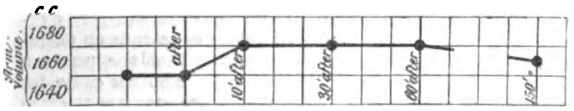
immersion in the bath of 94° F. was found unaltered; but in ten minutes it was observed to have increased 32 c.c. and at the termination of two and a half hours it was still slightly above the initial measure. In this instance the increase of

FIG. 13.



Carbonic acid bath. Persistent increase of arm-volume.

volume followed the immersion and seemed to be due to the reaction set up by the bath; but this reaction is common to all forms of tonic bathing.

The subject of baths will be touched upon in the fourth lecture, when reference will be made to their effects on the blood and on the interchange of fluids.

The Erasmus Wilson Lectures

ON

THE GENERAL PATHOLOGY OF BONE.

Delivered before the Royal College of Surgeons of England on March 16th, 18th, and 20th, 1896,

BY W. G. SPENCER, F.R.C.S. ENG.,

SURGEON TO THE OUT-PATIENTS AND THROAT DEPARTMENT, WESTMINSTER HOSPITAL; LECTURER ON PHYSIOLOGY AT THE WESTMINSTER HOSPITAL MEDICAL SCHOOL, ETC.

LECTURE III.[1]

Delivered on March 20th.

THE NEW FORMATION OF BONE.

Ossification in tendons and ligaments.—A simple type of ossification is met with in the tendons of birds. The tendon cells first multiply, forming rows of cells separated by very regular spaces. Between these cells are deposited small granules of lime salts, which become more and more refracting, hard, and homogeneous until the fibrous tissue of the tendon can no longer be seen. The fibrous tissue none the less remains as the framework of bone and its presence is revealed in the septa whenever they become decalcified. Along with this process of calcification there are seen vessels running parallel to one another in the long axis of the tendon. It is around these vessels that true osseous tissue is formed so that these channels become Haversian canals and the osteoblasts commence at the periphery and work inwards until complete Haversian systems are formed. This ossification in tendon, which is normal in birds, may exceptionally occur in man by extension from the ridges of insertion into the tendons as muscular exostoses, or even into the muscles in myositis ossificans. Ossification may extend from the periosteum into the ligaments about a joint and form the first stage of bony ankylosis.

Ossification in cartilage and in membrane.—No sharp line of distinction can be drawn between periosteal and endochondral ossification. Even in periosteal ossification a matrix surrounds the osteoblasts which stains deeply with logwood. Indeed, in fish ossification in cartilage starts from the perichondrium and spreads inwards. So also in tumours new bone may be formed directly in membrane or cartilage may arise in the tumour even when it grows from the periosteum. This cartilage may continue unaltered or afterwards ossify. Epiphyseal ossification does not essentially differ from that which takes place in fœtal cartilage. The single exostoses of the long bones are said to be due to displacement of bits of epiphyseal cartilage. The cartilage itself not only grows but in addition forms bone and becomes a cap covering the surface of the exostosis. The multiple exostoses are accompanied by diminution in the growth of the long bones. Exostoses may be developed, however, solely from membrane bones, as in the case of the skull-cap and face. Cartilage may never go beyond the stage of becoming calcified, no vascularisation taking place. Such calcification may be considered as a regular senile change more or less well marked in the rib cartilages and in those of the larynx. Likewise calcification may occur in the pure enchondromata without going further.

The grafting of bone.—In a previous lecture the relations between bone and the epidermis have been detailed. Bone, like skin, hair, horns, and teeth, can under certain conditions be transplanted. Bone may be made to form where it otherwise would not by grafting living periosteum and bone. One certain plan of ensuring a formation of bone which will not afterwards undergo absorption is by raising a flap of periosteum with a superficial layer of bone attached by means of a chisel (Schimmelbusch). Such a flap raised from the forehead including the outer table of the skull may be turned down so as to make a satisfactory bridge to the nose, but this may not be the case if only periosteum be turned down. Similar grafts of living bone have been made by taking chips of periosteum and bone from an animal just killed and planting them where a formation of bone is desired. In some cases the actual cells of the transplanted bone do not take part in the new bone formation, but oteoblasts come in from the outside. In such cases the transplanted bone merely acts as a scaffold. A great number of experiments have been made on the skull, but the skull is peculiar in that the pericranium and dura mater take little part in bone formation. Whether a disc removed by a trephine be replaced in the trephine hole intact, or whether it be cut in small pieces, or whether it be kept for some time in an antiseptic solution before being replaced, in any case the fact of replacing will allow of the gap being filled by bone, a process which would otherwise take place but incompletely. But the formation of new bone appears to be brought about wholly by cells which are derived from the bone around. These arise chiefly by active multiplication of cells in the marrow of the diploë and but to a small extent, if at all, in the pericranium and dura mater. The bone corpuscles of the actual graft degenerate, as seen by their losing the property of staining with logwood. The graft to the naked eye certainly becomes vascularised, but on microscopical examination new bone is seen to be laid down upon the old septa part, which act like the calcified trabeculæ in normal ossification and slowly disappear. Whilst both co-exist the new bone layers are distinguished from the old septa by the staining of the cells in the new, whilst in the old septa only blank spaces are left by the early disappearance of the bone corpuscles. It is a kind of metaplasia or substitution for dead bone (Barth). But the graft is of service not only as a scaffold, but also as affording a supply of lime salts. Many pieces of bone have been put into strong antiseptic solutions or into alcohol before being used, and yet have determined the formation of bone when transplanted, likewise dried bone or ivory chips have been employed, and finally plaster-of-Paris has been used as a filling for cavities in the bone (Martin). In all these cases the actual supply of the lime salts appears to be of advantage. But the transplantation of living periosteum and bone, as well as the insertion of dead bone to serve both as a scaffold and a supply of lime salts, are not the only means by which osteogenesis may be excited. A distinction must be drawn between the experiments made upon the skull, in which one has chiefly to depend upon the cells of the diploë, and that of a long bone where the periosteum is the principal factor. A certain amount of irritation, by increasing the vascularity of the periosteum, may ensure the formation of bone. Thus, in a limb after necrosis of the shaft the periosteum became a fibrous band without making any attempt to re-form the shaft. This band was split and plugs of wool soaked in turpentine inserted. By this means the blood supply to the periosteum was so increased that the whole bone was re-formed (Mikulicz). In other cases of delayed union an improvement of the blood-supply to the periosteum has been caused by rubbing or scratching the ends, injecting chloride of zinc, or by inserting pieces of decalcified bone. In some cases suppuration has followed grafting, and the grafts have been discharged, nevertheless the new bone formed. For the new formation of bone, therefore, the normal process of ossification holds good and the presence of (1) actively osteogenetic cells, (2) sufficient lime salts, and (3) a good blood-supply are necessary; but a distinction must be drawn

[1] Lectures I. and II. were published in THE LANCET of May 30th and June 6th, 1896, respectively.

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between cases in which periosteum still exists and those in which it has been destroyed, or, as in the skull, is naturally inactive. In the former cases where periosteum still exists, as in a long bone after necrosis of a large part of the shaft, any irritation tending to increase the blood-supply will suffice. In the latter case where periosteum has been destroyed—e.g., in the case of an injured nose or for a gap in the skull—living periosteum and bone will be required either by a flap or piecemeal from an animal. There is a danger of re-absorption nevertheless, even after new bone has formed. On two occasions I assisted Mr. Edmund Owen to graft living periosteum and bone direct from a puppy just killed for ununited fracture of the leg belonging to the class of "essential non-union of fracture in children." On both occasions firm union progressed and lasted for about six months, after which bending again took place at the site of the fracture.

ON THE CHANGES PRODUCED IN BONE BY NEW GROWTHS.

The essential feature of a new growth is the continued proliferation of cells. As the tumour grows the cells absorb bone and spontaneous fractures may occur. The disease, as far as the bone is concerned, may be purely local, spreading beyond solely by way of the soft parts without further involving bone. Like new growths of other tissues, that attacking the bone may be regarded as a kind of inflammation; indeed, the new growth frequently begins in a part which has before been the subject of chronic inflammation. But the special features are only seen when one bone is involved widely, or several bones, or, indeed, the whole skeleton by primary or secondary new growths. This is the most complex part of the whole subject dealt with in these lectures, for in order to give an explanation of the changes connected with extensive new growths of bone we must employ one or more among the results drawn from the conclusions already arrived at. In noting some of the chief forms of new growth *seriatim* it must be remembered that these are but types and that all kinds of intermediary stages may be met with.

Periosteal sarcoma.—The most important feature of a periosteal sarcoma is the rapidity with which this form of new growth extends beyond the bone by way of the lymphatics to the lymphatic glands. It is an error to distinguish periosteal sarcomata from the carcinomata by saying that the latter invade the lymphatics and glands more quickly than do the former. In the treatment of periosteal sarcoma it is just as important to remove the lymphatics and glands receiving the drainage from the part involved by the growth as it is in the case of a scirrhus of the breast. By reference to comparative physiology and embryology as well as to pathological conditions I have already shown the close relationship which exists between the cells which form bone and those which give rise to epidermal structures.

Central sarcomas—myeloid sarcomas.—As compared with the periosteal growths myeloid sarcomas tend to remain confined to the bone for a considerable time. The giant cells which are present in the tumours slowly absorb and enlarge the marrow cavity whilst periosteal bone continues to form. Finally, a mere shell of bone encloses the tumour, but until this shell is perforated the disease remains purely local.

Myelomas or lympho-sarcomas.—Myeloma is but rarely met with as a single and local tumour from the marrow. Generally it is multiple, the skeleton is widely involved, and multiple fractures or softening and bending with cystic formation may be seen. But besides this there is always more or less disease of the spleen and lymphatic glands, the latter not being situated specially in the neighbourhood of the bone tumours. In the myeloid tumours we have instances of great absorption only, the cells acting like phagocytes; the myelomas, on the other hand, illustrate in addition the connexion of the marrow with the spleen, lymph glands, and with blood formations, to which reference was made in the first lecture.

Cancerous mollities ossium or osteomalacia.—Malignant tumours which begin in a soft part may secondarily infiltrate bone, whether they be sarcomata or carcinomata. Carcinomas, especially those of the breast, thyroid gland, and prostate, may secondarily attack bone even when the primary growth has been of the atrophic scirrhous type and relatively very small. The bones chiefly attacked are the pelvis, the upper half of the femur and humerus, the skull, vertebræ, and sternum. Softening and bending and multiple spontaneous fractures are among the chief signs. Besides the property the cells of the growth have of absorbing bone we must recognise in some cases a further rapid absorption from an increased arterial blood-supply. Pains in the bones may be acutely felt and after death they are found very vascular and may be cut with a knife. On microscopic examination invasion by the new growth may be seen, although there need be no distinct tumour. The term "cancerous osteomalacia" is often used for such cases, and the so-called osteomalacia of a single bone, the pelvis excepted, will generally prove to be really cancerous on microscopic examination, it being remembered that the presence of a tumour is not necessary (Bramann). Another cause for the wasting of the bones is the cachexia occurring as the case progresses from the impairment of general nutrition checking the normal rate of periosteal formation whilst absorption goes on, producing the so-called "eccentric atrophy." Post mortem such bones will appear anæmic, and filled with a yellow marrow as distinguished from the red colour of the marrow actually infiltrated by cancer. But in other cases of new growth, especially those which progress but slowly, or which having begun as a chronic inflammation gradually become malignant, there may be excessive bone formation. This bone formation may either be an osteo-sclerosis, a formation within the normal limits of an unusual amount of compact bone, or an excessive growth beyond the normal limits, a hypertrophy of bone, either of cancellous or of compact bone. In such cases we shall find signs of venous congestion, and may recognise in it this factor as determining the excessive formation of bone in the case of new growths in addition to the observations already brought forward. For such cases, besides osteitis deformans, other names have been used, such as hyperostosis, osteo-sclerosis, condensing osteitis, cranio-sclerosis, or spongy hypertrophy of bone. It was noted by Sir James Paget that whereas the condition in the bones was for a long time that of chronic inflammation new growths appeared later in a number of cases. It is extremely difficult or impossible to draw the line between the results of chronic inflammation and of the new growth, but we can regard the venous congestion as the immediate cause of the bone production in both cases. The whole bone becomes enormously enlarged, of a uniformly porous texture, the medullary canal obliterated, and an interstitial growth in length may ensue. There is, however, some evidence of absorption, as seen in the bending of the bones, the sinking together of the vertebræ, spontaneous fractures, and, moreover, a diminution in the percentage composition of the mineral salts has been found. Sometimes osteitis deformans seems to take the place of the atrophy which may occur in old age. Thus it was seen in a woman aged eighty-eight years as well as in her daughter aged sixty years, both of whom were suffering from senile dementia (Gilles de la Fourette, Marmesco, and Chaffard). In other conditions the disease is more limited in extent—as leontiasis ossea and multiple exostoses. These hypertrophic forms of new growth occur in the distribution of the fifth nerve. There may possibly be some disturbance of the regulatory action of the nerve akin to that which allows of the new formation of bone in osteo-arthritis and locomotor ataxia. During operations these growths have been found exceedingly vascular and the newly-formed bone may be softer, more porous, than is the bone from which it grows, or, on the other hand, so hard as to approach the texture of ivory (Horsley).

Symmetrical new growths: Osteoporosis in animals.—The term osteoporosis has been used in various ways in human pathology, but since Varnell applied it to a particular disease which he noted in the horse the word has been on the whole confined to this disease in veterinary pathology. The disease is also common in the United States under the name "bighead" and is generally attributed to cold and damp. As a matter of fact, nothing is known as to the cause. I have described a number of cases which occurred in goats and have examined sections of the new growth microscopically. The disease commences bilaterally about the angles of the lower jaw, in the part of the bone to which the masseters are attached. It progresses with exact symmetry, and as the bone enlarges it becomes softer so as to yield to the pressure of the finger and may be easily punctured. As the jaws enlarge into a tumour on either side swallowing becomes more difficult and the goats I saw had to be killed or they would have died from starvation. The upper jaws, the frontal bones, and the ends of the long bones had already begun to suffer. On the examination of a macerated specimen the original bone is seen to have been replaced by very spongy new bone, which is in its turn

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being gradually re-absorbed until a mere shell in the outer wall of the tumours is left; a microscopic section of the growth does not materially differ from myeloid sarcoma. There is a remarkable symmetry in the disease which is striking.

Symmetrical periosteal new growths.—Another instance of symmetry in new growths is shown by the case of a dog which I have described and in which *all four* limbs were affected in an exactly similar way. The growth proved to be a fibro-sarcoma attended by some new formation of bone. It is not an isolated case, for an identically similar specimen is in the St. Bartholomew's Hospital museum also. And there are other allied specimens in the College museum from animals. This symmetry is a further connexion between new growths and inflammatory forms of disease and is sufficient to show that nerves may have some influence even in the case of new growths.

A summary of the points dealt with in these lectures may be given as follows:—

1. By a consideration of certain pathological conditions in the light thrown upon the development of bone by comparative physiology and embryology a relationship can be found between the bone-forming cells and epidermal structures, and between the bone marrow and lymphadenoid tissue, which explains the sympathy or co-existence of disease.

2. Alterations in the circulation affect bone: (1) a full normal supply favours bone formation of a normal kind; (2) an excessive arterial supply leads to decalcification and absorption; (3) a diminished supply checks the normal rate of bone formation, absorption going on, and "eccentric atrophy" is the result; and (4) an excessive supply of venous blood, venous congestion, causes pathological bone formation. The parts of bone most subject to an excess of the arterial or venous circulation are during earlier years the epiphyseal ends of growing bones and during later life the parts of the bones most subject to pressure and to the pull of the muscles.

3. The nerve influence on bone appears to be regulatory in action; when disturbed the formation of bone may be either in the direction of excess or of defect or of both combined. It transforms bone so as to accommodate structure to altered function.

4. Impairment of the general nutrition decidedly influences bone by diminishing the rate of formation, and its effect will differ according to age and the various incidents accompanying the different stages of life, such as childhood, puberty, pregnancy, old age, &c.

5. For the new formation of bone the normal process of ossification holds good, and the presence of osteogenetic cells, lime salts, and a sufficient blood-supply are necessary. Granted the artificial supply of one, two, or of all three of these factors, when they chance to be deficient, the new formation of bone may be brought about. A distinction must be drawn between bones, such as the skull, where the periosteum is naturally inactive, or where it has been destroyed, and periosteum which can be re-awakened to activity.

6. New growths which widely affect the bones serve as further illustrations of the points before noted; the conditions are not essentially different from those present in other diseases, such as inflammation, only they are more complex.

Conclusion.—It is clearly impossible so sharply to describe any general disease of bone as to separate it from others. When considering any particular case we should strive to group pathological changes under the headings which I have given. I have not fully treated the subject—there are many topics of interest in connexion with fractures and also with the infectious diseases of bone; but these matters are given at length in text-books and in systematic treatises. I have been able in these lectures to call attention to an interesting subject, and others with better opportunities will doubtless be able to extend it and especially to improve our knowledge concerning the causes of these diseases. At any rate, I have attempted to link together by their general features some of the specimens of diseases of the bones to be found in the museum of the Royal College of Surgeons of England.

MUNIFICENT DONATIONS.—The Governors of the Bedford Infirmary have adopted designs for a new county hospital to be built at Bedford at an estimated cost of £26,300. Among the subscribers to the fund, which already amounts to £23,000, are the Duke of Bedford and Mr. Whitbread, who have each given £5000.

A LAST WORD ON CHOLERA.

BY THE LATE SIR GEORGE JOHNSON, M.D., F.R.S.,
PHYSICIAN EXTRAORDINARY TO HER MAJESTY THE QUEEN, AND CONSULTING PHYSICIAN TO KING'S COLLEGE HOSPITAL.[1]

IN the course of an article on Asiatic Cholera in the recently published first volume of Dr. Clifford Allbutt's "System of Medicine" Dr. Kenneth Macleod does me the honour to refer to me in the following sentence (p. 910): "As a matter of fact Sir George Johnson's castor-oil treatment has been extensively tried and found wanting." Now as this statement is contradictory of much that has recently been published, and as this subject is one of primary importance, I ask permission to call upon Dr. Macleod to publish the evidence upon which is based his condemnation of the evacuant treatment of choleraic diarrhœa. His own treatment is simply repressive: "1. *Check the preliminary diarrhœa.* All authorities are agreed as to the advantage of this measure, which promptly cures mild cases and prevents others from becoming dangerous. Combinations of opium with astringents and antispasmodics constitute the favourite formula..... If medicines are still rejected the hypodermic injection of morphia may be resorted to." The author evidently does not see that this treatment of cholera in the human subject is in principle identical with that by which Dr. Koch succeeded in producing fatal cholera in guinea-pigs. After introducing the cholera bacillus into the stomach of the animal he injected into the peritoneum a dose of tincture of opium, his object being to render "it possible for the comma bacillus to remain longer and gain a footing in the intestine." In this manner he produced fatal cholera in thirty out of thirty-five guinea-pigs experimented on. Dr. Macleod's treatment of cholera, therefore, may fairly be designated *Koch's guinea-pig treatment.* If, however, this treatment is as successful as the author declares it to be, let him show by statistics what number of cases of choleraic diarrhœa have been treated by repressive doses of opium, and in what proportion collapse has supervened. Happily, the largest doses of opium given by the mouth may be ejected by vomiting and purging, and so may fail to arrest the elimination of the poison, but morphia given hypodermically is certainly and rapidly absorbed, and is, therefore, a more pernicious practice. If Dr. Macleod will do me the honour to refer to a recently published small book, "History of the Cholera Controversy," he will find that I have given the result of opposite modes of treatment. On the one hand, of some thousands of cases of choleraic diarrhœa treated by evacuants not one passed into collapse; on the other hand, Dr. Briquet and Dr. Mignot[2] treated in the hospital 200 cases of diarrhœa admitted at the very onset of the attack by from fifteen to thirty drops of laudanum, the dose to be repeated in an hour and followed by opiate enemata if necessary. The result was that no fewer than twenty-six passed into collapse. When in the epidemic of 1849 I saw that in case after case the arrest of an apparently mild attack of diarrhœa by opium was directly followed by deadly collapse, I saw clearly enough that the repressive treatment and the theory which suggested it must be wrong, though I was at that time entirely ignorant of the true nature of choleraic collapse.

If prior to my experience of diverse methods of treating cholera I could have known that the essential feature of the collapse stage is a greatly impeded circulation through the lungs, and that the immediate cause of this impediment is contraction of the pulmonary arterioles excited by poisoned blood, I think I should have foreseen that to prevent the escape of the poison by opium would be to increase the risk of that perilous contraction of the pulmonary arterioles which is the essential feature of collapse. At any rate, now that we know how completely the impeded circulation through the lungs, with the resulting scanty supply of oxygen, explains all the most striking phenomena of collapse, and how, in the words of Sir Thomas Watson, "it unlocks like the true key the whole of the pathological

[1] This little paper has a pathetic interest of its own. It is the document upon which Sir George Johnson was engaged on the day that his fatal seizure occurred, and shows him ready to stand up for his views till the end.

[2] Traité Pratique et Analytique du Choléra Morbus, 1850.

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intricacies of the disease," we can see how entirely consistent is the pathological theory with the results of opposite modes of treatment.

AN EPIDEMIC OF PNEUMONIA OCCURRING AT PESHAWAR.

BY JOHN STEPHENSON, B Sc., M.B. LOND.,
SURGEON-LIEUTENANT, I.M S.

DURING the months of December, 1895, and January and February, 1896, an epidemic of pneumonia occurred amongst the men of the 1st Bengal Infantry stationed at Peshawar. I was attached to the regiment at the time and had opportunities of observing all the cases. The following is a short account of the epidemic, the particulars having been as far as possible thrown into tabular form.

There were 34 cases of acute lobar pneumonia with 19 deaths. These occurred during the two months comprised between the middle of December and the middle of February; the first case was admitted on Dec. 17th and the last on Feb. 9th. The regiment left for Jhansi on Feb. 20th, but the epidemic was over by that time, no cases having been received into hospital for eleven days previously. Taking weekly periods the admissions and deaths may be arranged as follows:—

	Admissions.	Deaths.
From Dec. 15th to Dec. 21st	2	0
,, ,, 22nd ,, ,, 28th	2	0
,, ,, 29th ,, Jan. 4th	4	3
,, Jan. 5th ,, ,, 11th	7	2
,, ,, 12th ,, ,, 18th	10	6
,, ,, 19th ,, ,, 25th	3	3
,, ,, 26th ,, Feb. 1st	3	3
,, Feb. 2nd ,, ,, 8th	2	0
,, ,, 9th ,, ,, 15th	1	2
Total	34	19

Thus the epidemic was at its height in the week Jan. 12th to 18th; of the 10 admissions, 8 came in on the 15th, 16th, and 17th, and 3 of the 6 deaths occurred on the 14th. The earlier part of the epidemic was the most fatal; of the 15 cases that came in up to Jan. 11th 11 died; of the 19 that came in after Jan. 11th 8 died. Taking the average strength of the regiment during this time at Peshawar to be the number of men present on Jan. 17th (about the middle of the epidemic), when there were 573 men in the lines, the proportion affected was 5 9 per cent. Of the 34 cases 19 died, or 56 per cent. With regard to the localisation of the disease, of the 34 cases 2 were left apical, of which 2 died, or 100 per cent.; 17 were left basal, of which 8 died, or 47 per cent.; 10 were right basal, of which 5 died, or 50 per cent.; and 5 were double basal, of which 4 died, or 80 per cent. As to the mode of onset, 6 men came to hospital with the disease already developed. Commonly, however, the men developed physical signs of pneumonia a few days (from one to eight) after being admitted; this was the case in 25 instances. The remaining 3 cases were affected with pneumonia after being in hospital thirty, thirty, and thirty-five days respectively, during which time they were being treated for other diseases—2 for ague and 1 for abrasion and consequent erysipelas Of the 25 who developed pneumonia after being in hospital a few days 3 did so after one day, 3 after two days, 4 after three days, 5 after four days, 3 after five days, 5 after six days, none after seven days, and 2 after eight days. The average time was thus four days. In the cases which recovered, since the temperature as a rule fell by a long lysis, the duration of the disease could not be fixed exactly. The acute symptoms lasted in all cases a week, sometimes ten days, and rarely even a fortnight, before any distinct improvement was manifest. Of the cases that died, 15 out of the 19 died within five days of the onset of pneumonia, and 4 at longer intervals up to fourteen days.

Most of the cases presented a definite and somewhat peculiar type of the disease, different in many respects from that usually seen in England. A sepoy would come to hospital in the morning complaining of slight fever, pain in the chest, and a hard, dry cough; he usually said he felt weak and unfit for duty. On examination nothing abnormal would be found in the chest, and the temperature would range from 99° to 101°F., rarely 102°. Such a case was admitted and a stimulant expectorant mixture given. A large number of such cases recovered in a few days and went back to the lines; others, however, after an interval presented symptoms and signs of pneumonia. In such a case, after remaining in the above condition for four or five days, the cough and pain would become worse and an examination would reveal the ordinary signs of pneumonia. Sometimes, however, either the dulness or the bronchial breathing was not well marked, and the signs were fully developed only on the day following. Sometimes the signs continued indefinite for more than one day. The patient now very rapidly became extremely prostrate; delirium came on, first at night, then both by day and night. Often he would be apathetic, sometimes violent, and sometimes in a state of stupor, passing fæces in the bed. The temperature was as a rule not high—from 100° to 101° or 102°; sometimes irregular, and sometimes with distinct and regular morning remissions. Either death occurred at the end of a few days, usually from two to five, or after a week of this condition the temperature fell by a long lysis, leaving the patient very weak and exhausted. Convalescence was long, cases being kept in hospital as a rule from four to five weeks before being able to travel on sick leave.

The early physical signs noted in chests which subsequently (as a rule a day after) showed typical pneumonia were: (*a*) harsh breathing at the apex of the lung the base of which was afterwards consolidated, (*b*) indistinct bronchial breathing without dulness over the base afterwards affected, and (*c*) distinct bronchial expiration, with fine crepitations and no dulness, over the area which afterwards showed the typical signs. Of the 34 cases 5 showed no mental change, 3 were either apathetic or unconscious only, and the remaining 26 were at some time delirious. Four were violent or very violent, and 5 patients passed fæces in bed. As to the time of onset of the delirium, in 7 cases it appeared before the pneumonia, in 4 cases it appeared with it or the day after, in 9 cases it appeared two days after, and in 6 cases it appeared at a later period. Hence the large majority were cases of early delirium. As to prognosis, of the 26 who were delirious, 13 died and 13 recovered; of the 5 who showed no mental change, 3 died and 2 recovered; and of the 3 who showed apathy or stupor, only 2 died and 1 recovered. Early delirium was not more unfavourable than late. Thus, on the whole, delirium was of no account as a factor in prognosis. As a rule the temperature was not high: it often oscillated for many days on each side of 100°. There were no cases of hyperpyrexia, and the highest reached in any case was 104 2°. In half the cases the highest point reached was between 102° and 103°; in 9 it reached at one time or other a point between 103° and 104°. As to the character of the temperature, all kinds were exhibited. In 2 cases it was absolutely intermittent; several were regularly remittent, the difference between morning and evening temperatures being about 1°, thus showing a chart like that of an ordinary pneumonia in England; others showed larger remissions, as much as 3°, and approached the intermittent type. But in 15 cases there was no type at all, and these must be described as irregular; 4 of them might be called very irregular. In one case the first few days showed the characters of the typhoid fever chart.

With regard to defervescence, there was not one typical crisis, though in 1 case a sort of attempt was made, the temperature falling 2° in twenty-four hours. In 2 cases there was a pseudo-crisis followed by lysis; in 3 cases there was a short lysis taking only two days; but in all the rest the temperature fell very gradually. A distinct connexion can be traced between height of temperature and mortality. All the higher temperatures were fatal; only 1 recovered whose temperature at any time went above 103°. As to the character of temperature the two intermittents died; beyond this no connexion can be made out.

Three of the cases were in hospital when the pneumonia commenced, and had been under treatment thirty, thirty, and thirty-five days respectively. The first of these came in with ague, which began in the usual way; the fever, however, never went away, and after twenty-five days the temperature became higher, pneumonia subsequently developing. The second was also in hospital for ague, he had a relapse after

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cooking his food when naked on the twenty-fifth day after admission, chest symptoms developed, and pneumonia was found on the thirtieth day. The third was in for a slight abrasion of the foot which prevented him from attending parades; this was followed by erysipelas and then by abscess formation; he began to go downhill rapidly, discharges came from his eyes and ears, and a few days before his death pneumonia was found on examination of the chest. In these cases, however, the pneumonia was a complication of a pre-existing disease. The only conditions which complicated a primary pneumonia were pleurisy (distinct physical signs on one occasion only) and diarrhœa (in one patient who died).

The epidemic lasted for two months in the coldest part of the year. It was most intense at the middle of this period, while the earlier part of the epidemic was the more fatal. The general mortality was 56 per cent.; about 6 per cent. of the regiment had the disease. The commonest form was left basal; the mortality of this form was the least. The majority of cases developed pneumonia after being in hospital a few days, during which time they had slight fever unaccompanied by urgent symptoms. In cases that recovered acute symptoms lasted a week or ten days; in the fatal cases death occurred as a rule within five days of the onset of acute symptoms. The epidemic was characterised by the extreme prostration of the cases, the very common occurrence of delirium, which usually came on early, the general lowness of the temperature, the variations in type of temperature met with, the large number of cases in which it was quite irregular, following no type at all, the general defervescence by a long lysis, the long convalescence, and the rarity of complications.

With regard to the etiology of the disease there were appearances at one time of its spread by contagion. Thus the suddenness and severity of the epidemic, and especially the so frequent development of the disease a few days after admission, led us to consider whether infection might not be a factor of the etiology. It appeared almost as if the hospital wards themselves might be harbouring and diffusing the causal micro-organism. Many men were taken from the lines to act as sick attendants, and several of these men were taken into hospital suffering in the same way. Thus a Christian bandsman was being nursed by another Christian, who contracted pneumonia and was also given a Christian attendant; the latter also became ill with pneumonia. This appeared to be a passing on of the infection from the first to the second, and from the second to the third. However, on examining the statistics it was found that in reality the sick attendants were no more frequently affected than the regiment generally. Ninety-five men acted as sick attendants at various times. Of these 11 were admitted into hospital; 5 had pneumonia, the other 6 had not, but suffered from the same kind of short febrile attacks which affected so many of the regiment, and on which, in the majority of cases, the pneumonia appeared to supervene. Thus 5·26 per cent. of the sick attendants contracted pneumonia, the ratio for the whole regiment, as was mentioned, being 5·9 per cent. Had there been any element of infection it is only reasonable to suppose that the men who were exposed to it most constantly and in a more concentrated form should have been attacked more frequently, instead of less frequently, than the regiment generally. It was thought that the men might be going through an epidemic of influenza and that the occurrence of pneumonia might be a complication of this primary disease. Several points are in favour of this view: first, the usual presence of preliminary symptoms—slight fever and cough; secondly, the extreme prostration which accompanied the disease; thirdly, the fact that a number of cases which presented the preliminary symptoms were admitted into hospital and recovered, as a rule, within a week, never developing pneumonia at all; and, fourthly, there was said to be just before the outbreak of this epidemic an epidemic of influenza at Rawal Pindi, eighty miles away, and in Peshawar itself a number of the English population had also suffered from "influenza."

With regard to the first point, it is difficult of explanation if we reject the influenza hypothesis. We might suppose that the pneumonia was central, beginning within the lung substance near the root and slowly extending to the periphery; but it is unlikely that so large a number of cases would present this particular and rare form of the disease. Moreover, the rusty sputa, shallow, quick breathing, and rapid and feeble pulse came on only with the development of the physical signs, and therefore it appears improbable that pneumonia could be existing, even centrally, in the stage of the "preliminary symptoms." It must be conceded that influenza is the most probable explanation of this peculiarity of the cases. Nervous and muscular prostration are well-recognised features of influenza, and in this epidemic were also constant accompaniments of the pneumonia. If, however, we look for confirmation in the direction of the other symptoms of influenza we find very little help. The temperature in the majority of cases was very little raised, even at the first onset; there was never noticed any catarrh of the upper air passages, no running from the nose and no watering of the eyes; the general pains about the body, in the limbs, joints, pelvis, back, behind the eyes or in the head were seldom mentioned and never urgent. Pain in the chest was, however, a frequent complaint, nearly always made on first coming to hospital, before the development of the pneumonia. Except anorexia in a few cases, and one case of diarrhœa, there were no gastro-intestinal symptoms. There was never noticed any subsequent paralysis.

It must be mentioned that the cases of an apparently similar nature taken into hospital during the same period, which developed no pneumonia, did not invariably recover. One or two died with alarming suddenness the day after admission, apparently from sudden cardiac failure. Several lay in hospital for a long time in a state of extreme prostration, requiring one or two sick attendants; one who, like some of the pneumonia cases, was violently delirious required four. Something must, however, be said against the hypothesis of influenza. Whilst there were three other native regiments in Peshawar at the time, this was the only one that suffered in such a degree. About the time of the beginning of the epidemic there were several deaths from pneumonia in another regiment; but this did not last long, and later the same regiment had only 5 cases in hospital from all causes. Another had an average of about 12 sick, while in the 1st the daily number of sick during this time was 40, 50, 60, and 70. Thus the sickness among native troops was largely confined to the 1st Bengal Infantry. The detachment at Fort Jumrood sent back several cases to hospital; the cavalry detachment there remained healthy. Influenza has been styled "pandemic": it affects all classes over a large area of country and does not, as the present epidemic did, pick out one set of men only. Again, the regiment suffered a similar epidemic of pneumonia when they were in Peshawar last, about sixteen years ago. I have no records of this, but the accounts seem to show that it was at least of equal, if not greater, severity. At that time I suppose there was no question of influenza.

The foregoing remarks lead to a consideration of the third hypothesis as to causation. The regiment is one of the few composed practically entirely of Brahmins, and the men are more particular than even the generality of sepoys in their customs and observances. They are required to cook and eat their food when naked, and each man cooks his own; it was with difficulty that they could be got to disregard these customs even when seriously ill in hospital. They wash their hands and legs after going to the latrine; I have seen them doing this almost naked, with only a short shirt on. Their daily bath is taken outside even on cold, raw, and wet mornings. Moreover, they are down-country men, and the winter climate of Peshawar is much more severe than the winters they are accustomed to. The carrying out of the customs mentioned would therefore be more dangerous here than in their own part of the country. In one case at least the influence of exposure could be traced; the patient was admitted for ague on Dec. 11th; when convalescent he one day cooked his food when naked. This was on Jan. 5th; pneumonia supervened on Jan. 10th and he died on Jan. 14th. Here, too, the usual period of five days before pneumonic signs appear is seen. Whether, however, the epidemic as a whole is to be attributed to influenza, or to cold and exposure, or to both causes, can perhaps not be definitely decided. I have to thank Surgeon-Major Cretin, I M.S., in medical charge of the regiment, for his kind permission to use the cases on which this paper is founded.

HOME FOR GENTLEWOMEN, WOODHALL SPA.—At Woodhall Spa there was established last year a home for gentlewomen of limited means needing the special treatment at Woodhall who otherwise would not be able to avail themselves of the valuable properties of that water. The terms are put at the lowest figure possible—viz., 12*s.* 6*d.* per week for board and lodging, including medical supervision, which is given gratuitously.

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HEART DISEASE IN CHILDREN.[1]

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HEART diseases in children did not always claim the amount of attention which they do at the present time. Dr. Henoch, in the opening chapter on Diseases of the Circulatory Organs,[2] says: "Pathological changes in the heart are much rarer in children than in adults. The age causes neither anatomical nor clinical differences of any essential importance." On the other hand, in Dr. T. H. Tanner's work,[3] the author remarks: "It may further be stated that, admitting the comparative rarity of heart disease in childhood, we must, nevertheless, allow that it is far more common than was formerly supposed, and may, perhaps, be still more so if carefully sought for." To the late Dr. Sturges we owe much of our knowledge of the special characteristics of cardiac diseases in children, the Lumleian Lectures of 1894 being among the most valuable contributions on the subject. A little thought will show that heart disease must necessarily in some respects affect children differently to adults, and further consideration will point out where the variation exists. In childhood and youth we have growth and great activity of the organs of nutrition, in later life degenerative changes have to be considered; again, in the former questions of education and games are pressing, while in the latter domestic and business responsibilities are elements in the case that must have their due weight in prognosis and treatment. Dr. Sturges, in the lectures already referred to, shows that the incidence of rheumatism varies even in childhood at different periods. He gives an analysis of 100 cases where post-mortem examinations had been made, the proportion of rheumatic and non-rheumatic being[4]:—

Rheumatic (boys, 22; girls, 32)	54	100
Non-rheumatic (boys, 22; girls, 24)	46	

Ages of the rheumatic:—

Between two and four years	2	54
Between four and six years	4	
At six years old	6	
Between six and twelve years	42	

In children arthritic symptoms do not so generally occur concurrently with the cardiac. In a first attack of rheumatic fever there may be no morbid cardiac sounds until late in the illness or, indeed, until after apparent recovery. Case 1 illustrates that a patient with a mild attack of nodular rheumatism may after an interval show signs of grave cardiac lesion.

Causes of heart disease in children.—These are congenital, or rheumatism, chorea, nephritis (generally from scarlet fever), and dilatation from mural degeneration or weakening during acute fevers. Congenital disease is recognised by the existence of cyanosis of a greater or less extent dating from birth, clubbing of the distal phalanges of the fingers and toes. The exact condition of the heart underlying these symptoms cannot with any certainty be made out; a more or less extensive communication between the auricles or ventricles, narrowing or atresia of the orifice of the pulmonary artery, and transposition of the large vessels are among the causes of congenital heart disease. Although, generally speaking, there is no difficulty in recognising a case of congenital heart disease, it may happen that the symptoms attributable directly to heart disease are so slight and unobtrusive that treatment is applied to the relief of complications without reference to the primary disease.

Four years ago a girl aged ten years came under my care at the Farringdon General Dispensary for a cough which had hitherto resisted treatment. The mother had been told that her child had chronic bronchitis and that the dyspnœa and cough were caused by it. Examination of the lungs gave the signs of chronic catarrh; to the left of the sternum, however, at the second and third spaces an exceedingly loud booming bruit, systolic in time, was heard, its source being evidently a stenosed pulmonary artery. Treatment was chiefly directed towards the avoidance of undue strain on the circulation, and as a consequence the pulmonary symptoms cleared up and the cough abated. There was very little cyanosis in this case.

On looking over the notes of 122 cases of heart disease in children under 15 years of age there were—with a clear history of rheumatism, 91; with a history of scarlet fever only, 4; and 27 with no rheumatic or scarlet fever. Included in the last group are cases of anæmia and some of renal disease. It is highly probable that some of them had had scarlet fever which had not been noticed; others, again, may have had chorea. There are also cases where the only symptoms in a rheumatic attack were slight fever and a little joint pain, the whole illness attracting little or no attention and the cardiac inflammation may have been actually progressing after the apparently insignificant symptoms had passed away. A child under these circumstances will very likely return to active life earlier than he should and the heart mischief be undiscovered until the advent of symptoms cause medical advice to be sought. The following case is an example of grave cardiac disease dating from an apparently trivial illness.

CASE 1.—A boy aged five years came under my care in May, 1895. Two months previously he had a feverish attack with nodules on his arms and legs, but no joint inflammation. The medical man who saw him diagnosed the case as rheumatic and kept the patient in bed for three weeks. On examination the heart was found to be considerably enlarged, the apex being in the fifth space in the nipple line. The heart's action was visible over an abnormally large space. a systolic bruit was heard at the apex and round to the left scapular angle, and the second aortic sound was prolonged and roughened—signs indicating mitral regurgitation and probable aortic incompetency.

Chorea is another well-recognised cause of valvular disease sometimes transient, at other times permanent. The following case shows how heart disease from this cause may be overlooked until symptoms pointing to its existence appear many years afterwards.

CASE 2.—A man aged twenty-eight years was admitted into the National Hospital for Diseases of the Heart for dyspnœa, palpitation, and pain below the ensiform cartilage. He was in his usual health until fourteen months ago, when on attempting to rise in the morning he found he had paralysis of the right side and loss of speech: he recovered from the latter in three weeks and from the hemiplegia in three months. The history was briefly as follows. He had chorea twenty years ago and right hemiplegia with aphasia fourteen months ago, hæmoptysis eight months ago and œdema of the legs five weeks ago. He had always worked hard and for the last four or five years had drunk heavily. On examination the lungs were found to be healthy, the heart was considerably dilated and the impulse heaving; the apex beat was diffused and most marked in the fifth space, three-quarters of an inch to the left of the nipple line; there was a coarse systolic thrill at the apex, a pre-systolic and a systolic mitral bruit at the apex, and a reduplicated second sound over the cardiac area, especially over the pulmonary valves. At times three or even four feeble beats succeeded the systolic mitral bruit owing to imperfect contractions. This patient was quite unaware of his having anything wrong with him until an embolus was washed off his mitral valve and caused hemiplegia: thenceforward signs of heart failure grew apace. The valve lesion thus had its origin in chorea twenty years previously and caused no interference with the man's capacity for hard work until dilatation supervened. It is probable that had the patient lived a steady life he would still be ignorant of his having any heart affection.

Since writing the above the man has died. The results of the necropsy were as follows:—The heart was almost circular in shape, all the cavities were enlarged, the apex was formed equally by both right and left ventricles, and its weight was seventeen and a half ounces; the aortic valve was incompetent, the segments were thickened, rigid, and calcified; the aorta and right coronary artery were somewhat atheromatous; the mitral valve was thickened, with a button-hole slit three-quarters of an inch in length just admitting the little finger; the left auricle was large with markings on the inner surface; and the tricuspid orifice was five inches in circumference. The right lung had a recent infarct two inches in diameter, its base was compressed, and there was

[1] A paper read before the South-West London Medical Society, Nov. 13th, 1895.
[2] Lectures on Diseases of Children (New Sydenham Society).
[3] Diseases of Infancy and Childhood, 1870.
[4] Heart Inflammation in Children.

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much fluid in the pleural cavity; the left lung was œdematous. The liver was enlarged. The kidneys were fairly normal. These notes were taken by Dr. F. S. Wood, the house physician.

Scarlet fever is a cause of special interest since rheumatic fever sometimes follows it; the former is, however, solely responsible for some cases of heart disease. Scarlatinal nephritis and nephritis associated with diphtheria may during their course have pericarditis or endocarditis or acute dilatation may supervene.

CASE 3.—A child aged two years and ten months came under my care on Sept. 14th, 1895, complaining of general ill-health and of a hard swelling at the angle of the jaw on the left side. There was a history of failing health for some weeks, but no definite account of any acute illness. Careful investigation elicited the fact that many cases of scarlet fever had been removed from the immediate neighbourhood of the child's home. Beyond some enlargement of the tonsils the throat was normal; there was a high temperature, abundance of albumin in the urine, besides a large number of hyaline and blood-casts, also adenitis at the left side of the neck. The urine speedily became dark from presence of much blood. Examination of the chest showed considerable increase of præcordial dulness, especially to the left; a systolic murmur was heard all over the front of the left chest below the third rib and in the axilla, a mid-diastolic bruit at the apex, and accentuation of the second aortic sound. As the child got better the mid-diastolic bruit was not audible, but the systolic at the mitral remained. The rapid increase in the præcordial dulness and its subsequent recession were remarkable, and after making allowances for fallacies inseparable from percussion in these cases there must have been considerable dilatation of the heart.[1]

Rheumatic inflammation of the heart in children generally affects both surfaces of the pericardium and the endocardium. In the former there may be permanent adhesion of its two layers, in the latter valvular trouble. Adherent pericardium is often difficult to diagnose. When, however, the parietal layer is itself adherent to the chest wall the latter will be drawn in with the systole and come forward with diastole. Adhesions not involving the chest wall are those generally found and as there are no reliable physical signs indicating this condition its existence is generally a matter of inference. A history of well-authenticated attacks of pericarditis, the existence of an extensive area of cardiac pulsation, and, moreover, the absence of grave valvular lesion—such are the data for a presumption that there is adherent pericardium. The pathological importance of the condition under discussion consists in the fatty degeneration of the myocardium with which it is found post mortem to be associated. In endocardial inflammation and its effects are included the great majority of cases of heart disease that come before us, the valves, papillary muscles, and chordæ tendineæ being all liable to be affected. Valve lesions, whether they are obstructive or incompetent, require hypertrophy of the muscular chambers behind them. When this is sufficient to enable the heart, handicapped as it is, to do its duty, compensation is said to be complete. A person so circumstanced may remain unaware of his having any heart disease until a medical examination in connexion with a life insurance proposal or his candidature for Government service discovers it. Quite recently I was consulted by an applicant for a Post Office appointment who had been "refused for heart disease"; he had had no symptoms, neither was he aware of having had any illness that might cause his heart to be affected. He was an exceptionally well-grown man. On examination a well-marked systolic murmur was heard over the cardiac area, it being loudest at the apex and conveyed to the left scapular angle.

In organic disease of the heart treatment in a great measure has one of two objects—the prevention of disproportion between the myocardium and the work required of it, and, when the want of balance exists, the endeavour as far as may be to restore it. That much can be done by judicious management to meet both these indications there can be no doubt. Besides a compensation or hypertrophy, an opposite condition—a shrinking of the heart—may occur when the quantity of blood to be sent on is diminished. In an interesting paper on Consequences of Narrowing of the Mitral Valve when Occurring in Childhood, Dr. Wilks in THE LANCET of Jan. 2nd, 1886, calls attention to the existence of a contracted mitral in a large number of cases examined post mortem where there was a corresponding narrowing of the tricuspid; and, on the other hand, of the rarity of tricuspid narrowing following upon mitral contraction, and writes: "Dr. B. Fenwick brought before the Pathological Society a large number of cases of stenosis of the tricuspid valve, and in nearly all of them the mitral was similarly contracted. The fact is one of great interest as showing the relation between the orifices of the two sides of the heart, for even if a rheumatic endocarditis had been the starting-point for the change, I cannot but think the size given to the softened and contracting valve was fixed by, and was a measure of, the amount of blood passing through it. The explanation appears easy, since in most cases of stenosis of the mitral the blood is thrown back on the lungs and right side of the heart, so that the latter becomes large and the orifices retain their natural size; whereas in primary obstruction of the tricuspid which allows only a small quantity of blood to pass into the right ventricle and lungs, a diminished supply is sent to the left heart, and in this way its cavities with its orifices would become reduced in size." We are all familiar with the wasted condition of patients with advanced aortic regurgitation owing to the reduced amount of blood sent to the systemic circulation. When a man finds that his income is steadily diminishing and that increased efforts fail to bring it back to the original standard he will best save himself from ruin by reducing his establishment; this is just what nature does.

Diagnosis.—With regard to the special points to be observed in examining children with a view to diagnosis, in acute cases the onset of cardiac symptoms is announced by the intensity of the vital signs. The face has an expression of great distress and anxiety, the breathing is hurried and oppressed, the child is very restless, and inspection of the chest and physical examination afford confirmatory evidence. The pulse may be soft and of low tension and the thermometer may give no certain indications of the gravity of a case. The thermometer in children is no guide as to the character or severity of an illness. I have frequently seen it go up to 104° F. or even higher, simply from the presence of undigested food in the intestine, on the removal of which by a purge the temperature has gone down to normal. The diaphragm is fixed and the breathing thoracic, and a pericardial friction sound may generally be found, even though there is already some effusion, whilst an enlarged area of cardiac dulness will indicate, in a first attack, an increased amount of fluid. In endocarditis a murmur is not always present, and this is to be borne in mind in diagnosis and prognosis.

Prognosis.—Difficult as it most generally is to forecast the issue of a case of heart disease, the anxious parent expects to be told when and how far the child may recover and, if recovery is impossible, the probable duration of life. It behoves us, therefore, to answer these questions as far as possible. A diagnosis having been made of the physical condition of the heart, what are the data on which to form our prognosis? 1. If the cardiac disease was caused by a single attack of rheumatic fever, how long is it since the attack and what has the health been in the interval? 2. If there have been two or more rheumatic attacks, at what intervals have they occurred? 3. The family history. 4. What is the condition of the patient as regards general nutrition? 5. Is there good compensation, or commencing or even advanced failure? 7. If there is heart failure, is it recent or only a stage further on the downward course? The condition of the heart, lungs, liver, and kidneys will help materially in answering this question. 8. Œdema of the ankles.

Accuracy of diagnosis should always be aimed at, and in many cases repeated examinations are required to attain this object. If a long time—say, five or more years—has elapsed since the heart affection began we are able to judge how far the heart and circulation have accommodated themselves to the altered condition and from the way the heart has borne the strain to form some idea how it will bear it in the future. Frequent recurrence of rheumatism at short intervals is always a bad sign. The extent of dilatation will be an index of the healthiness or otherwise of the myocardium and the muscular power by the regularity and strength of the heart's action, and its efficiency as a pump may be gauged by the condition of the pulse and other signs. Aortic stenosis of

[1] I examined the child on Feb. 6th, five weeks after his discharge from the hospital, when the apex was found to be well inside the nipple line and the bruit very faint. The child was the picture of health.

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moderate extent is the least serious condition; the amount of hypertrophy of the left ventricle will be a guide to its extent. Aortic regurgitation may be so far compensated for as to render its existence but little bar to the enjoyment of life, although patients so affected cannot expect length of days. Anything which provokes dilatation brings the case a stage nearer the fatal issue, besides which fatal failure of the heart may occur any time.

CASE 4.—A youth aged twenty years had rheumatic fever when eight years of age which resulted in aortic incompetency. His parents were in good circumstances, so the boy had every possible care. At seventeen years he began drinking to excess with general loose living, which had continued up to my seeing him last autumn for subacute rheumatism. So well had compensation been obtained and kept up that, in spite of his reckless living for three years, the heart was well up to its work. Stenosis or incompetency of the mitral valve when unquestionably organic demands a guarded prognosis. The amount of difficulty these affections cause to the general circulation is shown more by the state of the pulmonary second sound than by the loudness of the mitral bruit.

As a rule patients with mitral disease are more or less permanent heart cripples. The possibility of the mitral incompetency being dependent upon a remedial dilatation of the heart must be borne in mind. The following case illustrates this.

CASE 6.—A boy aged fifteen years came under my care fourteen years ago. He had been for a long time in a delicate state of health and was then suffering from dyspnœa, palpitation, and anæmia; his impaired health dated from a severe attack of measles. The only morbid sound in the chest was a well-marked bellows murmur loudest at the apex and carried to the left axilla. Sir W. Jenner subsequently saw the patient with me and agreed as to the serious nature of the case. After a few months' rest and treatment the lad went to live with a relative in Paris and I lost sight of him for three years. On his return I found the heart sounds quite normal and no traces whatever of any disease. We had been mistaken in our gloomy forebodings. It is surprising sometimes to witness how even desperate cases improve under judicious treatment. In children we do not meet with atheroma; neither are their minds harassed with domestic responsibilities or business worries. I would therefore urge that, even in cases where the prognosis cannot be other than bad, the possibility of at least a rally should always be borne in mind.

Management and treatment.—A few words may be said with reference to congenital cases and permanent heart cripples generally, whose life, if treatment fails to cure, must be more or less that of an invalid. Most of us who have gone through a long illness can call to mind the useful knowledge we acquired during convalescence, and I would urge most strongly that not only should general education be gone on with as far as possible but also some special subject congenial to the child's taste should be introduced, such as natural history, chemistry, or botany, as a resource in the weary hours to come. It must be remembered that some of the most beautiful writings and musical compositions have been produced by those whose short lives were burdened by incurable and possibly painful disease.

Hygienic management.—Every effort should be made to prevent a recurrence of rheumatism; woollen but light clothing should be worn and early hours insisted upon. If it be possible to choose a locality for residence, one with gravelly soil, not over-encumbered with trees and at a fair elevation should be selected. Valleys should be avoided, not only because the air may be damp, stagnant, or draughty, but the compulsory ascent of a hill at the beginning of a walk is often unadvisable.

Diet.—This should be light and easy of digestion, consisting largely of nitrogenous food so as to avoid flatulence, which by pressing up the diaphragm would seriously embarrass an enfeebled heart; excess of sugar has also to be guarded against for the same reason. Under ordinary circumstances indigestion from an error in diet is easily remedied, but when the circulation is impeded from cardiac disease the gastric mucous membrane shares in the general congestion; consequently its functions are easily disturbed. Moreover, gastric irritation acts reflexly on the heart, causing irregularity of its action. In children especially in the treatment of cardiac disease attention has frequently to be directed from the heart to the relief of morbid conditions in distant organs, thereby favourably modifying the primary disease.

Exercise.—Swimming can rarely be indulged in; it is probable that many fatal cases of so-called cramp are really syncope from heart failure. Cricket and football are games generally outside the capacity of a cardiac patient. Cycling on the level may be allowed in selected cases; the difficulty is for the delicate boy to find a suitable companion who would moderate his pace to that which will not cause distress.

The school question is always a pressing one. I have already dwelt upon the importance of interfering as little as possible with the patient's education. A day school within easy reach of the child's home or a boarding school similarly situated should be selected, the one essential being constant parental supervision. I would advocate the medical examination of all children prior to sending them to boarding schools. Every now and then disastrous results follow the neglect of this precaution. Quite recently I was asked to see a girl aged sixteen years who had just returned from a school in Paris, where she had been only five weeks. She had severe valvular disease (probably congenital) and during the journey to France had caught cold. On her arrival in Paris she took to her bedroom, where she remained until she was fit to undertake the journey home. No medical man would after an examination have sanctioned her leaving home to reside so far away.

In *cardiac therapeutics* we are in most cases able to prescribe our remedies with a fair assurance of obtaining definite results. The pharmacology of drugs acting on the heart muscle and those which modify blood pressure has been so ably worked out that a rule of thumb manner of using them is inexcusable. Digitalis is a medicine of the greatest possible value, but misapplied or unnecessarily persevered in it is powerful for mischief. It is at times advisable to suspend the use of this drug for a while or to modify its action by combining it with other remedies; strophanthus, convallaria, and cactus are all useful in appropriate cases. None of the foregoing drugs should be gone on with for an unlimited period, the heart should be carefully examined at intervals and note taken of the effects of treatment; this is forcibly true with children. About a year ago I prescribed strychnine for a patient to be taken for two weeks. Several weeks, however, elapsed before I saw the patient again, and then I was told that the heart was much better, but my advice was required with reference to muscular twitching and cramps which had recently appeared. I need hardly say the patient was suffering from the toxic effects of the drug. Briefly, then, what class of cases benefit most from the exhibition of digitalis? In aortic stenosis only when there is dilatation of the left ventricle, and then it should be given with iron or strychnine; in aortic regurgitation when the mitral valve is incompetent. The best results in the latter cases are obtained sometimes by a free exhibition of the drug, but the effects upon the heart must be carefully watched and absolute rest in bed enjoined during the time. In mitral stenosis it has not been so useful in my hands as strophanthus. In mitral regurgitation the beneficial effects of digitalis are most conspicuously manifested. Digitalis, in common with other remedies acting directly upon the heart, is not to be prescribed simply because a bruit has been discovered. Mercury is a most useful drug and may be classed as a cardiac tonic; the plan of giving calomel in fractional and oft-repeated doses has in some cases proved specially beneficial. Strophanthus, convallaria, and cactus are each useful in selected cases. Iron, in whichever form appears to be the most suitable, is of the greatest use, but it may be pointed out that pallor alone is not necessarily an indication for its use. Arsenic is a most useful cardiac tonic. I have not found the Schott treatment of benefit in children; the difficulty is to keep their movements within bounds.

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VITALITY.

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III.—VITAL CHANGES IN NERVE TEXTURES.[1]

IN development, structure, and action no tissues or organs of the body afford more convincing evidence of the constant presence and influence of vital power than the tissues and

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organs of the nervous system. Whether we study the peripheral arrangements by which impressions are received from without, or the central organs to which these impressions are conducted, or the intervening fibres which carry the impulses from and towards centre and periphery, we find at varying intervals and of various sizes particles of living matter. In the most important part of the central nervous system of man the action of this living matter is intimately related to all mental operations. Consciousness, thought, will, and intellectual effort seem to be in fact vital manifestations which, regarded from the side of knowledge and experience, are inconceivable in the absence of vitality.

As regards the relation of vital endowments to the material particles, the changes in the position of which with respect to one another are continually occurring, it is probable that the material phenomena as far as they are at present discernible are in their essential nature of the same order as the vital movements of the structureless living matter of an amœba, of a colourless blood corpuscle, of a mucus or pus corpuscle and other kinds of living matter, and these vital movements are in their nature essentially different from every other kind of movement yet discovered.

Whether we trace the development of this most important and elaborate of all the textures of living beings in very simple organisms, or study the changes as they occur in man himself, we cannot but admire the remarkable arrangements by which the most distant organs and parts of the body are brought into intimate relation with the various receiving, originating, and regulating centres.

Not only does the arrangement as well as the development of the finer ramifications of nerves in peripheral and central organs afford evidence of the operation of the formative power of living matter, but the gradual formation and disposition of the most delicate nerve fibres and their special arrangement in different species have been shown to be due to the changes in particles of living matter which in young growing organisms are in great number and are always in structural connexion with the fibres. In the absence of such living particles the integrity of the nerve fibres would not be preserved, nor could their proper function be discharged. From the very first indications of its existence there is evidence, in various parts of the nervous system of the higher animals and man, of temporary arrangements which suffice for the comparatively simple nervous system required at an early period of life. These are gradually replaced by more complex and more lasting structures, some of which there is good reason to think undergo little further change through life.

The central and peripheral parts of every nervous system are in structural continuity from the first, but in the early period of development actual fibres cannot be discerned, though the course of the nerve currents can be followed by indications of more or less interrupted lines of granules made more distinct if the tissue is subjected to the action of very weak acetic acid for a long period of time. The anatomical elements of nerve centres and special nerve organs are for the most part so arranged as to occupy as little space as possible, while in their peripheral distribution nerve networks are usually spread out over an extensive area. But in some situations are developed nerve organs of highly elaborate structure for the performance of special acts. It is through the agency of these that the external world is discovered and made evident to individual consciousness. The substance mainly concerned in this operation is the living matter, which throughout nature is devoid of structure, exhibits spontaneous movement, and consists of comparatively few elements.

Nerve organs, in construction, composition, formation, and mode of action, differ entirely from any known apparatus by which corresponding physical and chemical changes may be effected.

The nature-constructed apparatus and the hand-made apparatus are formed upon different principles, are composed of very different materials, and act in a totally different manner. Indeed, all natural structures and organs being produced by living matter absolutely differ from any things made by us in structure, mode of action, and in the kind as well in the excessively small amount of substances they appropriate and consume in proportion to the amount of work they perform In fact, all natural structures approach if they do not actually reach perfection, and it need scarcely be said not one natural structure or organ has been made in pieces which were afterwards put together, nor is there one that may not be self-repaired to some extent. The material used for action and repair is selected by the living matter of the several tissues and organs from a solution common to all, and appropriated, applied to construction or to take the place of matter changed and converted into waste material during action. All natural tissues and organs are, as we say, evolved in the course of changes in colourless, structureless matter, consisting largely of water, by vital agencies, the exact nature of which we as yet know very little, and to investigate which we have not yet discovered the means.

We are assured that all natural processes are governed according to natural laws, but the terms of the laws have not been determined, and the phrase is repeated again and again without any definite meaning being assigned to it. If this view of natural law be accepted we must surely admit that the so-called "natural law" which governs the non-living part of the universe belongs to a category in which the "natural law" which governs vital phenomena cannot be included. There seems everywhere in the living world evidence of the paramount influence of a power altogether different from, and not governed by, any ordinary laws that have yet been discovered—a power invariably derived from pre-existing living matter and, as far as is yet known, originating in no other way—a power handed down from generation to generation without loss, but which may cease at any moment never again to be resuscitated or reproduced; and whenever this power ceases, as far as is yet known, it never undergoes conversion into any form or mode of motion and the results of its action are inimitable.

(To be continued)

RIGORS IN CHILDREN.

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IN studying the subject of this paper I have employed the valuable evidence contained in the surgical case-books of the Hospital for Sick Children, Great Ormond-street. They extend over a period of seven or eight years and embrace nearly every variety of surgical disease seen in children. But although the material has only been collected from the surgical notes I have found many cases in which one of the acute specific fevers played a chief or subsidiary part. Before quoting from the collected statistics it is as well to consider with what diseases rigors are commonly associated in adults and what are the other symptoms which most frequently accompany them. Certain acute specific fevers, and more especially cases of acute pneumonia, are commonly ushered in by a rigor. When extensive inflammation advances to suppuration one or more rigors may occur. In septic poisoning (sapræmia) and septic infection (septicæmia) they are not uncommon, while they invariably accompany pyæmia. Of the accompanying symptoms pyrexia is essential; no shivering fit can be truly termed a rigor unless the temperature rises above the normal. The other symptoms depend largely on the nature of the disease; but if it be of septic origin there are generally great bodily depression, rapid, feeble pulse, dry tongue and lips, with in many instances vomiting, profuse diarrhœa, and muttering delirium. If the disease be pyæmic secondary abscesses will be present in the subcutaneous tissues, joints, or viscera. This preliminary consideration is necessary before I quote the collected cases, as many of them were accompanied by several of the symptoms I have mentioned.

Rigors occur with extreme rarity in children. Out of 130 cases rigors are only mentioned in five, while one case is said to have begun with shivering and in another frequent shiverings are recorded. The diseases selected for investigation have been chiefly of septic origin; but, in addition to these, I have included others, such as acute specific fevers beginning in the surgical wards and hyperpyrexia of doubtful origin, in which rigors may occur in adults. Roughly classifying the cases they arrange themselves into the following groups: acute abscess, cellulitis, hyperpyrexia, acute specific fevers, complications of mastoid suppuration, acute arthritis, acute periostitis, and acute epiphysitis.

I.—Acute Abscesses.

Of these there are twenty-seven cases and in only one did

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rigors occur—i.e., in a boy six and a half years old, admitted for a deep abscess behind the carotid vessels in connexion with the œsophagus. This had followed an abrasion caused by his swallowing a triangular piece of pie-dish. He had vomited the foreign body soon after its lodgment, but shortly afterwards became unable to swallow. A little later he was feverish with dyspnœa and frequent vomiting. The child had a rigor when admitted and this was repeated on ten subsequent occasions, his temperature rising to 106° F. frequently during the rigors. With these symptoms there were others clearly pointing to general pyæmia, such as delirium, dry tongue, refusal of food, diarrhœa, vomiting, and extreme prostration. During his stay in the hospital he developed septic broncho-pneumonia. After death, which occurred, notwithstanding incision and drainage, fourteen days after admission, pyæmic abscesses were present in nearly all the viscera. Of the other cases there were three subpectoral, three axillary, three ischio-rectal, two tonsillar, two gluteal, two thigh abscesses, and two cases of whitlow, with one abscess dependent on necrosis of the jaw, one subdeltoid, one cervical, one popliteal, one inguinal abscess, and one in the scalp and side respectively. In one instance the abscess was probably pyæmic, while in another case there were numerous abscesses present at the time of admission. The ages of the patients varied between five weeks and eleven years, the average being about three years. In many of the children those septic symptoms with which rigors are often associated in adults were present. Thus in a case in which the abscess was associated with necrosis of the lower jaw the temperature varied between 99° and 106° and was accompanied by exhausting diarrhœa. The case eventually ended fatally. The child was two years of age. Another patient suffering from purulent ophthalmia was admitted with an abscess near the knee unconnected with disease of bone. Although this was opened and drained the case ended in death. During the illness there were severe septic symptoms, including pyrexia, vomiting, and diarrhœa. Possibly the whole process was pyæmic, infection having occurred by absorption of the purulent conjunctival discharge. A third child, three years old, was admitted with a large subpectoral abscess. She was in a drowsy condition, with dry tongue and lips and high fever, evidently resulting from septic absorption. The abscess was opened and drained, but even after this treatment the temperature remained high, and there was extensive burrowing of pus superficial to and beneath the pectorals. By counter-incisions and drainage the cavity was thoroughly emptied and the child eventually recovered after passing through a condition of extreme prostration.

II.—Cellulitis.

I have collected the notes of fourteen cases of cellulitis. In none of these are rigors mentioned, but in one child with cellulitis of the foot the disease began with a convulsion and in a second case numerous convulsions were noticed. The child was twelve months old and admitted for a scald of the thigh, the temperature being 105·8° F. Among the cases were four of submaxillary cellulitis, three of subpectoral cellulitis, two of cellulitis of the thigh, two of cellulitis of the leg, and isolated cases occurring in scalp, foot, and hand. In many of them all the symptoms associated with septic absorption were present excepting rigors. The average age of the patients was fourteen months. Three cases ended fatally.

III.—Hyperpyrexia of Doubtful Origin.

I have included two cases under this heading and in neither of these were rigors present. In one child aged two months, after excision of a large spina bifida, the temperature for two days varied between 104° and 105° F., but subsequently fell to normal, and the child made a satisfactory recovery. The second child was fourteen months old. She was admitted for a very large cavernous nævus involving the right axilla and the whole of the right arm. It was ulcerating in places at the time of admission, and subsequently the ulceration involved nearly the whole arm. The temperature rose to 108° once and afterwards varied between 101° and 104° during four weeks. With this high temperature, probably the result of septic absorption, there was frequent vomiting. Eventually under antiseptic treatment, and more especially after chlorinated soda had been applied, the temperature fell to normal and the arm eventually became covered with thin unhealthy skin, the nævus degenerating. I have included under this heading a third case, not so much because the cause of the fever was doubtful as on account of the difficulty of including it in any other class. A child aged two years, admitted for tuberculous dactylitis, subsequently developed meningitis and died. After two days' fever and drowsiness the child had one rigor. Afterwards the characteristic symptoms of meningitis manifested themselves and were verified by a post-mortem examination.

IV.—Acute Specific Fevers commencing in the Surgical Wards.

Many cases which are inclued in other classes died from one ot the acute specific fevers, but I have not thought fit to include them in this sub-division because death was probably due in a large measure to the surgical disease, though possibly accelerated by the medical complication. But I have found seven cases, five ending fatally, in which one of the acute specific fevers played the chief part. One child aged nine weeks, who was admitted for spina bifida, died from lobar pneumonia after eight days' illness, during which the temperature varied between 103° and 105° F. for eight days and was associated with persistent vomiting. A second child thirteen months old under treatment for congenital syphilis died from broncho-pneumonia. A third child eight weeks old, admitted for an abscess in the thigh, developed scarlet fever, which began with a rise of temperature to 105° and vomiting. This case ended in recovery. Another case in which death ensued is rather interesting. The child was admitted for disease believed to be pyæmia, but recovered. This was followed by pneumonia with recovery. During convalescence the child was attacked by scarlet fever. While this disease was running a fairly mild course a membranous patch, possibly the result of scarlet fever, but believed to be diphtheritic, was noticed on the fauces. It extended into the air passages and although tracheotomy was performed the result was fatal. The fifth child was admitted semi-comatose with hyperpyrexia. Dr. Barlow saw the case and considered it to be one of malignant scarlet fever. The child was isolated and died soon after admission. In a sixth case the child had acute lobar pneumonia, but recovered. In a seventh there was fatal broncho-pneumonia. In no case were rigors or convulsions present.

V.—Complications of Mastoid Disease.

Suppuration in the mastoid antrum when uncomplicated is rarely attended by rigors even in adult patients, and I cannot find one instance of rigors in children, but the disease is liable to be followed by many septic complications, such as septic meningitis, septicæmia, intracranial abscess, and lateral thrombosis. With any one of these we may expect to find rigors in adults. Now what do the statistics show to be the case in children? I have collected five cases. In two there were lateral thrombosis and general pyæmia. In one of the patients, a boy aged nine years, rigors were noticed on three occasions after the septic clot had been removed and the jugular vein tied. The child eventually recovered. In a second case ending fatally, chiefly because the symptoms were so obscure that further operative treatment was not adopted after opening and scraping out the mastoid, no rigors occurred. The child was only eighteen months of age. His temperature varied from 102° to 104° F. Throughout the illness there were frequent vomiting and profuse diarrhœa. Before death a pyæmic abscess formed in the arm. After death lateral thrombosis and general pyæmia were found. In none of three other cases, one associated with temporal necrosis, one with subdural abscess, and the third with suppurative meningitis, were rigors present, although two of the three cases ended fatally. Convulsions were absent in every case.

VI.—Empyema and Pleurisy.

In four cases, three of empyema and one of pleurisy, I cannot find any history of rigors or convulsions. The patients' ages varied from four to eleven years, the average being seven years.

VII.—Acute Arthritis.

I have collected twenty-six cases of acute arthritis. In thirteen of these the affected joint contained pus and five cases ended fatally, yet rigors were absent in every instance. Some of the cases deserve a more extended notice. A child aged eight months was admitted for acute arthritis of the knee-joint. The joint was opened and found to contain pus. It was flushed out thoroughly with perchloride of mercury

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solution. Next morning erysipelas attacked the wound and eventually proved fatal. In another child aged nine years the arthritis began very acutely with vomiting, headache, loss of appetite, and sleeplessness after a fall four days previously. Incision and drainage cured the disease. In a third infant fifteen months old erysipelas attacked the wounds through which the joint was opened and washed out. The child recovered, but later secondary pyæmic abscesses necessitated amputation of the limb. This failed to prevent a fatal termination. In another case cellulitis followed the opening and drainage of the joint. The temperature was very high, rising to 104° F. on many occasions. Recovery followed numerous incisions. Another case was believed to be pyæmic in origin, absorption having taken place from a septic wound. The disease ran an acute course and ended fatally. In a child aged thirteen months arthritis of the shoulder-joint was followed by broncho-pneumonia. The child eventually recovered. Another case was followed by measles and fatal broncho-pneumonia. In only one instance were convulsions present. This occurred in a child aged twenty-five months in whom the onset began acutely with convulsions and pyrexia. Recovery followed incision, irrigation, and drainage. The ages of the patients varied between fourteen days and nine years; the average age was nineteen months.

VIII.—Acute Periostitis.

I have felt inclined to include acute periostitis and acute epiphysitis under one heading, as it seems to me that the two diseases are identical in their origin. Both appear to commence near the epiphysial cartilage and their after-course depends on whether the diaphysis or epiphysis is chiefly involved. But at present we are accustomed to classify them separately, and therefore I might confuse matters by classing the two together. I have examined the notes in twenty cases of acute periostitis. In only one of these can I find any history of a rigor. This occurred in a child aged eight and a half years who developed acute periostitis of the left tibia after receiving a kick upon that bone. The onset began acutely with fever, vomiting, and headache. One week afterwards there was swelling of the left leg preceded by a rigor. The disease was treated by a medical man who incised the swollen limb. But later the limb required amputation on account of extensive necrosis of the tibia. In another child aged three years and nine months the disease began with convulsions. The case is full of interest, not so much on this account as because of the course of the disease and treatment adopted. In addition to convulsions the onset was marked by vomiting and fever. The right leg, which had been kicked, swelled up and became intensely painful and tender. Subsequently both hips became swollen and flexed, and there was synovial distension of both elbows and wrists. The child lost his reason. He was admitted into the Hospital for Sick Children, Great Ormond-street, four months afterwards with multiple bedsores, swelling over the right fibula, and a sinus leading to exposed bone; both hips were acutely flexed, with grating on movement, the left hip being dislocated upon the dorsum ilii; his mental condition was one of idiocy. He was extremely pale and emaciated. On Aug. 26th, three weeks after admission, the greater part of the right fibula was removed as a sequestrum and the right hip was excised; on Oct. 5th the left hip was excised. On Sept. 9th a swelling was noticed over the left occipital bone; it seemed to increase when he cried, and there appeared to be a deficiency of bone at its base. On that day it was opened and proved to contain pus, but it subsequently filled again. On Oct. 15th it was opened up freely and found to be connected with a deficiency in the occipital bone leading to a cavity between the dura mater and bone, which was lined by granulation tissue; this lining membrane was scraped away freely after a large area of bone had been removed. The cavity was left open, to heal up by granulations. After three or four weeks he was sent to a convalescent home, all the wounds having healed. The bedsores had healed long previously under careful nursing and good diet. Later in the year he returned, being perfectly sound mentally, but with a recurrent abscess near the left hip. This was opened and the acetabulum found to be perforated. He is still an inmate of the hospital. I have been tempted to dwell at length on this case as it shows how severe septic infection may be in children without the occurrence of rigors. Personally I believe the whole process to have been pyæmic, although there is the alternative possibility that the disease was in part a tuberculous one following upon acute necrosis. In another child aged seven years and eight months the temperature varied between 104° and 106° F., and secondary abscesses formed in one elbow and ankle. The limb was amputated, but this failed to regard these as rigors. The patients' ages varied from six to save the child's life. In a fourth case the disease was attended by almost constant shivering fits. It is hardly possible weeks to nine years. Of the twenty cases four ended fatally.

IX.—Acute Epiphysitis.

Acute epiphysitis is one of the most common and most fatal of the septic diseases of children. Of twenty-one cases recorded in our case books during the last seven or eight years no less than twelve ended in death. However, some were complicated or followed by other diseases which helped in the fatal result. Thus one case, though typically acute in character, was of tuberculous origin, and death was due to general tuberculosis. Two other children died from erysipelas. In one boy aged four years the diagnosis was not verified by post-mortem examination. Five days before admission he had twisted the right leg. Next day he suffered from pain, swelling, and tenderness of the right thigh, with fever, loss of appetite, and vomiting. On the day before admission he became delirious. When admitted he was dusky, with a temperature of 105° F. (106° later), very feeble pulse, and rapid respirations accompanied by retraction of the intercostal spaces. He was extremely restless and delirious, with dry lips covered by sordes. There was much bronchitis in both lungs, with dulness behind and very clearly conducted sounds suggestive of broncho-pneumonia. Nothing was heard over the præcordial area pointing to pericarditis. The right thigh was acutely flexed, its upper third was swollen and extremely tender; fluctuation was present above and behind the great trochanter. The joint was distended. Clearly the boy was suffering from acute septic poisoning, the result of one of three things—acute epiphysitis of the femur, acute arthritis of the hip-joint, or possibly acute periostitis of the ilium. He was immediately operated on and an abscess found, but owing to his great exhaustion the operation was shortened as much as possible, so that the exact origin of the disease was not discovered. The child died on the same evening and his parents refused to allow a post-mortem examination. Of the other fatal cases, one child died from general pyæmia following epiphysitis of the upper end of the tibia, two from secondary septic meningitis, and five from septic infection and exhaustion, death being preceded by suppurative arthritis in two instances. Of the nine cases that recovered, in two there was secondary arthritis requiring incisions into the joint and drainage; in one instance the disease was bilateral, affecting the lower ends of the femora and accompanied by double popliteal abscess. It appeared to be pyæmic in origin. The other cases ended favourably after incision and drainage. The children's ages varied from four weeks to ten years. In no case were rigors recorded, and convulsions were present only in those cases where death followed septic meningitis.

I have only one more case to record. A child aged six years, who had been sent to the convalescent home after excision for hip disease, returned to the hospital with a high temperature and acute pain with tenderness in the left side. On the night of admission she had a genuine and severe rigor which was seen and verified by the house surgeon. The temperature remained high for a few days and then fell to and remained normal. A few days after she passed some pus in her urine, and continued to pass a small quantity with uric acid crystals at first (the urine being acid) and triple phosphates later, the reaction becoming alkaline. No enlargement of either kidney was found. In this condition she was again sent to the convalescent home and she was there when this was written. I have not attempted to classify her disease, probably she has early tuberculous pyelitis.

From the statistics I have collected and the cases quoted I think we may conclude that rigors are extremely uncommon in children, even in diseases which are acutely septic in character. On the other hand, convulsions are also uncommon in children. In 130 cases I have only found five in which rigors occurred—i.e., once in a case of lateral thrombosis, the child being nine years old; once in a boy aged six and a half years, who died from pyæmia following acute abscess; once in a case of tuberculous meningitis occurring after tuberculous dactylitis in a child aged three years; once in a boy aged three years, who had acute periostitis of the tibia; and once in a child aged six years, the rigor being of doubtful origin. Two of these cases ended

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fatally. In five cases there was a history of convulsions, once in a child aged eleven months with cellulitis of the foot; once in a case of cellulitis of the thigh and bronchopneumonia, the child being one year old; once in a child aged two and a half years suffering from acute arthritis; and twice in children with acute periostitis, aged respectively two years and nine months and three years and nine months. The majority of the cases I have collected might have been accompanied by rigors in adults. I have gone so far as to risk rendering this paper tedious in order to accentuate the many other symptoms which seemed to point clearly to septic infection and in many cases to pyæmia. If, as is generally supposed, the shivering in a rigor is caused by contraction of the superficial arterioles induced by irritation of the vaso-motor centre by various poisons in the blood, the cause for the extreme rarity of rigors in children is probably to be found in a less perfect development of that centre in them than in adults. The frequency of hyperpyrexia from comparatively trivial causes is another clinical fact which lends its weight to this suggestion. I think I may safely conclude from these statistics: (1) that rigors are very rare in children and almost unknown under three years of age; and (2) that convulsions very rarely take the place of rigors even in infants.

Rigors are not of very great clinical value in studying the diseases of childhood. Before the age of seven or eight symptoms apart from signs can never assist so clearly in diagnosis as in older patients. As I have already said, hyperpyrexia may follow upon trivial causes. The facial expression, manifestations of pain, and even the pulse itself seldom give the surgeon perfectly reliable information. But rigors may mislead him more than any other manifestation of disease. As a rule they point to severe infection and if oft repeated generally to septic infection, but their presence or absence rarely assists in differential diagnosis. To take one instance from among many. In an adult with a profuse and fœtid discharge from the ear the occurrence of rigors, especially if associated with other symptoms such as vomiting and optic neuritis, points to lateral thrombosis. Yet I have already mentioned two cases of that disease in young children, in one of which rigors occurred before and after ligature of the jugular vein, while in the second there were neither rigors nor convulsions throughout. Since writing the foregoing I have found two cases of mastoid suppuration in which rigors were associated with a very high temperature, vomiting, and optic neuritis. In both cases the jugular vein was exposed, but in neither case was a septic thrombus found in it or in the lateral sinus. One of these cases occurred at the Hospital for Sick Children, Great Ormond-street; it was not included among my cases as the child was under the care of a physician and treated throughout in the medical wards. The second patient was treated at St. George's Hospital. Another instance is general pyæmia from other causes. I have quoted from the notes of many cases of children who died from this disease, and in only one of them were rigors present. The same remarks apply to all the cases in which rigors did occur. They were isolated instances from among many similar cases of equal severity. Why one child had rigors and another had not it is impossible to say. The great fact that these cases appear to point out is that in diagnosis only a minimum amount of weight can be given to the absence or presence of rigors in children.

King-street, Portman-square, W.

VACCINATION GRANT.—Mr. Charles Wightwick Pitt, of the first district Malmesbury Union, has for the fourth time received the Government grant for successful vaccination.

DIPHTHERIA AT GILLINGHAM.—Diphtheria has reached an alarming stage at Gillingham, near Chatham, 33 deaths having been chronicled in a population of less than 30,000 persons during the present year. We notice that the Registrar-General states that 21 deaths from the disease were registered in the place in the first three months of this year, these figures themselves being equal to an annual rate of 3 per 1000; whilst the addition of 12 deaths since that period gives evidence of increase of a sort to call for serious inquiry. The hospital is said to be full of patients, and removals thereto have to be sent away at the end of three weeks to make room for other claimants for beds. It has been decided by the district council to purchase two tents at a cost of £90 and to erect them in the hospital grounds.

A CONTRIBUTION TO THE OPERATIVE TREATMENT OF MALIGNANT DISEASE OF THE LARYNX, WITH SPECIAL REFERENCE TO THE DANGER OF CANCEROUS WOUND INFECTION.

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THE object of this paper is, first, to direct special attention to the possibility of the dissemination of cancer by means of direct transplantation as distinguished from dissemination by means of the blood and lymph channels; secondly, to the danger of infecting a wound with cancerous material in operations for malignant disease generally; and, thirdly, to consider the importance of these facts in relation to local recurrence after operations for malignant disease of the larynx. I shall discuss each of these subjects separately and shall commence by quoting some illustrative cases I have observed or have found in medical literature bearing on each point. Thus Ebert has recorded a case in which a secondary epitheliomatous growth appeared on the tip of a long uvula which was in contact with a similar ulcerating growth in the larynx. In another case two epitheliomata were observed on opposite and corresponding parts of the same larynx which would come in contact on phonation, the intervening tissues remaining healthy. In a third case of epithelioma of the larynx a secondary deposit took place on the site of an abrasion on the lower lip, and there being no other secondary deposits of malignant disease the reporter of the case concluded that this secondary growth arose from direct transplantation of the cancerous epithelioma derived from the primary growth and conveyed to the lip by means of the sputum or saliva.

Similar cases can be quoted with regard to cancer in other regions. Thus Ebert in his Inaugural Thesis relates the following instances: 1. A case in which a carcinoma of the cervix uteri gave rise to a secondary deposit on the left vaginal wall. The body of the uterus was dragged over to the right by an old adhesion, the cervix was abnormally long and the affected parts were thus maintained in contact; the cauliflower-like growth on the cervix fitted exactly into the crater-like ulcer of the vaginal wall. The roof of the vagina was free from disease. 2. A second case, almost identical with the above, in which there was prolapse of the uterus, a carcinoma of the cervix and a secondary growth on the vaginal wall in contact with it, the intervening tissues remaining healthy. 3 and 4. In two cases a malignant growth limited to one side of the vulva was followed by a similar growth on the parts in contact on the opposite side. 5. A case in which the anterior and posterior walls of the vagina were affected with malignant disease, the growths being in contact and the intervening tissues being sound. 6. A case observed by Bergmann of epithelioma of the upper and lower lips. 7. A case of epithelioma of the side of the tongue and of the part of the cheek in contact with it. 8. A case of carcinoma of the stomach in which there was found a similar carcinoma on the surface of the liver in direct contact with, but not adherent to, the growth in the stomach. With the two previously quoted laryngeal cases one thus finds in all ten cases of transplantation of malignant disease, in all of which the affected parts were in direct contact and in all the intervening tissues were free from disease.

In another series of cases the secondary growth has occurred at a distance from the primary disease, as in the larynx and lip case above noted. Such cases are the following, quoted mainly from the theses of Erbse and Ebert. 1. A case observed by Kaufmann of cancroid of the skin of the right hand lasting five years, and for one and a half years a similar tumour had been noticed on the conjunctiva of the right eye. The patient had epiphora and frequently rubbed the affected eye with his hand. 2. In a case of carcinoma of the upper jaw and tongue reported by Klebs a similar growth was found in the stomach. 3. A case of epithelioma of the œsophagus in which a similar growth was found in the stomach.

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4. A case of carcinoma of the tongue in which a similar growth was found in the duodenum. 5. A case of epithelioma of the lower part of the œsophagus in which secondary growths were found in the intestinal tract. 6. A case of epithelioma of the larynx with a secondary deposit in the left bronchus. 7 and 8. Two cases of carcinoma of the œsophagus ulcerating into the larynx and trachea in which secondary deposits occurred in the lower lobes of both lungs, chiefly in the walls of the smaller bronchioles, and which apparently arose from deposits of inhaled particles of the disease. 9. A case of carcinoma of the pelvis of the kidney, followed by carcinoma of the bladder, the ureter remaining healthy. 10. To this list may possibly be added the extremely interesting case reported by Gross in which a man contracted carcinoma of the penis from his wife, who was suffering from carcinoma of the cervix uteri. The disease of the penis and cervix showed the same structure—viz., glandular carcinoma, and it forms an apparently unique instance of direct transmission of cancer from one individual to another. These cases make in all twenty-one, to which other less definite cases could be added, and I have probably overlooked many; but enough I trust has been said to show that this method of spread of cancer does occur, somewhat rarely it is true, although in medical literature in England at any rate it has attracted very little attention. But I wish in this paper to deal more especially with cases in which the dissemination has occurred as the direct result of an operation undertaken for the relief or cure of the disease, instances of which I believe are by no means rare. I may just briefly summarise the following cases which have come under my own notice. A man aged about fifty years was admitted into the Golden-square Hospital under my care in December, 1894. He had enlarged glands of uncertain nature on both sides of the neck, and as they were growing it was decided to remove them. On one side they were carefully removed in one mass with the surrounding tissues, and on macroscopic section appeared caseous and breaking down and were considered to be tuberculous. The other side was now rapidly dealt with, as the patient was taking the anæsthetic very badly, and one gland was unfortunately burst during its removal. The débris extruded from it was carefully washed away and the wound well irrigated at the end of the operation, but no exceptional precautions were taken. The first side operated on—the larger mass of glands—healed rapidly and well and gave no subsequent trouble. The wound on the other side never healed properly; there were from the first some swelling and a considerable amount of watery flaky discharge. In about three weeks the patient was allowed to go out of hospital. There was still a small sinus discharging a small amount of thin, flaky material and some ill-defined swelling on that side of the neck. The glands on microscopic examination proved to be carcinomatous, and two months later the whole side of the neck, from the mastoid process and lower jaw nearly to the clavicle, was a huge, brawny, indurated mass of malignant disease. There were now also definite signs of a malignant growth in the lower part of the pharynx springing up from behind the arytenoids. An almost identical case has occurred in the practice of Mr. Watson Cheyne. A mass of recurrent epitheliomatous glands on either side of the neck was removed, on one side cleanly, and here there was no subsequent trouble, but on the other side one gland burst during removal and was subsequently rapidly followed by diffuse carcinomatous infiltration of the whole side of the neck. Another interesting case was also observed in King's College Hospital under the care of Mr. Watson Cheyne. The patient was a man suffering from recurrent sarcoma of the lower jaw. After a part of the jaw had been removed with an adherent submaxillary lymphatic gland it was considered advisable to perform tracheotomy. Recurrence took place in a few months in the scar of the tracheotomy wound. After its removal the malignant mass had been cut into and the tracheotomy wound was undoubtedly infected by the hands or an instrument or sponge used in the earlier part of the operation. A fourth case I have seen was that of a woman in the Hospital for Diseases of the Throat, Golden-square, W., suffering from carcinoma laryngis, and on whom complete extirpation of the larynx was performed by Dr. Bond. After the usual vertical incision another cut was made at right angles to it along the lower border of the hyoid bone outwards to the sterno-mastoid. Before removal of the malignant mass the larynx was split vertically to see the extent of the growth, which was in this way cut into. About eight months later recurrence occurred which at first sight seemed to be in the glands, but which on removal was found to be in the scar at the extreme outward limit of the above-mentioned transverse incision. In this case, also, it seems certain that the growth was transplanted to the part by the operation, division of the larynx and growth having given ample opportunity of infecting the instruments &c. A similar case operated on by Bull of New York is on record in which, after removal of an epitheliomatous larynx which had been cut into during the operation, recurrence shortly occurred in the scar of the tracheotomy wound. The details of this case are, however, a little indefinite as to the mode of infection, and it may have been a direct extension of the disease.

A few cases of transplantation arising in connexion with cancers in other regions may now be briefly mentioned. An undoubted case of this kind is one operated on by Wölfler in which pylorectomy was performed for malignant disease, and nine months later recurrence was found in the scar of the wound in the abdominal parietes. This was removed, but recurrence took place in the glands in the groin.

The following cases are taken from Ebert's thesis:—A case observed by W. Thorn of carcinoma of the cervix uteri. The vagina was very narrow and had to be slit in both directions to allow sufficient room for vaginal hysterectomy. Recurrence of the disease occurred in the incision near the rectum. Two cases in which paracentesis was performed for malignant disease of the peritoneum and in which a secondary growth appeared in the muscles of the abdominal wall at the seat of puncture. In both cases the peritoneum immediately underlying and surrounding the puncture wound was unaffected. A precisely similar case in which a secondary growth appeared at the site of puncture of the abdominal wall for ascites due to malignant disease of the liver. A case observed by Von Sippel of malignant ovarian cyst which was burst during its removal. Seven months later there was ascites, and hard lumps could be felt in the abdominal cavity. A second laparotomy was performed and the peritoneum was found extensively studded with malignant nodules, but there was no recurrence at the site of removal of the ovary and no malignant disease of any other abdominal organ. The peritoneum over the old abdominal scar was healthy, but each of the deep stitch tracks was the site of a tumour varying in size from a pea to a cherrystone. These little tumours formed a double row, and on microscopic examination proved to be cylindrical-celled carcinomata. A case related by Gross of tumour in the rectum, in which after removal recurrence occurred in the skin wound. Kraske reports similar cases in which after excision of the rectum recurrences have occurred in the skin wounds near the anus. A case observed by W. Thorn of cancer of the uterus, in which the growth did not reach as far as the external os, and in which, after total hysterectomy, recurrence occurred as a projecting mass in the scar of the vaginal roof. (This case appears capable of being explained differently.)

In almost all the thirty-five cases quoted above dissemination by the blood or lymph stream seems an extremely improbable explanation of the observed clinical data, nor can the recurrence in the large majority of the operation cases be possibly due to a local incomplete removal. The latter cases seem to me a quite sufficiently convincing proof of the point to which I especially wish to draw attention—namely, the great danger we run in infecting our patient with the very disease we are endeavouring to eradicate if at any time during the operation we cut into the affected tissues or infect our hands, &c., with it. Some considerations on the above cases tend to show that this danger is even greater than may at first sight appear. Thus no less than four undoubted cases have come under my own observation in the last four years. Again, it seems possible, even probable, than in many cases a local recurrence in the scar is really due to cancerous wound infection, although in the great majority of such cases it is obviously impossible to exclude instances of recurrence due to imperfect removal, however thoroughly the operation may appear to have been done. It is almost only in the exceptional cases where an implantation growth has occurred in a wound made at a distance from the primary seat of the disease that we can exclude positively other channels of dissemination. The scarcity of such cases met with in medical literature may be reasonably ascribed to the fact that when they have occurred they have been for the most part

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looked on as local recurrences. Such cases would probably not be considered worth publishing, and, further, my search has been but a very limited one. In the two cases of malignant glands in the neck above described the subsequent course of events leaves no room for doubt as to the cause of the dissemination of the disease, and it is suggestive as showing danger in wounds which we completely close that infection occurred in the only two cases in which I have seen carcinomatous glands burst during their removal. Further, in these cases not a simple recurrence occurred in the scar, but the whole wound and side of the neck were involved in one huge mass, and similarly in the case of laparotomy for malignant ovarian disease almost every one of the deep stitch tracks became the site of a malignant growth. In a wound left open or packed as in most laryngeal operations the danger is probably not nearly so great, any epithelial cells left in the wound being washed away with the discharge or removed with the dressings; yet many of the cases quoted above show that the danger even in these cases is a very real one.

In some respects malignant disease of the larynx appears eminently suitable for curative operations, general dissemination of the disease being an extremely rare occurrence, and infection of the glands in cases of intrinsic carcinoma being an also rare and, when it does occur, a very late event. Thus the disease remains local either throughout its course or at any rate for a very long time; and as we should expect from this we find that in operations on the larynx excluding the immediate risks local recurrence is the great danger to be feared. The statistics of these operations, those of Wasserman, of Pinçonnet, and a large number collected by myself of operations performed in the last six years all agree closely on this point. Excluding the cases in which death occurred soon after the operation or in which the result up to one year is not reported, we find approximately 65 per cent. of local recurrences, as compared to 30 to 35 per cent. of cases well one year or more, of which latter about half, that is 15 per cent. of the whole, were definite cures. Thus it is obvious that although in recent years much has been done to improve the technique of these operations and lessen the immediate mortality, much more must still be done to improve the prospect of cure of the survivors before we can urge our patients to submit to the still considerable risks of the operations, especially that of complete extirpation. In the operation of excision of the larynx, total or partial, or of thyrotomy it is a very usual plan to split the thyroid cartilage early in the procedure so as to inspect the exact nature and extent of the disease. This is, no doubt, a very convenient procedure and is quite unobjectionable in those cases in which, so far as we can determine, the anterior part of the larynx is free from disease; but where the affection spreads across the mid-line in front it opens the door to the risk of infection, and is, I venture to submit, one of the causes of the very large number of local recurrences. In the following case, occurring in my own practice, to avoid this danger a modification of the usual method of performing thyrotomy was successfully adopted.

A woman aged sixty years came to the Hospital for Diseases of the Throat, Golden-square, in September, 1894. She complained of hoarseness commencing about three months before, and gradually increasing until the voice was reduced to a hoarse whisper. There were no other prominent symptoms. On laryngoscopic examination a white cauliflower-looking growth was found springing apparently from the edge and under surface of the left vocal cord and anterior commissure. There was some surrounding hyperæmia. The arytenoids moved well, but the anterior halves of the cords were apparently fixed. The larynx was cocainised and an attempt made to remove a piece of the growth with the forceps. This failed, but a large piece was easily removed with the cutting curette. A series of sections was at once cut and left no doubt the tumour was a squamous-celled epithelioma. The patient was at once admitted to the hospital, and on Sept. 22nd the following operation was performed. After preliminary tracheotomy and introduction of Hahn's cannula the larynx was exposed by the usual vertical incision. The soft parts were then dissected off in front of the crico-thyroid membrane, the cricoid cartilage and lower part of the thyroid cartilage going well back on either side. A small piece of the anterior ring of the cricoid cartilage was then removed so as to, as it were, enlarge the crico-thyroid space, and the larynx opened by dividing transversely the mucous membrane as low down as it could now be reached. By curved scissors this opening was enlarged upwards well back on the right side. These incisions were guided by the previous knowledge obtained by the laryngoscope of the extent of the growth, and were planned so as to keep at a sufficient distance from it. Through this opening one could now easily see the exact limits of the growth. A semicircular piece of the lower part of the thyroid cartilage was next removed and the mucous membrane and soft parts detached for a short distance all round. All this exposed and detached mucous membrane, including the whole of the crico-thyroid membrane, was then clipped away in one piece. The part removed included more than half the right and nearly the whole left vocal cord, and was nearly circular, with a growth as large as a sixpence in the centre, surrounded everywhere with a margin of at least three-quarters of an inch of healthy tissues. This method of operating, although apparently inconvenient, was by no means difficult or troublesome to carry out. The usual after-treatment was adopted, the patient could take both solids and fluids by the mouth after the first day, and her progress was uninterrupted. The patient was discharged with the wound soundly healed on Nov. 3rd, but in December it was considered advisable to re-insert the tracheal cannula. The patient still (March, 1896) remains well, but retains the tube.

Where the whole larynx is involved or complete extirpation is considered necessary it should be removed in one piece, and the method recently adopted by many foreign surgeons, such as Perier, Poppert, Cohen, Swain, &c., seems to be the best hitherto described. In this operation the larynx and trachea are first well cleaned, the trachea is then raised from the œsophagus and cut right across. The upper end of the windpipe is then stitched to the skin, a tampon-cannula tied in, and in this way is completely shut off from the wound. The larynx is now detached from the œsophagus from below upwards until the arytenoids are reached, when the pharynx is opened. The larynx is now freed at the sides and in front well beyond the disease and removed. If the arytenoids are involved the complete removal of the mucous membrane covering them is rendered absolutely necessary if we wish to avoid an almost certain recurrence, and no attempt should be made to peel it off on the posterior surface, as is often done. The large wound into the pharynx should now be completely closed in the manner recommended by Rotter. The cut edges of the mucous membrane are first brought carefully together with fine catgut sutures, then the deeper structures, layers of muscles, &c., are brought across to support this, and finally the skin flaps are brought across and stitched in position. Thus the large gap is efficiently closed and the after-treatment becomes a very simple matter. Rotter's patient was seventy-two years of age, and complete extirpation left a very large wound in the pharynx, yet he could swallow easily and without pain after the first day, was allowed up on the seventh day, and had gained six pounds in weight in three weeks after the operation. In extensive operations on the throat the rapid restoration of the power of swallowing is of the greatest importance; it is the best safeguard against septic lung complications, for if swallowing is impossible, mucus, saliva, discharges, &c., gather in the throat and trickle down into the trachea in spite of the patient's efforts to cough. In such cases we must of course retain a Hahn's cannula or other efficient plugging of the windpipe until the power of swallowing has returned, but this is an obviously inferior method to the one above described. Where only one side of the larynx is involved thyrotomy or hemi-laryngectomy may be of course performed in the usual way, the disease being in such cases removed in one piece without cutting into it. Where, however, the growth of the larynx occupies or impinges on the anterior commissure, and thyrotomy or some partial excision is determined upon, precautions should be adopted, as in my own case, to avoid cutting into the growth and infecting the wound, and in any case in which a malignant growth is unexpectedly cut into the wound should be thoroughly cleaned. Cauterisation is probably the only reliable method of destroying the infective cells, and a fluid cautery such as undiluted carbolic acid is the most likely to thoroughly reach all parts of the wound and leads to the least subsequent trouble.

To sum up, it seems very advisable that in all cases of malignant disease the growth should be removed in one piece, all incisions being made in healthy surrounding tissues, and where this has not or cannot be done that the wound

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should be cleansed afterwards by cauterisation. This probably applies equally to cancer in all regions of the body, although, in so far as I know, in no region is the growth so frequently cut into during the operation as it is in operations on the larynx. Throughout this paper I have almost unavoidably used the term infection although none of the cases I have brought forward point in any way to cancer being an infectious disease, that is, in the ordinary sense of a virus; rather they all point to the dissemination having taken place by a direct transference of the cancer cells. Finally, I have to express my thanks to Dr. J. W. Bond and Mr. Watson Cheyne for kindly allowing me to make use of some of their unpublished cases.

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Welbeck-street, W.

A SUCCESSFUL CASE OF LAPAROTOMY FOR COMPLETE INTESTINAL OBSTRUCTION SUBSEQUENT TO AN ATTACK OF PERITONITIS.

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IN April, 1895, I received an urgent message from Dr. Wright and Mr. Mackenzie of Romford, Essex, asking me to go down to explore the abdomen of a young man aged twenty years who had had complete intestinal obstruction for a week and was then vomiting stercoraceous matter. On my arrival the following history was elicited. About six weeks previously, after a long day's hunting, during which the patient went without food and got drenched twice, he complained of pain in his stomach and fainted on reaching home. He went to bed and had a hot drink, and on the following morning sent for Mr. Mackenzie, who found him feverish and with all the symptoms of peritonitis. The patient had a bad time of it for some weeks, though eventually he pulled through and seemed to be getting well, but on the Friday before my visit he suddenly became worse, the pains returned, the abdomen swelled, and vomiting occurred. For about a week there had been no proper action of the bowels, and for two days little or no flatus had passed. Rectal injections had brought away a small amount of hard fæces, but his sufferings continued and he was rapidly losing strength. On examination I found his abdomen much distended, tympanitic, and exceedingly tender. His temperature was 99° F., the pulse 100, the tongue moist and white, the face flushed, and the countenance anxious. The urine was scanty and dark, and the vomited matter was bilious and offensive but not fæcal. Judging from his stature the patient must at one time have been a muscular youth, but at that moment he was looking very ill and haggard. During his long illness he had been lying on a feather bed, and as a consequence had contracted a large bedsore over his sacrum. Gurgling was distinctly heard and felt in the line of the colons, and the dilated coils of small intestine could be seen moving beneath the abdominal wall. There was no special tenderness over the situation of the ileo-cæcal valve, but the patient complained of severe spasmodic attacks of pain in his abdomen, and particularly referred to a spot about two inches below, and to the left of, the umbilicus, where the pain was continuous. He also stated that soon after swallowing fluids he experienced agonising pains in the pit of the stomach. On exploring his rectum the finger impinged on a large mass of fæcal matter very high up; I therefore ordered a copious enema of olive oil, turpentine, and soap-and-water, which brought away a large amount of hard, light-coloured fæces. This treatment relieved his pain somewhat and the vomiting ceased, but the abdomen remained distended and tender. As the hour was late and the patient's symptoms were now less severe it was decided to leave him for the night in the hope that some improvement might take place before morning. He was given twenty drops each of tincture of belladonna and opium and another enema was ordered to be administered at 7 A.M. In the meantime it was arranged that I should hold myself in readiness to operate if the symptoms again became urgent. For the next twenty-four hours the patient seemed to be much better and had no sickness. The enema had brought away more hard fæcal matter and the abdominal pain was bearable. The day following he was not so well and at night became very ill. Early next morning I had a telegram asking me to come at once. On arrival I found the patient in great pain and praying to be relieved. His abdomen was immensely distended, the lower portion being discoloured and œdematous. The vomit was distinctly fæcal, the tongue was brown and dry, and the pulse was 140 and thready. No flatus had passed for twenty-four hours and the patient was in a most critical condition. I put the matter very plainly before him and his father, and they at once consented to any operative measures that would give the slightest chance of life. The patient was then carried into an adjoining room, where there was a better light and where everything was in readiness for the operation. Taking into consideration his exhausted condition and the probability of a lengthy operation, Mr. Mackenzie decided to give the A.C.E. mixture and the result was all that could be desired, the patient rapidly getting under its influence and remaining completely anæsthetised whilst on the table. Mr. Wright took charge of the sponges and rendered most valuable assistance. Fully expecting to find the chief cause of trouble at the painful spot so often referred to by the patient I opened the abdomen immediately below the umbilicus, and it was fortunate that I did so, for on introducing my finger I detected a coil of intestine flattened out and adherent across the middle line just below my incision. This was detached and the opening prolonged downwards to the extent of five inches. The small intestines were enormously distended, injected, matted together, and covered with flakes of lymph. On passing my hand into the abdominal cavity I found that it was impossible to distinguish between the large and small intestines, and therefore, though the case seemed hopeless, I proceeded to separate the coils, beginning with the portion just detached. Bit by bit the adhesions were broken down, the intestine released and brought through the wound, until the greater part of the jejunum and ileum lay outside the abdomen. The coils were protected by flat sponges and towels wrung out in warm carbolic lotion. I then carefully examined the large intestine, and on reaching the transverse colon felt a band of adhesion almost strangulating it. This was caught with forceps in two places and divided between. On passing my finger along the descending colon another similar adhesion was found, and on dividing it the flatus rushed through the intestine and dilated it enormously. The divided ends of the adhesions were then tied and the forceps removed. The separated coils of intestine were next examined and several bleeding points secured by ligation and the torn peritoneal surfaces brought together by suture. An unlooked-for impediment now presented itself, for on attempting to return the intestines it became evident that the abdominal cavity could not contain them in their distended condition. A flatus-tube was passed into the rectum and some gas escaped, but not enough to make any appreciable difference in the size of the gut. I therefore punctured the intestine in three separate coils and let out a quantity of flatus, each puncture being closed with a Lembert's suture and well washed with corrosive sublimate solution. Still the intestines could not be replaced owing to the accumulation in the colon. I therefore pulled the descending colon forward, and having isolated a portion of it and protected the peritoneal cavity, I incised it longitudinally to the extent of half an inch and let out a great quantity of gas and some liquid fæces, thus reducing the distension considerably. The incision was well cleansed with corrosive solution and then closed with four Lembert's sutures, and after another careful washing the intestine was replaced. The sponges were then removed and the coils of small intestine returned into the abdominal cavity, which in its turn was subjected to a considerable amount of cleansing with sponges. Finally the abdominal wound was closed with silkworm-gut sutures and dressed with iodoform gauze over which a large pad was placed, the whole being kept in position by strapping. The patient was

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then put into bed and placed on a water-cushion. Considering the severity of the operation, which had lasted two hours, he showed but little signs of collapse although his pulse was very rapid—140. He was sick once, and as the vomit was distinctly fæcal the prognosis seemed extremely grave. However, no bad symptoms supervened, and the immediate result of the operation was most satisfactory. There was no return of the sickness, and he had some refreshing sleep. Flatus passed freely next morning, the abdomen became flat and the pain and tenderness disappeared. The tongue rapidly cleaned, the pulse, which had been 140, gradually dropped ten beats each day, and the temperature kept below 100°. On the ninth day I removed all the sutures, and from that date his convalescence was uninterrupted. By the end of the third week the bedsore had healed and the patient was out of bed on a sofa. He is now in perfect health, rides long distances on a bicycle, can walk miles at a stretch, and enjoys a day's shooting or riding. The after-treatment and nursing were admirably carried out, and it gives me much pleasure to acknowledge the valuable services of Dr. Wright and Mr. Mackenzie, who by their unremitting care and attention brought this case to such a successful issue.

Remarks.—The condition of the abdominal contents revealed during the operation fully justified, in my opinion, the extreme measures adopted. Had I been contented with detaching and liberating the portion of adherent intestine first disclosed, the operation would have been a miserable failure and I should have been discredited. Previously to this operation I had never attempted to attack such an amount of intestinal adhesion, nor had I seen or read of a case where most of the intestinal tract being adherent the adhesions were systematically broken down and the several coils separated and released. In this instance it was either certain death to the patient from obstruction or the risk of collapse from a severe and tedious process of intestinal manipulation. With regard to the intestinal adhesions their extent and degree may be imagined from the fact that the whole length of intestine liberated and withdrawn from the abdominal cavity was raw and bleeding, the peritoneum being in places stripped off, leaving the muscular structure exposed. A few remarks relative to the several forms of obstruction dealt with in this case may not be out of place, and therefore I shall enumerate them in the order in which they appeared: (1) intestine adherent to the abdominal wall; (2) volvulus; (3) omental band constricting the transverse colon; (4) peritoneal band binding back the descending colon; and (5) impaction of fæcal matter. Any one of these obstructions would probably have proved fatal if overlooked, which shows clearly how essential it is that the operator should be perfectly satisfied that the whole intestinal tract has been investigated before closing the abdomen. The first obstruction met with was due to a coil of intestine being adherent across the middle line to the extent of three inches. This portion was flattened out and completely obstructed by pressure of another coil, distended and adherent to it. The second form of obstruction was caused by the twisting of several distended and adherent coils. I have used the term "volvulus" for the want of a better one. The third was due to a thick twisted piece of omentum attached high up on the abdominal wall close to the diaphragm. It was buried in the transverse colon, almost severing it and completely constricting its canal. Curiously enough this was the only portion of the omentum seen during the operation. The fourth obstruction revealed a band of adhesion, probably peritoneal, which was attached to the left side of the abdominal wall and dipped down towards the mesentery. The colon was so tightly bound down by the band that on either side of the constriction the intestine bulged out and the band had to be divided on the finger-nail in the depths of the abdominal cavity. The impaction of hard fæcal matter was most likely induced by the administration of opiates at the outset of the symptoms. There seems to be a general opinion among surgeons that extrusion of the intestines is always to be avoided in abdominal surgery. Over and over again I have heard it stated where death had ensued subsequent to an operation that the death was directly due to shock from exposure and chilling of the intestines. Now the term "shock" has served to cover many a surgical error, but I doubt if extrusion of intestines, properly and carefully managed, adds much to the danger of an abdominal operation. So far I have never hesitated to withdraw as much intestine as was necessary to clear the field in cases of hæmorrhage or obstruction, and I have never had to regret doing so. Every precaution must, of course, be taken to keep the extruded intestine warm and completely covered. Such is my opinion at the present moment, but I am open to conviction. In this instance manual exploration of the abdominal contents would have been useless without the aid of visual examination and extrusion of the intestines, and I do not envy the surgeon who attempts to complete an operation for obstruction while relying on his sense of touch alone, particularly if the intestines be adherent and distended.

Now comes a very pertinent question. Ought one to attempt to replace the released intestines in their distended condition, or should the contents be evacuated before returning them into the abdominal cavity? Dr. Greig Smith teaches that "no case of intestinal obstruction is properly concluded until the distended bowels are relieved of their contents." In the case under discussion it would have been extremely hazardous to attempt replacement by pressure, knowing the extent of injury to the released intestine, which was immensely distended with gas and fluid fæces. The only question which arose was whether to puncture with a trocar or to incise the distended intestine. With regard to the choice between puncture and incision of distended intestine, my experience so far would go to prove that both may be necessary where the accumulation is large, and that neither method can do much harm if the proper precautions be observed in the sewing up and disinfecting of the injured gut before returning it into the abdominal cavity. Incision, however, seems to me to be preferable to puncture, inasmuch as the former makes a clean cut and gives more room for the exit of fæcal matter, whereas the latter makes a punctured or jagged wound, and the cannula frequently becomes obstructed and has occasionally an awkward way of suddenly twisting round with each successive rush of flatus, and may even be jerked out of the intestine unless carefully held in position, while at the most only gas and liquid fæces can escape through it. In any future operation I should be inclined to incise and evacuate at a much earlier stage, as such a procedure would give more space for manipulation.

Brook-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

FATAL CASES OF POISONING BY ORDINARY SORREL (RUMEX OXALIS).

BY GEORGE G. FLEMYNG, M.D. DUB.,
MEDICAL OFFICER OF THE FIRST DISTRICT OF ELY UNION.

THE following cases are of interest as I have been unable to find any recorded instance of fatal poisoning from this plant, which is extensively used in salads, &c. The active principle in the ordinary "dock sorrel" is binoxalate of potassium, which under the names of "salts of sorrel" or "essential salt of lemons" is extensively used for bleaching purposes and which has proved fatal, being mistaken for cream of tartar.

Two sisters, aged respectively six and a half years and five years, were brought to me about 10 A.M. on June 5th. The history was that about six o'clock the previous evening they had been sent to get milk at a neighbouring cottage, to reach which they had to cross some fields. They returned and told their mother that they had eaten a quantity of sorrel leaves. They then had a meal consisting of tea, bread-and-butter, and cake. Both children vomited during the night, and as this continued they were brought to me. They both presented the same symptoms, which were vomiting of a greenish-coloured fluid, deep stupor, and collapse. The pupils were dilated; the tongue was moist, somewhat swollen, and not coated with fur; the extremities were cold and clammy; the pulse was very feeble, being 120 and 106 respectively, the respirations were shallow and sighing, and the temperature was subnormal. There was neither pain nor diarrhœa. The symptoms presented the curious properties both irritant and narcotic which are characteristic of poisoning by oxalic acid and the oxalates. Owing to the condition I thought it inadvisable

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to administer emetics, and the treatment consisted in the exhibition of remedies suitable to the collapse and of the antidotes for oxalic acid—namely, chalk suspended in milk, lime water, and castor oil. The coma and collapse, however, increased and the children died at 12 noon and 2 P.M. respectively, eighteen and twenty hours after they had apparently taken the poison.

At the post-mortem examination, which I performed on the following day, no appearances worthy of record were noticed except a slight amount of congestion in the small intestine of the elder girl. The mucous membrane of the mouth and tongue was in both cases white and shrivelled. I did not detect any perforation. Both stomachs were ligatured and removed into jars which were sent by the wish of the jury after the inquest to Mr. J. W. Knights of Cambridge, public analyst of the Isle of Ely County Council.

I had in the meantime carefully explored the fields in the vicinity and as far as possible traced the path of the children. With the exception of the ordinary cuckoo-pint (Arum maculatum) and the ordinary hemlock (Conium) no poisonous plants were discovered except sorrel, of which several tufts were found.

At the adjourned inquest the evidence of Mr. Knights proved that a small quantity of oxalic acid or binoxalate of potassium was found in the stomach of each. The quantity was not enough to have caused death, but in his opinion sufficient might have been taken and, though afterwards vomited, produced fatal results. He was also of opinion that enough sorrel might have been taken to produce these results. No other poison was detected. These facts and evidences clearly show, I think, that the cases must be ranked as poisoning by sorrel leaves.

Ely, Cambs.

A NEW METHOD OF OPERATING FOR HYDROCELE.

By SURGEON-LIEUTENANT-COLONEL E. LAWRIE, M.B.EDIN.,
RESIDENCY SURGEON, HYDERABAD, DECCAN.

THE operation for the radical cure of hydrocele should be performed in the following manner. The sac is punctured in the usual way and when about a third or one-half of the fluid has been withdrawn two drachms of a saturated solution of bichloride of mercury in glycerine are injected and mixed with that which remains and allowed to rest in the sac for from half a minute to a minute. The whole of the fluid is then drawn off to the last drop. Very little pain is experienced and unless the patient is nervous and takes chloroform he is able to move about immediately after the operation. For the next few days he must as a rule lie about, but need not in any case be confined to bed, and in a week or less he is quite well. Provided the surgeon is careful that his hands and instruments are clean and free from micrococci when the puncture and injection are made they produce a uniform result—i.e., sufficient aseptic inflammation to obliterate the sac and nothing more.

Hyderabad.

FRACTURE OF THE ALVEOLUS OF THE LOWER JAW.

By J. HUTCHISON EDWARD, L.D.S. R.C.S. IREL.

THE following case may not be uninteresting now that the cricket season is in full swing, because of the nature of the accident and the easy, rapid, and complete recovery which followed the treatment. In June last year a man about eighteen years of age, who had been struck in the mouth by a cricket ball, applied to me to have six front teeth (which he said were knocking about in his mouth) extracted from his lower jaw. On examination I found it was not simply a case of loosened teeth, but that the whole of that portion of the front of the lower maxillary bone which contained the alveoli of the six teeth had been broken away and was swinging about in his mouth attached only by means of the membranes of the gum which were intact on the right side, although on the other side they had been torn through. I at once proceeded to secure the teeth with their broken-off alveolar supports *in situ* by means of a gature of silk thread. The fracture extended from the side of the right canine tooth downwards through the alveolar portion of the lower maxilla, passing transversely along the junction of the alveolar portion of the body to the lateral incisors on the left. I then carefully took a model in beeswax of the injured mouth. From this I made a plaster-of-Paris cast, and from this a model in wax again, and from this last a splint of black vulcanite extending from the right to the left molar (inclusive) of the lower maxilla, using black vulcanite in order to avoid the possible irritation which might be set up in the injured tissues by the presence of colouring matter. I also raised the bite a little in order to take off the pressure from the injured portion of the jaw. The patient was required to rinse out his mouth very frequently each day with an antiseptic wash consisting of one part of carbolic acid to twenty parts of distilled water. In about three weeks he recovered and was enabled to dispense with the black vulcanite splint and masticate his food as usual.

Manchester.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ROYAL ALBERT HOSPITAL AND EYE INFIRMARY, DEVONPORT.

A CASE OF DOUBLE OVARIOTOMY, INGUINAL COLOTOMY, AND EXCISION OF THE RECTUM; RECOVERY.

(Under the care of Mr. F. EVERARD ROW.)

AT the present day, when operations are so frequently performed for the removal of ovarian tumours and with almost unvarying success, a practice which, we think, at one time was fairly common—that of removing the other ovary when the operator was doubtful if it was quite normal, in order to prevent the risk of a second operation—should be departed from and the question be left to be decided by time. There does not appear to have been any contra-indication to the removal of the rectum in this case, and the result has more than justified the operation. The growth was, however, extensive, and it will be interesting to know the ultimate result as regards prolongation of life. Some recent statistics[1] give a favourable prognosis after removal of the rectum for cancer; 40 per cent. of those recovering from operation had survived the three years' limit, 8 per cent. of them five years, and four others six, eight, eleven, and thirteen years respectively. The operation is not likely to be abandoned as too dangerous. That stage in its history has long been passed. For the notes of the case we are indebted to Mr. J. J. N. Morris, house surgeon.

A married woman aged forty-four years was admitted to the hospital in June, 1887, suffering from an ovarian tumour. An operation was performed a few days after admission, and a large multilocular cyst springing from the right ovary was with little difficulty removed. She made a most excellent recovery. The highest temperature recorded was 99·8° F., for which there was no apparent cause. She left the hospital within three weeks perfectly well. Five years later in 1892 she was re-admitted with a growth from the left ovary. This also on operation was found to be multilocular and with no adhesions. Recovery was again uninterrupted, and she left the hospital in seventeen days quite recovered. In October of last year, 1895, Mr. Row was sent for privately as she was said to be suffering from "outward piles." On examination it was found that she was in reality suffering from almost complete intestinal obstruction from malignant disease of the rectum and anus. She was a third time admitted to the hospital and two days after admission left inguinal colotomy was performed. Owing to an extremely short mesentery of the sigmoid flexure there was considerable difficulty in getting a sufficient portion of the bowel outside the abdominal wound. The numerous sutures, however, held well and the gut was opened on the third day after the operation from which she experienced considerable immediate and

[1] Czerny: Beiträge für Klinische Chirurgie, vol. x., 1893.

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permanent relief. Three weeks later, when she was convalescent and accustomed to the altered condition of affairs, Mr. Row excised the anus and rectum, about four inches of the anterior wall, and five inches of the posterior wall. The whole circumference of the rectum was involved and also a portion of the posterior wall of the vagina which was removed. The surgical procedure consisted of incising the perineum in the middle line, cutting around the anus, and then carrying the incision in the middle line as far as the coccyx. Sufficient room was thus secured to grasp the rectum in the left hand, pull it down outside the body, and remove it with scissors, with a portion of the vaginal wall. After the operation a little fæcal matter for a few days came away in the dressings with which the wound was packed — namely, strips of lint soaked in glycerine and iodoform. The sub-peritoneal fat, but not the peritoneum itself, was seen, and there was very trifling hæmorrhage. Again she made a remarkably quick and uninterrupted recovery, the cut end of the posterior vaginal wall becoming adherent just above the skin margin at the site of the anus. She was, in May, eight months after the last ordeal, fat and cheerful, having gained about 10 lb. in weight. She had no prolapse of either the vagina or uterus and the skin in the neighbourhood of the incision was then quite free from signs of recurrence.

Remarks by Mr. ROW.—I do not know that this case calls for any especial comment except to point out the importance of care in aseptic treatment. The patient on three separate occasions ran the risk of death from accidental flaws in the toilet of the peritoneum, in addition to other obvious dangers. As an interesting point I may add that after the first operation, nine years ago, she left the hospital just in time to nurse her husband, who was suffering from an enormous sarcoma of the scapula and surrounding parts which was far too large for removal and who died from hæmorrhage from the axillary artery two or three weeks later.

BRISTOL ROYAL INFIRMARY.

A CASE OF FATAL HÆMORRHAGE FROM A STERCORAL ULCER OF THE COLON COMPLICATING RELIEF OF OBSTRUCTION FROM CANCER.

(Under the care of Dr. GREIG SMITH.)

IT is, of course, a well-known fact that the stercoral ulcers which appear in the bowel above a point of obstruction form an important element in the prognosis of such cases. Varying very much in size and number, they form a source of considerable danger to the patient from their liability to penetrate through the coats of the bowel and produce a fatal peritonitis. In this case it is probable that the operation prevented such a fate by being performed very soon after such an ulcer had given way. As a rule, when the fæcal impaction which has caused the ulcers has been thoroughly relieved, their tendency is towards cure, and fatal hæmorrhage from an ulcer situated in favourable circumstances for repair such as obtained in Dr. Greig Smith's patient after the enterostomy, is, we agree with Mr. Carwardine, almost unknown. For the notes of the case we are indebted to Mr. T. Carwardine, house surgeon.

A man aged fifty years was on April 9th admitted to the Bristol Royal Infirmary complaining of abdominal pain and frequent vomiting. His bowels had not been open for eight days and he had not passed flatus for five days; consequently, there was considerable abdominal distension, and his condition was grave. His illness began about a month previously with a sudden severe griping pain in the abdomen, followed by persistent vomiting, and later by an abatement in the severity of the symptoms. For a while he passed scanty motions of small calibre. An operation was performed the day after admission. On opening the peritoneal cavity a little gas escaped which had a doubtfully fæcal odour. A small indurated mass was found attached to the ascending colon; during manipulation this became detached, and the audible escape of bubbles of gas proved that there was intestinal perforation. Dr. Greig Smith pinched the opening between his fingers and brought it as near to the surface as possible. There was an ulcer with jagged edges at least an inch in diameter, and a small perforation about three inches higher up, while the whole bowel looked unhealthy and congested. The condition of the patient forbidding further operation, the parts were cleansed as thoroughly as possible and enterostomy was performed, the large ulcer being used for the insertion of the large rubber tube. During the next twenty-four hours fæces came away freely and the abdominal distension subsided. On the third day a slough of bowel detached. For a week there was steady progress, although fæces welled up from the greater part of the abdominal incision, which was accordingly opened up freely, exposing matted bowels covered with granulation tissue. This was followed by marked improvement in the wound and in the patient's condition. On the morning of the eleventh day after operation bright blood was discovered oozing from the wound in the neighbourhood of the artificial anus. The patient's bed was soon soaked and he must have lost externally at least a pint of blood. The parts were carefully examined and cleansed, but no bleeding point could be seen. Iodoform gauze was therefore packed in. The patient, however, was blanched and restless, and although the usual measures for the anæmia were adopted he died five hours subsequently.

Necropsy.—On post-mortem examination the cæcum was seen to be the portion of bowel affording an artificial anus. It was congested in parts and had two circular perforations of about half an inch and a quarter of an inch diameter respectively. The surrounding bowels were adherent, but there was no general peritonitis. The colon was largely distended with blood and clot, and a small amount of fæcal matter. The blood reached from the ileo-cæcal valve to the splenic flexure, most being accumulated at the hepatic flexure, where there was a deep circular well-defined ulcer about three-quarters of an inch in diameter, which had all but perforated the peritoneal surface. It was obvious that the bleeding came from this ulcer, and that the blood, after filling the colon, had escaped at, and about, the artificial anus. There was a large annular infiltrating mass of cancer at the junction of the descending colon with the sigmoid flexure, fixed, almost filling the lumen of the gut, and involving a portion of the adjacent small intestine. In this case, therefore, there were two stercoral ulcers in the cæcum and one in the hepatic flexure from which fatal hæmorrhage occurred eleven days after the obstruction was relieved and at a time when the patient was practically out of danger as far as the obstruction was concerned.

Remarks by Mr. CARWARDINE.—The above case appears to be the first of its nature noted, the search for notes of a similar case having been futile. A case is recorded of fatal hæmorrhage from an ulcer at the base of a myoma of the ileum, but no reference has been met with to such a fatality caused by a stercoral ulcer complicating the successful relief of cancerous obstruction.

Medical Societies.

OBSTETRICAL SOCIETY OF LONDON.

Fibroma of the Ovary and Ovarian Ligament removed by Operation.—Anterior Colpotomy.—Impacted Ovarian Dermoid Cyst.—Exhibition of Specimens.

A MEETING of this society was held on June 3rd, Dr. CHAMPNEYS, President, being in the chair.

Mr. DORAN read a paper on cases of Fibroma of the Ovary and Ovarian Ligament removed by Operation, with a series of after-histories of cases reported in the Transactions since 1879. Two cases of fibroma of the ovary in Mr. Doran's operative practice were first recorded: one typical and recently in hand, whilst in the second the tumour was removed in 1889, and though it seemed to present some of the microscopic characters of sarcoma no recurrence had occurred. Eleven cases were tabulated; they included the above, whilst the remainder were reported when recent in the society's Transactions since 1879, Mr. Doran adding after-histories. This was done on account of the question of recurrence, since in four, at least, malignancy was suspected, yet the after-histories proved innocence. Most of the eleven cases bore the naked-eye characters of a fibroma. The suspicious microscopic elements in four cases were apparently connective-tissue cells between bundles of white fibre. Myomata of the ovary were not considered in this communication. In only one case was the disease bilateral. One exceeded ten pounds in weight; but older writers, in days when operation

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was deferred long after diagnosis, recorded heavier fibromata. In ten out of the eleven cases the tumour was removed by ovariotomy. In none was the operation very difficult, and all recovered. In seven cases no adhesions were found. The pedicle was always anatomically normal and long enough to be secured with ease. In two cases it was twisted without causing the pain and other symptoms so prominent in twisted dermoids. Of the eleven cases free fluid was found in the peritoneum in at least five. Mr. Doran discussed this question at length. The after-histories of the ten operation cases were, without exception, favourable. Eight remained free from recurrence from two to twelve years after the operation. The two which remained recovered rapidly, but were quite recent cases. Though always hard, and heavy, fibroma of the ovary caused less pain than dermoid or any other solid or semi-solid ovarian tumour. A markedly hard and painless tumour moving separately from the uterus in a very young woman was most probably an ovarian fibroma. Pedunculated sub-peritoneal uterine myomata were practically unknown in early womanhood, whilst dermoids, very common in youth, were seldom uniformly hard, and the hardest usually set up the most pain. Sarcoma of the ovary, relatively frequent in girlhood, was nearly always soft and associated with amenorrhœa and cachexia. Ovariotomy was the only treatment for fibroma of the ovary. The abdominal wound bled very freely, as in cases of uterine myoma; it must not be made too short else it may be badly bruised during extraction of the hard tumour. Three authentic cases of fibroma of the ovarian ligament were tabulated. Two were certainly fibromata with cystic cavities; one was said to be sarcoma, but its extreme hardness and slow growth did not favour that theory. This tumour grew to a large size, Mr. Doran's weighing over sixteen pounds. In all three the disease was unilateral and the adjacent tube and ovary were free from the new growth. When large the tumour might become œdematous and soft. Ascites and adhesions did not readily develop. In all three cases the patient was in the prime of sexual life. Menstruation was regular in every case. Diagnosis was hardly possible. The uterus might be enlarged yet free from fibroids. All three tumours were removed. In two cases the tumour alone was taken away, the ovary and tube being saved, but one patient died on the fourth day. There seemed to be no tendency to recurrence, Mr. Doran's case and one related by M. Doléris being both still alive and healthy six and a half years after the operation.—Dr. MACNAUGHTON JONES related a case of fibroma of the ovary occurring in a young girl aged twenty-two. From its painlessness, mobility, and feeling of density it gave the idea of a pedunculated myoma. The tumour was discovered accidentally, as no complaint had been made of any pelvic symptoms. The tumour was removed and found to be of the size of an orange and encapsuled. The paient made at good recovery.—After some remarks by Dr. HANDFIELD-JONES, Dr. HORROCKS pointed out the present unsatisfactory state of knowledge of the histological differences between fibromata, sarcomata, and allied conditions. The difficulty was shown in a case under his care exhibited at this society. The tumour was shown as a case of fibroma of the ovary, and the microscopical appearances of sections seemed to several pathologists to indicate its fibromatous nature, but Mr. Bland Sutton, on looking at the sections, pronounced them to be typical of a sarcoma. Fibromata were collections of connective tissue and sarcomata were essentially connective-tissue tumours, and, judging by fibromata under the skin and elsewhere, it was highly probable that they might remain pure fibromata in their histology and innocent in their action for years, and then become sarcomatous and malignant.—After remarks from Dr. CULLINGWORTH and Dr. SPENCER, the PRESIDENT asked whether Mr. Doran considered survival to prove non-malignancy and, if so, whether he would make this statement of both forms of malignant disease or whether he referred only to sarcoma. If so, what would he say about cases (e.g., of cancer of the uterus) in which no recurrence had taken place?—In reply Mr. DORAN said he had listened with interest to the cases related in the discussion. Not many years ago too much stress used to be laid on the term spindle-celled, so that any normal cellular structures with elongated nuclei were considered identical with the cells which made up the true and very malignant sarcoma of bones and fasciæ. We must mistrust old reports of "small spindle-celled sarcoma of the ovary." When a tumour was diagnosed as an ovarian fibroma it was the duty of the surgeon to remove it. If on microscopic examination it appeared to possess malignant characters and if the patient survived the operation for many years he must not conclude that he had triumphed over malignancy.

Dr. JOHN PHILLIPS read a paper on Anterior Colpotomy. He considered that to Duhrssen belonged the credit of calling attention to this operation. Anyone who had performed either vaginal hysterectomy or fixation could not but be struck with the ease with which the pelvic organs could be examined through the opening in the anterior vaginal cul-de-sac. Full details of the operation, as carried out by Duhrssen, Mackenrodt, and Dr. Phillips were given, with short histories of four cases, in the first of which vaginal fixation only was originally intended. Dr. Phillips considered the advantages of this method to be: (1) no hernia or cicatrix and less liability of the formation of adhesions with the omentum and intestines; (2) greater simplicity of operation and greater rapidity of performance; (3) post-operation sickness was much less and the convalescence shorter; (4) no bleeding of any consequence except occasionally from the vaginal flaps; and (5) no drainage-tube was required. The disadvantages, on the other hand, were: (1) much greater difficulty in making the vagina antiseptic, especially if there was any fœtid uterine discharge; (2) greater risk of wounding the bladder, ureters, and coils of intestine; and (3) if the swelling was adherent in the left and posterior quarter of the pelvis the rectum might be lacerated. A list of cases in which this operation seemed indicated was given. With regard to recommending the operation, Dr. Phillips wished it to be borne in mind, firstly, that the peritoneal cavity was opened with its possibly grave after-results, and, secondly, that the removal of the ovaries and tube whether by vagina or abdomen must always be looked upon as a mutilation, and hence the same care and anxious thought should be exercised as before resorting to abdominal section.—Dr. AMAND ROUTH was glad that Dr. Phillips had brought forward this important subject. There was little to criticise in his remarks, but much to commend, especially in the warning added at the end of the paper. He thought that the two difficulties of the operation were the separation of the bladder and the turning-out of the uterus. As regards the former, he thought that a combined transverse and longitudinal vaginal incision gave the best result. It was not always easy to turn out the uterus, and he had found that the best way was to antevert it per rectum or by a uterine repositor fitted with a rack and screw.—Dr. HORROCKS and Mr. MALCOLM then made remarks, and the PRESIDENT closed the discussion by criticising the indications for the operation. He considered that in cases of small intraligamentous and parovarian cysts where these required much enucleation operation was probably safer from below. He considered, also, that abdominal section as an exploratory measure was very valuable from a diagnostic point of view to be followed up by operation per vaginam. With regard to Mr. Malcolm's remarks on the greater safety of abdominal than vaginal section, it must be remembered that as far as sepsis was concerned the latter was one of the safest operations in gynæcology, as was shown by the results of vaginal hysterectomy.

Mr. THOMAS H. MORSE (Norwich) related a case of Impacted Ovarian Dermoid Cyst which was removed by abdominal section during the ninth month of pregnancy. A multipara aged thirty years, whose last labour had been quite normal two years before, was again pregnant nearly nine months when Mr. C. E. Muriel, under whose care she was, discovered that the pelvis was almost completely blocked with a semi-solid tumour and that the os uteri could only with great difficulty be reached with the index finger passed up close behind the pubes. Abdominal section was performed and the whole tumour, which arose from the right ovary, was lifted out. The pedicle was three inches long and was twisted upon itself one whole turn from left to right. This was ligatured and the ovary cut away. The uterus, which had been outside the abdomen for about five minutes, had been carefully kept wrapped up in warm cloths and was replaced with some difficulty. The wound was united with twenty-one sutures, the whole operation lasting twenty-five minutes. The tumour proved to be a dermoid containing hair and sebaceous matter, with some blood and pus. The walls looked gangrenous. The patient made an easy recovery; a normal labour followed twenty-five days after, forceps being applied to prevent unnecessary strain on the recent cicatrix. The child was living and of full size.

The following specimens were exhibited:—Dr. AMAND

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ROUTH: A Hydrosalpinx and small Ovarian Cyst removed by Anterior Colpotomy.

Dr. MACNAUGHTON JONES: Microscopic Sections of a Fibroma of the Ovary.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases.

A MEETING of this society was held on June 5th, Dr. A. SYMONS ECCLES, President, being in the chair.

Dr. F. CLEMOW showed a case of Rodent Ulcer in which an area of skin of the upper lip of about the size of a sixpence was involved. Excision, with grafting according to Thiersch's method, had been entirely successful.

Mr. SWINFORD EDWARDS showed drawings taken from a male patient the subject of Acute Phthisis. There were two circumscribed areas involved, one (the smaller) being apparently papillomatous, the other closely resembling eczema. The diagnosis appeared to rest between mucous tubercle and scrofuloderma.—Dr. ABRAHAM suggested that the case presented some analogies with Paget's disease of the nipple.

Mr. SWINFORD EDWARDS also brought forward a case of Chronic Ulceration and Induration of the Lip. The history dated back some twenty years and the original lesion appeared to have been inflammatory. The present condition was not typical and presented some features consistent with epithelioma, syphilis, lupus, or simple ulceration.

Mr. KEETLEY showed a case of Rodent Ulcer of the Cheek and Ala of the Nose treated by Excision and Skin Transplanting, in which, owing to the failure of Thiersch's grafts, an arm-flap had been brought into requisition.

Dr. CHAPMAN showed a girl aged seventeen years, the subject of heart disease, with Œdema of both Legs, there having been an interval of a year between the onset of the swellings on either side. — Dr. CHAPMAN also showed a case of Linear yielding of the Skin from Premature Obesity in a girl aged fifteen years and weighing 12 st. The skin of the shoulders, mammæ, and buttocks was affected.

Dr. ABRAHAM showed a case of Extensive Acne with Comedones of the Chest and Neck and also water-colour drawings of a Congenital Lymphangioma of the Shoulder which had been successfully removed by scraping.

Mr. MCADAM ECCLES showed cases of Osteo-arthritis in father and daughter. In the male patient, aged forty-five years, the hands were affected in the typical manner. His daughter, aged twelve years, had worn ill-fitting boots and presented a painful swelling over the metatarso-phalangeal joint of the great toe.—Mr. ECCLES also showed a woman aged forty-four years whose hand was typical of Osteo-arthritis. She had also swelling of the elbow, probably of the same nature. — Mr. ECCLES exhibited a man aged twenty-eight years, with Cleft of the Soft Palate with Double Hare Lip, who, through debility, had escaped operation during infancy. The clefts on the two sides of the lip were not complete, the intermaxillary bone was not carried forward, but the prolabium was attached to the columna.

Dr. MORGAN DOCKRELL showed a case of Ulerythema in a boy aged eleven years. The end of the nose and both ears were involved.

Dr. WILLIAM HUNTER showed a case of Deformity of the Chest produced by bicycle running in a boy aged sixteen years, well nourished, and of good personal history. His occupation involved a considerable strain, and always with an inclination of the body to the right. He presented a projection of the right edge of the sternum and adjacent costal cartilages with falling-in of the corresponding ribs and another projection of the left costal arch outwards and forwards. On imitating with the right arm the usual position necessary for supporting the bicycle learner the deformity was much exaggerated, while, when placed supine, pressure on the projecting edge of the sternum nearly annulled the deformity. The President pointed out that in addition to the deformity described there was slight gastroptosis, which was probably also due to the excessive strain involved in his occupation.

Dr. HORNE showed a man aged fifty-six years, the subject of General Atheromatous Degeneration of the Arteries. The aneurysm followed a crush of the foot.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

Chronic Rheumatic Arthritis in the Rorqual (Balænoptera Rostrata).

A MEETING of this section was held on May 29th, Mr. CONOLLY NORMAN, the President, being in the chair.

Dr. E. H. BENNETT exhibited part of the Skull and First Cervical Vertebra of a Rorqual (Balænoptera Rostrata) which had been dissected by Dr. Dixon on the shore of Achill Island. The articular surfaces showed the eburnation and polish of chronic rheumatic arthritis. Dr. Bennett enumerated a great number of mammals in which he had observed the disease, and discussed the grounds on which he made the diagnosis in this rare instance.—Sir W. STOKES wished to know whether there were any other evidences of chronic rheumatic arthritis present besides the polished condition of the bone, as that was met with in such a variety of circumstances.—Dr. DIXON said there was a considerable amount of intervertebral substance between the bones when he got the specimen, and so the polish was not due to the sand acting on it. No other joint was affected. They were all examined. The vertebræ of the neck were degenerating structures in this species, as was shown by two of them being often fused together, and perhaps as degenerating structures they were more liable to disease.—Dr. BENNETT said that there was no evidence of suppurative arthritis, and the condition was, therefore, due to chronic rheumatism.

SECTION OF ANATOMY AND PHYSIOLOGY.

Genu Valgum Adolescentium.—Ossification of the Third Trochanter.—Effects of Right-handedness on the Sternum.

A MEETING of this section was held on May 22nd, Professor PURSER being in the chair.

The SECRETARY read for Dr. J. SYMINGTON, the President, a communication on Genu Valgum Adolescentium, illustrated by a specimen, showing a condition of extreme malformation in both lower limbs. The patient up to the age of eighteen years exhibited no signs of the deformity. She then went to work in a mill, and soon afterwards the condition shown in the specimens arose. There were some signs of rickets in the upper limbs, but the characteristic enlargements of the anterior end of the ribs were absent. The deformity was extreme, the two thigh bones crossing like the limbs of an X; it was due chiefly to the condition of the diaphyses of both femur and tibia and to a slight extent to the unequal growth of the inner and outer parts of the epiphysis. There was comparatively little change at the ankle. The pelvis was unsymmetrically narrowed, the transverse axis being much reduced.

Dr. A. F. DIXON read a paper on Ossification of the Third Trochanter. Three thigh bones were exhibited showing a special epiphysis for the third trochanter. In each case this epiphysis was small and scale-like and was placed just above the groove present in the region of insertion of the gluteus maximus muscle. An examination of a number of young bones led to the conclusion that, in many cases at all events, the third trochanter in man was ossified from a special centre. The epiphysis was never found to be more than a scale-like piece of bone, even when the third trochanter was very well developed.—Professor BIRMINGHAM said that Dr. Dixon's observations seemed to solve a question which was discussed some time ago by Professor Dwight and Mr. Arbuthnot Lane. The latter held that certain bony projections were produced by the pull of muscles on the bone, but Professor Dwight argued, on the other hand, that this third trochanter was a survival of the third trochanter of the lower animals, and that it was not due to muscular pull. Dr. Dixon's observations proved that Professor Dwight's theory was correct.

Professor BIRMINGHAM made a communication on the Effects of Right-handedness on the Sternum. He had remarked that comparatively few sterna are symmetrical, and he believed that the asymmetry was due to the more frequent use of the right upper limb. On examining a number of sterna the conditions which could be attributed to the more frequent use of one limb were (1) a depression of the clavicular facet on the manubrium, sometimes very distinct, generally fairly marked on the right side in about 66 per cent., on the left side in about 26 per cent., and

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absent in about 8 per cent.; (2) an apparent compression from above downwards on one side of the manubrium with a reduction in its vertical depth, present on the two sides in the same proportion as the preceding; and (3) a reduction of the interval between the first and second costal cartilages present on the right side in nearly half the specimens, on the left side rarely. In addition the clavicular facets looked more strongly backwards on one side, usually the right, and in several bones the axis of the sternum was curved, the convexity looking to the left. The curve was most marked in the lower portion of the bone, as if this part were pushed to the left by the pressure of the lower right rib.—Professor PURSER was of opinion that right-handedness depended on the brain, the blood-supply to the left brain being more direct, as was shown by the frequency of embolism on that side.—Professor BIRMINGHAM, in reply, said that none of the theories advanced to account for right-handedness were quite satisfactory. He agreed with Professor Purser that the cause lay in the brain.

Reviews and Notices of Books.

The Present Evolution of Man. By G. ARCHDALL REID. London: Chapman and Hall, Limited. 1896. Price 7*s.* 6*d.*

IF the truth of a doctrine is to be measured by the extent of its application then assuredly no doctrine can claim to be more firmly established than that of evolution. Its central idea is capable of being employed for the explanation of phenomena in almost every sphere and phase of organic life, and it is astonishing what a flood of light it has shed upon some of the most obscure places. The special application of the doctrine which has been chosen by Mr. Archdall Reid is perhaps the most interesting of all the studies which have been based upon the hypothesis, and, ably as he has dealt with it, there remain many lines of investigation which are practically untouched as yet. Mr. Archdall Reid has grappled with his task in a masterly manner. He shows that he has himself gained a clear insight into the import and extent of evolution, and although obviously belonging rather to the school of Weissmann than of Spencer, whose dicta he does not hesitate to criticise with much acuteness, he shows that he has devoted much independent thought and considerable learning to the elucidation of the problems before him. The result is a monograph which is crowded with illustrative data and well-reasoned arguments—a work that requires to be read and studied many times before its full import is grasped, and one which deserves in its place as much attention from the thoughtful as any of the numerous writings that have arisen from this most fruitful doctrine. Although the title of the book is "The Present Evolution of Man," it must be said that this particular subject forms but a moiety of it. About one-half of the volume is devoted to the study of organic evolution, which is really introductory to the main thesis. The author deals in turn with Physical and Mental Evolution, showing the analogies between them, and laying especial stress upon evidence of "retrogression." In particular we may mention the sharp line of distinction he lays down between "instinct," that inborn and transmissible faculty of mind, and "reason," which is not transmitted by inheritance, but is acquired by each individual, and, like acquired physical traits, is not capable of being transmitted. This leads naturally to the inference that most, if not all, the mental qualities exhibited by man, and those which characterise more especially different races, are really not inborn, but that it is only the power or capacity for acquiring them that is transmitted. Mr. Reid goes even further in his pitiless logic, and maintains that man's moral nature is equally a matter of education and example. He concludes his most suggestive study of mental evolution by dealing with the subjects of language and religion. Interesting as such speculations are, they are, after all, less practically important to the community than those considerations upon which he enters in the second part of the work. Here he applies the doctrine of evolution to mankind in general, and maintains, with some reason, that it is mainly resolved into a struggle for existence against zymotic disease. He points out that although in process of generations the susceptibility to such disease may lessen, yet at the same time the powers of attack of pathogenic organisms increase. He admits that immunity may be inherited as well as acquired, and obviously inclines to the phagocytic side of this question. Immunity is acquired by the cells undergoing variation in response to appropriate stimulation; and it is suggested that as in rabies, so in syphilis it may be possible to artificially induce this kind of change. On the other hand, leprosy and tuberculosis, to which many individuals seem naturally immune, offer less probability for acquirement of immunity. Those who have once suffered from tuberculosis are as liable as ever to be attacked by the disease. A distinction is therefore made between diseases which act upon phagocytes with powerful toxines and those in which there is rather a direct struggle between microbes and phagocytes. The manner in which this argument is developed is ingenious, although perhaps some of the statements are more dogmatic than is warrantable from the facts. Zymotic diseases may be classified, according to the author, in three groups—namely, (1) in which the pathogenic organisms are entirely parasitic; (2) in which the organisms are not only entirely parasitic, but "are capable of maintaining existence for a limited time as resting spores or otherwise" outside the living body; and (3) in which the microbes can maintain an independent existence outside the living body for an indefinite time—saprophytic, in fact—of which malarial fevers form the chief examples. It is pointed out that these latter are less stable in type than the purely parasitic diseases. Several of these diseases are treated in detail with many suggestive remarks upon the extent to which the evolution of man has increased his resistance to their inroads. We would fain dwell on this part of the work, which is so full of interest for the medical inquirer; but we have already reached our limit and must close this brief notice by calling especial attention to the really remarkable and novel treatment of the question of alcoholism, which forms a fair portion of the section on Mental Evolution. The closing paragraph of the volume tersely sums up the position taken by the author. He says: "In conclusion it is surely clear that if the world is to become more temperate it must be by the elimination, not of drink, but of the excessive drinker. If artificial selection be found impracticable in the future, as, owing to the state of public opinion, it undoubtedly is at present, then the only alternative is natural selection, in which case the world will never be thoroughly sober until it has first been thoroughly drunk." How this seeming paradox is arrived at we must leave to our readers to find in the pages of the book itself—a work which, as we have said above, requires to be read and read again, for it teems with suggestive, if at times daring, ideas.

The Methodical Examination of the Eye. By WM. LANG, F.R.C.S. Eng., Surgeon to the Royal London Ophthalmic Hospital, Moorfields. London: Longmans, Green, and Co. 1895. Pp. 96.

THIS little manual will prove of service to the beginner, and especially to the student who is about to comply with the regulation of the Conjoint Board of the Royal Colleges of Physicians of London and Surgeons of England that he should attend for three months in the eye wards

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of a hospital. The language is plain and simple, and the directions for the use of instruments easy to be followed, and this might reasonably have been expected from one who has had so large an experience in teaching as Mr. Lang. He has devoted two chapters to the external examination of the eye and its accessories, one to the mode of investigation of the visual powers, and one to the employment of the ophthalmoscope. The first chapters deal with the supra-orbital ridges, the globe of the eye in respect to its prominence, the palpebral fissure in regard to its size and form, and the action of the orbicularis and levator palpebræ muscles. The condition of the lids, lashes, and Meibomian glands is next taken into consideration, together with the appearances characteristic of chemosis, conjunctivitis, and cyclitis. The examination of the iris, pupil, lens, and vitreous is then proceeded with. In passing, it may be remarked that woodcuts of such instruments as "Meyer's syringe" and "Graddy's forceps" might with advantage be introduced into the text, as the student may not always be familiar with them. The account of the determination of the tension of the eye might also have been somewhat extended by giving the terminology in common use for varying degrees of hardness and resiliency of the globe. The mode of testing the sharpness of vision is carefully and fully described, as is also the examination of the refraction of the eye by retinoscopy. A good section is devoted to the examination of the muscles of the eye by means of the Maddox disc and rods and by prisms. Directions are given for ascertaining the field of vision, the light-sense, colour-sense, and the field for colour. Finally, a short chapter contains the mode of practising oblique illumination and of making direct and indirect ophthalmoscopic examinations. Nothing is said in regard to stereoscopic vision. If the student works out a few cases with the aid of this manual he will have neglected no point of importance and will have accustomed himself to make a sound and complete examination of any case that may present itself to him in his subsequent practice.

A Smaller Atlas of Illustrations of Clinical Surgery, consisting of 136 Plates, with Descriptive Letterpress. By JONATHAN HUTCHINSON, LL.D., F.R.S. London: West, Newman, and Co. 1895.

IN this work Mr. Hutchinson has collected in a handy and portable volume a collection of clinical illustrations remarkable alike for their fidelity and their value for teaching purposes. A large number of them depict cutaneous eruptions, and where all are excellent it is difficult to single out instances of exceptional value; but a rare case of eruption, caused by a group of cases of "arsenic psoriasis" and "arsenic cancer," and plates illustrating varicella gangrenosa and Bazin's disease, and different varieties of lupus may be mentioned as deserving of special attention. A remarkable case of chancre of the lip is given to illustrate the difficulty of recognising it in this position. In addition to clinical rarities Mr. Hutchinson has collected some curiosities, one at least of which is probably unique. It is a drawing of a boy's heart into which a cedar pencil was forced six weeks before death. The pencil is lying across the right ventricle and thickly coated with fibrin.

The work is not only of great interest to practitioners but will be invaluable for teaching purposes, particularly if, as Mr. Hutchinson suggests, the plates be separated from the book and remounted with wider margins. Both Mr. Hutchinson and his artists are to be congratulated on the production of this volume, and the chromo-lithographing has been done by the publishers in excellent style. A second volume is projected, and will doubtless meet with as cordial a welcome as this one, which however it will be difficult to surpass in interest and value.

Eyesight and School Life. By SIMEON SNELL, F.R.C.S. Edin. With numerous illustrations. Bristol: John Wright and Co. 1895. Pp. 70.

IT is acknowledged on all hands that the care of the eyes during school life has become an important duty which devolves on parents, teachers, and surgeons. Parents and those engaged in the education of the young should learn that the least expression of discomfort in the eyes, the least peculiarity of the mode in which a book is held during reading, or of the mode in which the head and body are kept during writing, is sufficient to indicate that some defect of vision is present, or, at any rate, that an examination of the eyes should be made to determine whether the defect is due to this or some other cause. In the earlier stages such defects are often remediable, whilst if no notice be taken and years be allowed to elapse conditions are established which may prevent the lad from entering the public services or from competing on equal terms with his peers. As Mr. Snell remarks, although much has been done to bring home to parents and teachers a knowledge of the importance of this subject, no medical man seeing much of eye affections in children can shut his own eyes to the fact that there is still room for a much more widely extended knowledge. The prevalence of myopia in Germany has led the German ophthalmic surgeons to devote an unusual amount of attention to the causes of its occurrence and development; and amongst those who have done most to elucidate these points Professor Cohn of Breslau occupies the most prominent place. Many have since followed his lead, amongst whom Mr. Snell is not undistinguished, and from the labours of all those who have had the opportunity and disposition to follow out investigations on this subject it is now certain that particular attention should be paid to the lighting of schoolrooms, to the construction of desks, the size and clearness of type, and especially of music type, and lastly, to the number of hours of study. Each of these points is ably discussed by Mr. Snell, who gives in addition many photographs of children in the act of writing with good and bad illumination — photographs that show clearly how injuriously imperfect lighting and inattention to position may affect not only the eyes but the spinal column.

JOURNALS AND REVIEWS.

The Journal of Pathology and Bacteriology. Edited by G. SIMS WOODHEAD. Vol. III., No. 4. January, 1896. Lonon: Young J. Pentland. Price 12*s.* net.—This issue contains a large number of articles of importance to the practitioner as well as to the pathologist. After a graceful tribute to the memory of Pasteur by the editor, Dr. Louis Cobbett contributes an important practical article on the Serum Therapeutics of Diphtheria. Dr. Williams and Dr. Cameron of Montreal give an account of several cases in which they found the bacillus pyocyanus in the spleen, liver, &c., of marasmic children. Mr. Westbrook has continued his investigations on the Action of Direct Sunlight on the Cholera Bacillus. He finds that the germicidal action of sunlight is only marked when the layer of culture medium is thin and where there is free access of air. Otherwise growth in the deeper parts goes on more rapidly than destruction at the surface, and the bacilli are as virulent as those grown in the dark. Dr. Ainslie Hollis concludes his important article on Atheroma, and has some interesting suggestions as to the possible connexion between various visceral disorders and atheroma of the aorta. Dr. Ralph Stockman describes the experimental production of anæmia in dogs by withdrawing as far as possible all iron from the food. Dr. Crauford Dunlop contributes a very exhaustive article on Oxaluria. He finds that oxalic acid is

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a constant constituent in normal urine, and that its precipitation as calcium oxalate is prevented when it is present in small quantities by acid sodium phosphate, and occurs only when the quantity is high. He concludes finally "that oxaluria is no special pathological condition, but is essentially a hyper-acid dyspepsia, and that all its symptoms can be referred to the existence of acid dyspepsia." Dr. Abram corroborates Becker's statement that acetonuria occurs after the administration of anæsthetics, no matter what anæsthetic is employed, the acetonuria persisting for several days. Dr. A. E. Garrod and Dr. Hopkins contribute notes on the occurrence of large quantities of hæmatoporphyrin in the urine of patients taking sulphonal, with a useful account of the methods for separating the pigment. Dr. Watts Eden gives an admirably clear and well illustrated account of the histology of the human placenta. Dr. Hektven of Chicago describes a case of interstitial myocarditis in hereditary syphilis. Dr. Russell Wells and Dr. W. H. Wilson contribute a most important paper on the post-mortem changes in peripheral nerves, showing that decomposition alone will give rise to appearances indistinguishable from those met with in diphtheritic and lead paralyses. Dr. W. Edmunds in a beautifully illustrated paper gives the results of his recent observations and experiments on Graves's disease. Altogether the number is one of the best that has yet appeared. The papers all have a direct bearing on clinical medicine, and those responsible for its production are to be congratulated both on the quality of the articles and the excellence of the illustrations.

The Journal of Physiology. Edited by MICHAEL FOSTER, M.D., F.R.S., and J. N. LANGLEY, Sc.D., F.R.S. Vol. XIX., Nos. 5 and 6. Cambridge: C. J. Clay and Sons. May 30th, 1896. Price 8*s*.—The articles contained in this number, which completes the nineteenth volume of the journal, are five in number—viz.: (1) On the Granular Leucocytes, by Mr. G. Lovell Gulland, with two plates; (2) A Contribution to the Study of Lymph Formation with especial reference to the Parts played by Osmosis and Filtration, by Dr. Lazarus-Barlow, with thirteen figures in text; (3) Notes on Rennet and on the Coagulation of Milk, by Dr. Arthur Edmunds; (4) The Regulation of Temperature in Hybernating Animals, by Dr. M. S. Pembrey and Dr. W. Hale White; and (5) On the Changes in Shape and in Position of the Heart during the Cardiac Cycle, by Dr. John Berry Haycraft and Dr. D. R. Paterson. Mr. Gulland considers that sublimate solutions constitute the best means for fixing leucocytes and holds that all varieties of leucocytes are merely stages in the development of a tissue. He divides them into three main groups—the hyaline, the acidophile, and the basophile. His observations and argument demonstrate that the granules of leucocytes are not products of the metabolic activity of the cell embedded in a structureless protoplasm, but are really an altered condition of the microsomes. They are probably concerned with amœboid movement. He does not think that it is possible to determine the diseased organ when they appear in excess in the blood. Dr. Lazarus-Barlow figures and describes (but has omitted to letter) an osmometer, and gives a series of tracings showing the effects of injecting into the circulation equal quantities of equimolecular concentrated solutions of crystalloids upon the lymph-flow. Amongst other results of his experiments he has found that after injecting into the circulation large quantities of weak solutions and small quantities of concentrated solutions of crystalloids and weak solutions of gum the specific gravity of arterial blood falls with great rapidity, but later recovers itself and ends by being higher than before; further, that the specific gravity of voluntary muscle falls after large injections of weak solutions and rises after small injections of concentrated solutions of crystalloids and that the lymph-flow from the thoracic duct is increased both after the injections of weak and of concentrated solutions of crystalloids. He carefully states the arguments for and against the view that osmosis and increased filtration are the effective factors in causing the increased outflow of lymph that is seen after injection of a crystalloid into the blood. Dr. Edmunds shows that the testis, liver, lung, muscle, kidney, and other tissue sometimes contain a very minute trace of rennet or rennet-like ferment sufficient to cause curdling in the presence of excess of calcium. Dr. Pembrey and Dr. Hale White arrive at the conclusion that the power of regulation of temperature observed in hybernating dormice and bats resembles closely that of an immature warm-blooded animal, the evolution of hybernation being due not to the acquisition of a new power but to the retention of one already present in immature mammals and birds. Dr. Berry Haycraft and Dr. Paterson describe carefully the changes in shape which the heart undergoes when the animal is placed in different positions.

The Dublin Journal of Medical Science.—Dr. M. A. Boyd has a thoughtful paper on Defective Metabolism in relation to Gout. At the end of his paper Dr. Boyd very justly remarks, "Clearing the blood and system of uric acid by alkalies or salicylates leaves the principal part of our work undone—namely the correcting of the faulty metabolism. . . . ." We fancy that this fact is often forgotten. Dr. Mouillot writes on the Harrogate Treatment, and there are a number of reviews, and some interesting sanitary and meteorological notes by the editor.

The Birmingham Medical Review.—Mr. Walter Tyrrell writes on the treatment of certain depressed forms of nervous disorders, a form common enough nowadays. He recommends very small doses of nux vomica, say, $\frac{1}{120}$ to $\frac{1}{100}$ of a grain, these quantities to be long-continued. Mr. G. Heaton reports a case of Traumatic Epilepsy with Aphasia and Paralysis. Portions of bone were removed on two separate occasions, and the operation was followed by complete relief.

The April number of the *Intercolonial Medical Journal of Australasia* is full of interesting matter, including Dr. Lendon's presidential address at the Intercolonial Medical Congress recently held at Dunedin and a paper on Tuberculosis of the Skin read at the same Congress by Mr. A. W. Finch Noyes of Melbourne. Dr. Lendon's theme was the Achievements of the General Practitioner, exemplified chiefly by Edward Jenner's life and work. Dr. A. Jeffreys Wood of Melbourne contributes notes on Seven Cases of Scurvy in Artificially-fed Infants successfully treated by Raw Meat Juice and Orange Juice.

The June number of the *American Journal of the Medical Sciences* has a lengthy and instructive paper on the Blood in General Paralysis, contributed by Dr. Joseph A. Capps of the Massachusetts General Hospital. He has directed special attention to the different varieties of colourless blood cells, and concludes that most cases of general paralysis show a slight leucocytosis, averaging about 22 per cent. above the normal. Dr. da Costa of Philadelphia writes on a form of Protracted Simple Continued Fever distinct from typhoid fever.

The Practitioner.—It is a good idea of the editor to make his magazine reflect in its articles the lustre of the hero of medicine for the month. The one chosen for June is James Lind, whose name, as the writer of the article remarks, is almost unknown even to the members of the profession. But England, as a nation, owes more to him than perhaps to anyone else, for, to quote Sir J. Simon, "that scurvy has become an almost forgotten disease is due emphatically to Lind." There are two articles in the body of the magazine upon Scurvy—one by Mr. Johnson Smith,

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and another on How to Avoid Scurvy in the Arctic Regions by Dr. W. H. Neale, who was medical officer of the *Eira* in 1881. The ship went down, and the crew lived for twelve months upon what they could kill, but had hardly any vegetables. No case of scurvy occurred, and Dr. Neale puts this down to the fact that their hut was well ventilated and that they ate plenty of fresh meat and blood.

The Edinburgh Medical Journal.—Mr. R. W. Parker, whose wide experience at Shadwell gives him every right to speak, has a most interesting paper entitled, "Is Inherited Syphilis Contagious?" The main conclusion to which he comes is that most "inherited syphilis" is not syphilis at all. It would be unfair to the writer to enter more fully into the subject here, but we recommend a perusal of Mr. Parker's paper. Mr. Stitt Thomson writes upon his twenty years' experience of midwifery. He reports 2000 cases without a single maternal death—surely a record. His ideas are somewhat at variance with those commonly taught (all the same he insists upon the strictest cleanliness), but then, as he says, his results are eminently satisfactory.

Science Progress.—Those interested in the bearing of the recent discovery of Argon and Helion on Astronomy will find an excellent account of the subject by Professor Norman Lockyer in the current number (June) of this journal. It is now well known that Professor Ramsay last year examined the gas obtained from uraninite with dilute sulphuric acid with the result "that the twenty-six year old helion had at last been run to earth and D_3 was at last visible in a laboratory." This was the same gas which Dr. Hillebrand obtained in 1888, and which, he thought, was nitrogen. Subsequently Professor Lockyer obtained the same gas by heating the mineral in vacuo. "From March 30th onwards," he says, "my assistants and myself had a very exciting time." One by one the unknown lines observed in the sun in 1868 were found to belong to the gas distilled from uraninite. Further investigation resulted in "catching" in the few-lined stars all the most important lines "at the first casts of the spectroscopic net." Concluding, he says: "The more the work goes on we find that this gas is really the origin of most, but certainly not of all, of the unknown lines which have been teasing astronomical workers for the last quarter of a century." In the same number Dr. Buckmaster contributes a paper on the Hereditary Transmission of Micro-organisms, in which, from the summary of results of observations made upon the subject, it would appear that the placental is far more frequent than the germinative infection and that the share borne by the male in this transmission may be disregarded, as no bacteriological evidence exists to support this view. Further, "the frequency of hereditary transmission of pathogenic germs is exceedingly small compared to other modes of infection" We notice on the title-page that the name of the late Dr. Marshall Ward still appears as a member of the editorial committee.

CHOLERA IN EGYPT.

WE are glad to notice that cholera seems to be steadily decreasing in Alexandria and Cairo. The death-roll reported on the 7th inst. was—Alexandria, 4; Cairo, 18; Gizeh, 18; Tourah, 4; Dessouk, 9; Bassouna, 8; Zagazig, 4; Benisouef, 5; other places, 22.

We have little to add to what we have previously said in regard to this epidemic. The disease was already in the country in connexion with the waning effects of the previous epidemic, but it is alleged that during the late summer and autumn of last year it was freshly introduced into Egypt, Tangier, and other ports of Morocco by pilgrims returning from Mecca. There is no doubt that there were numerous fatal cases of cholera in Lower Egypt between October, 1895, and March of the present year, and that the epidemic has been gradually spreading and developing from that time until its increased manifestations in May last, when the numerous attacks in Alexandria and Cairo and other places gave rise to a cholera scare and the exodus of a number of people from Egypt. According to the last returns the disease appears to be decidedly abating as regards the two cities we have mentioned, but the information from other and outlying places is probably not sufficiently accurate and complete to enable us to define its exact extent or the limits of its spread at the present time. It must be borne in mind that the epidemic may manifest itself in greater force later in the season.

THE ROYAL MEDICAL BENEVOLENT COLLEGE.

THE annual general meeting of the Governors of this College was held at the offices, Soho-square, London, on Friday, May 29th, Dr. Holman being in the chair.

In accordance with the provisions of the Act of Incorporation ten members of the council retired, but nine of them—viz., Mr. A. E. Cumberbatch, Mr. G. C. Croft, Sir Joseph Fayrer, Bart., M.D., K.C.S.I., Mr. J. F. France, Dr. Needham, Mr. B. Pollard, Mr. J. T. Mould, Rev. E. W. Northey, M.A., and Dr. F. Taylor—were re-elected for a further period of three years, with Mr. F. B. Hallowes to fill the vacant place. Sir Arthur T. Watson, Bart., Q.C., and the Right Hon. A. J. Balfour, M.P., were re-elected Vice-Presidents of the College.

The names of the successful candidates for Pensions and Foundation Scholarships were given last week (p. 1607).

In their report the Council state that there has been an increase in the amount received from annual subscriptions, but this is chiefly owing to the special appeal made late in 1894 and to the festival dinner held last year, and they take the opportunity of observing that contributions of less amount than a guinea are most welcome. If every practitioner in the United Kingdom subscribed annually only half a guinea there would be a reliable income of over £13,000 a year; but as the total amount received in 1895 from all classes of subscribers was under £3200 it is evident that the members of the medical profession do not give the College that support which it unquestionably deserves. There are at present fifty pensioners. There are also eighty-nine Pugh pensioners and three Morgan annuitants. There are at present on the books of the institution forty-nine foundation scholars. It is hoped that the new school buildings will be ready early in 1897. It must be gratifying to the Governors that the value of the education given at Epsom College is so widely appreciated, and the Council would be glad if all supporters of the College would make a point of bringing the advantages of the school before their non-medical friends in order that there may be a material increase in the number of boys other than the sons of medical men. The enlargement of the chapel is progressing favourably. The health of the school on the whole has been excellent. In the recent Lent term there was an outbreak of measles and also several cases of mumps; otherwise there has been little illness of a serious character.

In moving the adoption of the report, which was subsequently agreed to, the chairman said the tone of the report was satisfactory, marking all-round progress. The balance sheet showed a small loss, but this was explained by the fact that they had virtually no capital account and everything had to come out of revenue. The school practically supported itself and would soon be worked at a profit. What they wanted was the £6000 a year which was given away. More lay boys were wanted. The repute of the school was growing. He wished particularly to point out that the sanitary condition of the school was unquestionably good and that the sickness and the epidemic of scarlet fever were imported from outside the school. Every possible care was now taken that no disease is introduced into the institution.

The formal business of the meeting was brought to a close with a well merited vote of thanks to Dr. Holman for the great services which he renders to the institution and for his able conduct in the chair that day.

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THE LANCET.

LONDON: SATURDAY, JUNE 13, 1896.

THE present week has in a very marked manner directed the attention of London to the needs of the London hospitals. The case of Guy's Hospital has, in particular, been thrown into prominence by the function at the Imperial Institute, over which the Prince of WALES presided on Wednesday evening last. Elsewhere in this impression an account appears of the celebration, and we cordially commend to the attention of our readers the very telling appeal made on behalf of that old and now impoverished institution by the Prince and Lord ROBERTS. This appeal was addressed especially to the wealthier classes, and we doubt not that the rich and fashionable assembly which gathered round the Heir-Apparent on Wednesday last will make a suitable response. But it is not possible to state the case of one of the general hospitals of London without stating the case of all. They are all doing the same work in different localities; they are all dependent upon voluntary charity, and they all attain to a standard of efficiency which entitles them to a full measure of public confidence. These are considerations which commend them to the sympathy and support of all classes equally, and the clergy who will to-morrow address the thousands of London in support of the hospitals generally will have to this extent the same story to tell and the same appeal to press home which were on Wednesday last laid before the Prince's guests. Our Special Supplement, which we published last week in support of to-morrow's collection, affords the best proof of this, for it will be found that substantially the argument of that appeal follows the same course as that which at the Imperial Institute elicited as a response a gift of £167,000. But there is an aspect of the work which was hardly touched upon on Wednesday last, and which certainly should not be lost sight of, for it illustrates in the most striking manner not only the magnitude and importance of hospital work but also its resourcefulness. We refer to the synoptical statement of an ordinary hospital staff. It is there shown how the work of every department is carried on by a most elaborately organised staff, and by its means it becomes possible even for those to whom the facts are new to understand the precision with which every want of the patient is provided and the way in which the easy and regular working of all the machinery devised for his relief is secured and maintained.

It has been pointed out that through the misplacing of a decimal point we were led to understate quite considerably the amount of the average contribution of individual Londoners to the Hospital Sunday collection, and that this average contribution should have been estimated at nine farthings instead of one. The correction is due both to our readers and ourselves, and the slip, easily made in the pressure of preparing matter for the printer, would nevertheless have given us some concern if its correction had entailed any modification of our argument. It is, however, a mere inaccuracy, for even when corrected it leaves the substance of our appeal unaffected. The average Londoner spends about £2 10*s*. a year in beer according to the statisticians, something between 8*s*. and 10*s*. upon tea, and upwards of 10*s*. upon sugar. These figures probably represent with rough accuracy the scale of annual expenditure per head of the population at the present time, and present an under-estimate rather than an over-statement. It can, then, be no answer to an appeal founded upon the starved condition of the London hospitals that the average Londoner's charity amounts to nine farthings in the year. We make the correction, as we have said, because it is due both to our readers and ourselves; but we draw attention to it because it occurs to us that we have hardly used the fact in our original statement for all that it is worth.

WE have to congratulate Guy's Hospital upon the success that has attended their appeal to the public for re-endowment. It is true that to place this ancient charity upon its former splendid pecuniary basis an additional sum well-nigh twice as large as that announced on Wednesday night as already collected is required, but this must not blind us to the fact that £167,000 is a noble response from the public to the hospital's declaration of want. Where all have worked so well towards a good end it is almost invidious to point to one influence more than another as having brought about the substantial result. We must be clearly understood to be thoroughly recognising the labour, enterprise, and energy of the staff and past and present members of Guy's Hospital when we say that the greater part of this money has flowed into the re-endowment fund in response to the personal nature of the appeal made by His Royal Highness the Prince of WALES, the new President of the hospital. The Prince of WALES is the ideal leader for such a movement quite apart from his position as Heir to the Throne. He is experienced in the workings of organised charity and he is an immensely busy man, so that the mere fact that he was able to give his time to assisting the movement stamped that movement in the eyes of other busy men as one which they would do well to support. Again, his popularity is unbounded, so that loyalty to the throne, respect for the business man and real affection to the person of the Prince have all operated and coöperated in determining subscriptions towards the object in which he had declared himself to be deeply concerned for success. Second only to the personality of the Prince of WALES as the leader of a movement, political or social, comes that of Mr. GLADSTONE, and the veteran statesman has also lent his invaluable assistance to Guy's Hospital. The sum which has been received in response to his circular letter reached no less than £16,000, that is, one-tenth of the total amount subscribed; while a legacy of £35,000 from the late Mr. INCLEDEN was probably due to the same influence. Happy, indeed, have Guy's been in their champions.

Happy, also, have these champions been in the cause for

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which their advocacy has been given. The singular justice of the claims of Guy's Hospital upon the public for financial help is recognisable at once, and can be stated in a sentence: Their deplorable financial position has been reached through no fault of their own. Always well managed, always in the first rank as a home of medicine and surgery, and a nursery of young men of science, the hospital has fallen upon evil days entirely on account of agricultural depression. The whole of the funds by which the charity is maintained have been by the direction of the donors invested in what seemed at that time to be the most substantial security that could be selected—land. The administrators of the charity have had no choice; into land the money was forced to go. For a time all went well, and at some seasons not so very far distant extremely well, but of late the value of land in many parts of England has fallen from a half to even a tenth of what it was twenty years ago, and with this fall the income of the hospital has declined until it has dwindled to £20,000 per annum, barely a moiety of what it had previously been. Here is no story of bad management or reckless investment. The money has simply been placed where by law it had to go, and, owing to unforeseen circumstances, constituting really a political revolution, it has shrunk to one-half its size. But one charge could possibly be brought against the governors if we were to look round for a reason to attribute blame to them, and of it they are able to clear themselves so nobly that their refutation constitutes in our eyes their most valid claim upon the public. It might be urged—Why did not the authorities of Guy's Hospital save in their prosperous days lest evil ones should be in store for them? They did not because, having enough for themselves, they thought it better for the cause of humanity that other institutions should benefit rather than that they should accumulate a surplus. In the palmy days of farming their income was so large that with splendid liberality they declined to receive donations of which less fortunate charities stood in more urgent need. This generosity has cost them dearly, for owing to "the well-known wealth of Guy's Hospital" legacies have not reached the hospital, donations have been few, and the endowment of beds a thing almost unknown.

Let us hope, then, that the remaining two-thirds of the half-million which Guy's Hospital requires will be forthcoming. The present sum would make a splendid stop-gap for immediate needs and would even allow the hospital to maintain its former complete efficiency for ten years or so; but these are not the purposes for which the re-endowment fund should be used. What is required is the capitalisation of sufficient money to maintain the hospital at its full working power, not a sum to tide them over temporary difficulties.

THE General Medical Council rose on Tuesday, having sat seven days. The subjects on which it had to deliberate included many which involved points of great importance and some delicacy. We have already commented on one of these in regard to which the deliberative quality of the Council has yet to be tested. Mr. TEALE'S statement of the case against the multiplication of examinations was necessarily somewhat academic in its character and was the better for being so. But this is the mere introduction of the subject. It is the basis of an attack on our system of examination, which system threatens to injure the education it is supposed to test. It rests with the Examination Committee to refute or to accept Mr. TEALE'S charges, and in the latter case to give a practical form to objections extensively shared by those who have paid any attention to the matter.

Another subject of great importance—having regard to the function and reputation of the Council—is its action in the matter of the Apothecaries' Hall of Ireland. Whatever the Council might have done was sure to be criticised from many different points of view, and what it has done will also be well criticised, although done on the motion of one of its ablest and most experienced members, whom Dr. TUKE called "the old Parliamentary hand." Its various critics will do well to remember that the Council cannot look at matters from any particular point of view. It is a complex body, it is in a certain sense a judicial body, and it is bound by its very nature to take a number of things into consideration which do not trouble critics with short and easy methods for the extinction of the least fit. The Privy Council, it will be remembered, declined to go fully into the case at its late hearing and showed a decided wish that the General Medical Council should relieve them of the duty of doing so. The reluctance of the Privy Council was most sensible and it was most respectful to the General Medical Council. Sir DYCE DUCKWORTH spoke as if the Privy Council were asking the General Medical Council "to do its dirty work." This is an entire misapprehension. There is no reason to think that the Privy Council will be one whit less ready than the General Medical Council to extinguish the Apothecaries' Hall if it fails to justify its claim to further existence. But the highest court of appeal naturally demands that before the extinction of the Hall it should have every chance to show its *raison d'être*. In a poor country like Ireland it seems scarcely fair to leave the whole work of non-university qualification to be done by a Conjoint Board which works more expensively than any similar board in the United Kingdom and which drives away to a neighbouring division of the kingdom a large proportion of its own students. Moreover, it was impossible for the Privy Council to overlook two considerations—first, that whatever the faults of the Apothecaries' Hall it was acting in association with another and a powerful corporation; and, secondly, that for the discharge of the existing obligations to candidates who have already been examined by it this Board must continue in existence for five or six years longer. Sir WILLIAM TURNER, with his practical mind, seized on this circumstance and based on it a most valuable suggestion—viz., that the two corporations should be asked by the Council to reconsider the whole question and to reconstruct their conjoint scheme in a way that should make each of them responsible for the whole examinations and should be satisfactory to the General Medical Council. The voting of the Council on this motion and its competitors was unfortunately very close, and this seems to show that some of the members had a difficulty in making up their minds. But the more the motion is considered the more reasonable does it appear,

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and the greater it seems must be the responsibility of the Royal College of Surgeons in Ireland if it refuses to entertain the suggestion of the General Medical Council. It cannot be the interest of the medical corporations of Ireland to call into existence a new kind of State examination that might compete with them, or to necessitate by a dog-in-the-manger attitude the interference of the General Medical Council, still less of the Privy Council.

This is eminently a case for Home Rule—for showing that the medical corporations of Ireland can meet all the wants of the people of Ireland, and they will have only themselves to blame if they do not succeed. There was great force in the complaint of Sir PHILIP SMYLY that in the old arrangement the Royal College of Surgeons in Ireland had no control over the appointment of medical examiners. Unless this is altered the College will be well advised in refusing to entertain the suggestion of the General Medical Council. And, indeed, the Council itself would probably not sanction a scheme which does not make both parties jointly and separately responsible. But if such an arrangement can be devised it will be a wise and magnanimous procedure on the part of the Royal College of Surgeons in Ireland to give entertainment to the proposal of the General Medical Council. At the same time, the Council must be prepared for the failure of Sir WILLIAM TURNER'S suggestion, especially after the very narrow and halting majority by which it was carried. And it must be admitted that the outlook of the Apothecaries' Hall of Ireland is very uncertain. It is difficult for either the Privy Council or the General Medical Council to preserve a body whose diplomas are in such little demand. The only excuse for attempting to do so is that this small demand may be partly the misfortune of the body as well as its fault, and that in the economy of Ireland there is room for a Board whose conditions and cost are on a somewhat lower scale than those of the other Conjoint Board of that country.

Annotations.

"Ne quid nimis."

THE ARMY MEDICAL OFFICE AND SERVICE.

WE understand that a very legitimate subject of grievance among the Army Medical Staff has been removed. The practice has always hitherto been in the headquarter office of the medical service to have a post which should rightly be occupied by a medical officer filled by a civilian clerk. Everything connected with the roster, the movements of medical officers and the representations of their claims and wishes to their chief, should be most properly and fittingly committed, anyone would think, to an officer of their own service. That seems to us so correct in principle as to commend itself and to require no words of comment. We are glad, therefore, to recognise that the new Director-General has made this one of the initial reforms of his office. Medical officers very naturally desire to approach their own head through one of themselves, who may be reasonably expected to understand and appreciate their objects and requirements and to be more in sympathy with them than any civilian could be. It strikes us that what is wanted in the present unsettled state of the department is a strong man at the helm with the courage of his opinions. Things appear to have been somehow drifting of late in the wrong direction. With the advent of a new Director-General an opportunity occurs for considering not only what is right for the medical service itself, but what is best for the public service as a whole. Some clear and settled policy should be arrived at after careful and impartial consideration, with a determination to stick to it. It would not surprise us if some radical changes were soon introduced into the medical service, seeing that Lord Lansdowne is the present War Minister, and that we have a new Commander-in-Chief in the person of Lord Wolseley as well as a newly-appointed Director-General.

MEDICAL CERTIFICATES AND BOARD SCHOOLS.

IN THE LANCET of May 23rd we commented upon the action of the Macclesfield School Board concerning its wish to appoint a medical officer. We also expressed a doubt whether any medical man would apply for the post, and we now learn that only one did so, and he of course was appointed. We congratulate the board on having obtained the services of so good a man as Dr. Swail, but we condole with him on the unpleasant task he will have of supervising the certificates of his brother practitioners, and that too at the bidding or upon the judgment of the clerk, a gentleman who presumably has no medical training whatever. To certify whether a school child has measles or chorea is indeed a solemn and responsible task, and the board, we see, marks its sense of this responsibility by paying a whole shilling. Meanwhile we suppose the Macclesfield practitioners will be allowed to sign certificates dealing with such an unimportant matter as death, for instance, without having a clerk to sit in judgment and without receiving even a shilling.

THE POWER OF MAGISTRATES TO HEAR CERTAIN CASES IN CAMERÂ.

SOME months ago a long correspondence was published in the *Times* as to whether magistrates possessed power to hear cases with closed doors, the various correspondents dealing with the question in its more strictly legal aspect. Then followed the notice of the proposed Bill to regulate the publication of cases in which the details were of a nature which rendered their suppression desirable. In an annotation which appeared in THE LANCET it was suggested that as magistrates did possess the power of hearing cases in private—as shown by the action of two provincial stipendiary magistrates, in cases which were instanced — the practice might with great advantage be adopted in all those unhappily numerous cases which come almost daily before magistrates in towns and cities and much too frequently even in county police courts. In these cases the details are not only wholly unfit for publication in the daily press, but also to be heard by any but those who are officially engaged in the case and are obliged to hear them. Those members of the profession whose painful duty it has been to give evidence on these occasions know how extremely unpleasant it is to do so before the very persons who ought to be excluded, a number of coarse-minded, idle men, whose reason for remaining in court is to gratify a very idle and gross curiosity. It is with great satisfaction that we have now to record the action of the magistrates in the most recently reported case of the kind. On the 21st ult. a medical man practising in Liverpool was charged before the magistrates at the County Police-court, Birkdale, with indecently assaulting a girl under the age of sixteen. Mr. Collingwood Hope, who appeared for the prosecution, applied to the bench to hear the case in private. He felt fully the responsibility of such application, but having regard to the fact of the serious charge made by this young girl against a medical man, he asked, in

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the interests of justice, that the bench should exercise the prerogative they undoubtedly possessed and hear the case privately. He felt sure that the bench would consent when he stated that if, after the magistrates had heard all the evidence, they felt that it was not a case for conviction, grave, serious, and even irreparable injury would have been done to this girl. In reply to Dr. Barron, who was one of the magistrates hearing the case, and who asked if the term "irreparable" applied to the fact of the case being heard in public, Mr. Hope observed that all the facts which could not be substantiated would be announced broadcast, no good object could be served by publishing the details, and hearing the case in private would not interfere with justice. Mr. Steel, who appeared for the defendant, agreeing to this course, the case was put back till all the other business was disposed of. The court was cleared of all save those concerned in the case, and after a four hours' inquiry the bench dismissed the case. We trust that in the interests of morals and for the honour of human nature that this course will be adopted in all cases in which it is obviously desirable.

THE VACANT PHYSICIANSHIP OF THE ROYAL INFIRMARY AT NEWCASTLE-ON-TYNE.

THE election of a successor to Dr. Philipson will take place on Thursday, June 18th. Formerly the election was a formidable affair for candidates who had to canvass the governors. Now it rests with a selection committee, which is composed of the consulting physicians and surgeons, the physicians and surgeons of the Infirmary, the members of the house committee, and a certain number of governors, in all numbering sixty. The election is by ballot, canvassing on the part of a candidate being a disqualification. It would be hard on a candidate to visit with a similar punishment the indiscretion of puffing newspaper friends, writing even before the occurrence of the vacancy. Such sin is apt to bring its own punishment. We may trust such a committee as we have described to realise the importance of their duty and to discharge it with impartiality. The candidates include George R. Murray, M.D. Cantab., &c., Vickerman H. Rutherford, M.B. Cantab., and Thomas Beattie, M.D. B.S. Durh. &c. The committee will have no difficulty in selecting a physician whose appointment will be recognised far beyond the district of Newcastle as the reward of merit. On the same day a special Court of Governors is summoned to appoint Dr. Philipson honorary consulting physician—a graceful and proper way of continuing his long and beneficial connexion with the Royal Infirmary. He has acted for some years as vice-chairman of the house committee. It is gratifying to know that in this double capacity he will still be able to render important aid to the chief medical institution in the northern counties of England.

DOLCE FAR NIENTE.

THOUGH it be true in a way that medicine has no politics, and though medical men would treat with equal readiness small-pox in a Radical or in a Tory, yet we think it our duty as medical journalists to offer a word of warning to the Government. In a hymn formerly, if not at present perhaps owing to the revival of taste, popular among what Mr. Gladstone in a recent utterance called "independent religious bodies" there occur the lines—

> "Doing is a deadly thing,
> Doing ends in death."

This is, indeed, a form of sound words. The late Government did not shine at the polls, not, indeed, because they had done too much, but for merely trying. The present Government is on its way to disaster by the same methods. If only a Government would arise and say, "No great measures will be undertaken, but we will devote ourselves to making existence more comfortable," people would arise and bless it. There is an opportunity now for our rulers to earn everlasting gratitude by bringing in and passing a Streets Bill. There is Mr. Jacoby's admirable Street Noises Bill, a birth-strangled babe we fear, for this session, which would make a foundation. Among other clauses of such a Bill the following are suggested. A clause to prevent gas, water, electric light, telephone, drainage, and pneumatic companies from digging up the roadway directly it has been laid down; a clause to prevent carts full of decomposing bones, fat, and other filth being driven slowly along the street at all hours of the day; and a clause to prevent beer-barrels, sacks of coal, and perambulators loaded with market produce being rolled along or across the pavement except between certain hours. With regard to beer and coal we believe there is a Police Act dealing with their delivery, but it is quite obsolete or never acted upon. Attention to all these matters would enormously benefit the health of the dweller in towns, and we are sure a Bill to bring about this consummation would easily pass. Education rating and benefices are but apples of discord. A Bill such as we have indicated would, we believe, unite every party in the House.

BENEFIT NURSING ASSOCIATIONS.

SOME twelve years ago Miss Broadwood founded at Ockley (Surrey) a local nursing association for the benefit of the poor who could not afford to pay for the services of a trained nurse. She accepted as her model a plan which had been successfully tried at Holt (Norfolk), where—hospital-trained nurses having proved to be unsuitable for cottage cases—a staff had been formed from a humbler class of women accustomed to nurse amongst cottagers. A number of parishes were affiliated together, one or more cottage nurses engaged, and a secretary was appointed. Each parish guaranteed a certain sum annually towards paying the nurses' and other expenses. A sliding scale of fees and subscriptions was fixed, sufficiently low to enable people of every class to engage the services of a nurse, the inducement to the poor to subscribe being the right to have a nurse at half-fees. The nurses employed lodged in different parts of the district, and when nursing boarded with the family of the patient, save in exceptional circumstances. Occasional nursing was undertaken, but obviously over such an extended and thinly populated area very little of this could be done. In this respect the system differs from that in which "district" nurses are employed. The Ockley experiment proved so successful that Miss Broadwood made public the results, and since then about 100 other districts have formed local associations working on the same lines, and the system is now known as the "Holt-Ockley." The incessant inquiries for particulars and the appeals for aid in obtaining cottage nurses and in establishing fresh centres led Miss Broadwood to urge that all the centres should be affiliated and have an office in London. The Affiliated Benefit Nursing Association was thus formed and has its office at 12, Buckingham Palace-road, W. Having completed the second year of its existence, by the permission of the Duke of Sutherland a meeting was held at Stafford House on the 4th inst. Miss Broadwood reported that eighteen fresh centres had been formed during the year, that fifty-seven women had been sent to Plaistow (Sister Katherine's nursing home) and elsewhere for training, and that most of these had been engaged by the various branches of the association. The Duchess of Sutherland gave an account of the establishment of several centres in Sutherlandshire, and bore testimony to the immense service the nurses had been to the labouring classes in that county. Mr. J. H. Cheatle spoke upon the conditions under which cottage nurses should attend confinements by arrangement with medical men; Mr. Horace Manders urged the desirability of utilising workhouse

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infirmaries for training this class of nurse, and Dr. Thresh described his experience in connexion with practical training at the Essex County Cottage Nurses' Home at Leytonstone. The growth of this association and the great interest which is being evinced upon the subject of nursing for the poorer classes seem to indicate that cottage nurses—women taken from cottage homes and who have had a short course of training—are of real service, especially in rural districts, and that in future the cottage nurse will come to be recognised as having her own particular sphere of usefulness.

THE FUNERAL OF SIR GEORGE JOHNSON.

SIR GEORGE JOHNSON was buried on Monday last, June 8th. The first portion of the burial service was read at St. James's Church, Piccadilly. Bishop Barry, the rector, and the Rev. Dr. Wace, Principal of King's College, London, officiated, the former delivering a short address on Sir George Johnson's life and work. Amongst those present were Sir W. Priestley, M.P., Sir William MacCormac, Sir Richard Quain, Sir Joseph Lister, General Sir R. Wilbraham, Sir John Williams, Sir J. Banks, Sir W. Brooks, Sir Joseph Fayrer, Sir Dyce Duckworth, Dr. Wilks, Mr. Christopher Heath, Dr. Dickinson, Dr. Playfair, Dr. Liveing, and Mr. S. B. Bancroft. Sir Alfred Garrod and Dr. Tirard, as medical attendants during the last illness, followed with the relatives, who alone accompanied the body to Addington, near Croydon, where the remains of Sir George Johnson's wife repose. The service at St. James's Church included the hymns, "Lead, kindly light," and "On the Resurrection morning." A most appropriate text appeared in the copies of the burial service summarising Sir George Johnson's career: "I have fought a good fight, I have finished my course, I have kept the faith."

ASTASIA-ABASIA.

A CASE of this disease is recorded by Dr. A. A. Eshner in the *Journal of the American Medical Association* of May 16th of this year. Astasia-abasia may be accepted as a convenient designation for a clinical condition characterised by inability to stand or to walk, but not dependent upon actual paralysis. As a rule sensibility, muscular power, and coördination are preserved, though the disorder may be associated with hysteria or organic disease of the spinal cord. The case described by Dr. Eshner was that of a woman aged forty-six. There was a decided neurotic taint in the family. From 1871 to 1892 she smoked tobacco constantly and had suffered from nicotinism. In 1878 the "speech had been partially paralysed," the disturbance having set in abruptly and being unattended with any concomitant disease. For ten minutes the woman was totally unable to speak, and only with difficulty for two or three hours more. In 1893 the patient observed that contact of the hands with cold water and exposure to draughts of air would cause her to fall. Previously to this there had been numbness in the toes and difficulty in walking. When she came under observation she complained irregularly of icy coldness of the feet, extending half way up the legs, and at times of a sense of burning in the same parts. The bowels were obstinately constipated. She could not distinguish between the desire to defecate and that to urinate. The digestion was poor, but the appetite was fairly good. The tongue was slightly coated and dry. Sleep was good and refreshing. Headache was only an occasional symptom; when present it was supra-orbital and vertical. Occasionally there was vertigo. On inclining the body forward and flexing the trunk after meals vomiting resulted. The patient was annoyed by a sense of the presence of hair in the throat. She had never had a convulsion or lost consciousness. The patient appeared quite unable to walk unsupported. When asked to make the attempt she threw her arms about rather incoördinately and swayed upon her feet. She was unable to stand at all with her feet together. She maintained that the right leg felt heavy. She could walk up and downstairs with the aid of the bannister. She volunteered the information that she did not fall when her feet were warm, and that she did not topple over in her own room. The knee-jerks were greatly exaggerated and ankle-clonus was represented by a few contractions of the foot upon flexion. So far as could be determined there was no other derangement of motility, and the muscles used in walking and standing possessed the power of performing other acts. Sensibility was generally preserved. The right pupil was a little smaller than the left; both were regular and reacted to light. The patient was rather pallid and of poor nutrition. She pointed out a small spot as large as a pin's head upon the left ear, which for two or three months had from time to time been the seat of intense burning. The patient was extremely detailed in her account of herself, and in this she was supported by her husband. Dr. Eshner regards the case as clearly a hysterical one, all of the symptoms and attendant circumstances, including the family history, supporting such an opinion, but he thinks it must none the less be viewed with a good deal of seriousness and the prognosis be guarded. This case, he says, and allied ones cannot be viewed as manifestations of merely functional disturbance. It is far more probable that there have taken place nutritional changes which become more and more pronounced with the progress of the case and which in time may lead to structural changes.

PAROCHIAL BLACKMAIL.

OFFICIAL custom does not often err by spoiling justice with generosity. Its fault far more frequently is on the opposite side. In its estimate of medical service this less agreeable characteristic is apt to be only too apparent. With curious inconsistency, moreover, the medical practitioner is in many cases expected to set an example of liberality. It is so when he attends as witness at a coroner's inquest. On such occasions an officer of the court invariably absorbs the odd shillings of his fee. On a recent occasion when the medical witness was ordered to make a post-mortem examination he was somewhat surprised to find that a mortuary-keeper who acted as his assistant was likewise entitled under a vestry order to claim the, for him, not insignificant sum of 5*s*. for his services. It is worthy of notice that no mention was made of this honorarium before the work had been done. These modest reductions combined amounted to a sixth of the whole medical fee, a fairly substantial discount. Custom, under such circumstances, clearly requires some alteration. The practitioner either is or is not entitled to a certain legal remuneration. If he is, why should the amount due to him be reduced by a wholly needless exercise of charity towards the regularly paid coroner's officer? If he should also require the aid of the mortuary keeper in making a post-mortem examination, or in any other matter connected with the inquest, he may surely be allowed such necessary assistance without payment. It would be advantageous to have the duties of mortuary officials clearly defined. We are not aware that they are too onerous. At all events it would seem that time can be found for work in the post-mortem room if there is a good fee in prospect. There are other conditions affecting the work of medical men in public mortuaries which will not bear too close examination. Better warming arrangements are in winter absolutely essential to good work. Warm water, clean towels, soap, nail-brushes, and disinfectants (such as can be used to the hands of the operator) are as often absent as not. Yet no one acquainted with the responsibilities of medical men who are daily engaged in surgical and obstetric practice will deny that they are absolutely indispensable,

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not only to the safety of the practitioner but of the public. Why, then, should the onus of precaution rest only on the former? Any additional expenses incurred by providing such needful additions as we have indicated for the post-mortem room would not be heavy, and they should certainly fall upon vestries or municipal councils and not on the comparatively disinterested medical expert.

THE ROYAL SOCIETY CONVERSAZIONE.

"LADIES' NIGHT" at the Royal Society was held on Wednesday last, when, as is usual, many of the exhibits shown at the previous annual conversazione (in May) were repeated. On the whole, however, the exhibits were of a still less striking character from the point of view of display. The "New Photography" appeared to draw the keenest interest, and an excellent demonstration was given by Professor Silvanus Thompson. He showed the production by "x" rays of electric dust shadows and the exhibit included a number of new forms of "x" ray tubes, and notably one for insertion in the mouth. Professor Thompson employed "scheelite" or native tungstate of calcium on the fluorescent screen. Mr. Herbert Jackson repeated his demonstration of the use of phosphorescent materials in rendering "x" rays visible, and Mr. J. S. H. Teall showed an excellent series of photographs of the electric discharge at various stages during the exhaustion of a Crookes's bulb. Bordering on the same subject was the brilliant exhibit of Messrs. Siemens Brothers and Co., which illustrated the history and development of the electric discharge in vacuo. Thus there was to be seen a facsimile of the first vacuum tube ever constructed which was by Dr. William Watson in 1751. In regard, however, to the application of the "x" rays to medical diagnosis the series of photographs shown by Dr. Macintyre are undoubtedly a great advance on any previous productions. He exhibited photographs showing besides the hard tissues the soft tissues as exemplified in the series including the neck, tongue, larynx, heart (normal and abnormal), diaphragm, muscles, &c. Coming to the exhibits that were not previously shown—and they represented not more than one-third of the entire demonstration—the photographs of the hæmatozoa of fly disease of South Africa attracted a good deal of attention. As is well known, for the last half-century the tsetse fly has been notorious as a terrible scourge to live stock and a most formidable impediment to colonisation in Equatorial and South Africa. It has now been discovered by Surgeon-Major Bruce that the fly is itself innocuous, and is only fatal to animals when it is the carrier of a flagellated infusorian (hæmatozoon), which it introduces into the blood. Close by were models of the curious flowers of *Aristolochia gigas* from Brazil and of *Stapelia gigantea* from Natal, which have the extraordinary property of exhaling a sickening fæcal smell which attracts carrion flies and dung beetles in abundance. They are described as being provided with indoloid scents and resembling animal corpses in their colouring, having usually livid spots, violet streaks, and red-brown veins on a greenish or fawn-coloured background. In the exhibit of the Applied Mathematics Department of University College we noticed diagrams illustrating the relative variation of different organs in men and women of divers races, and diagrams also showing that 25 per cent. of the married population produce 50 per cent. of the next generation. The research apparatus, which is intended for the Davy-Faraday Research Laboratory of the Royal Institution, made an excellent display, and was presided over by Mr. Robert Mond, son of the generous founder of the laboratory. Standing in one corner of the library was Professor Dewar's apparatus for the production of liquid air and oxygen, which he has reduced to the limits of comparative portability. The tuneful experiments by Mr. Joseph Goold were exceedingly interesting, and consisted in a pictorial demonstration of the axes of sound vibrations by means of powdered chalk dusted upon the tuning bar. Professor Herkomer showed his "Herkomer gravures," their method of production being also the subject of an interesting demonstration in the meeting room. A lantern exhibition by Professor A. C. Haddon was given also at an earlier hour in the same room, illustrating the evolution of the cart and of the Irish jaunting car; while Professor Dewar concluded the demonstration by repeating his fascinating experiments with liquid air. Sir David Salomons, Bart., showed an important improvement in the stereoscope, which is designed to suit the vision of all persons without straining the eyes, so affording those who are unable to use the ordinary stereoscope the opportunity of appreciating the beautiful and solid effects of this instrument. A series of accurate micrographs taken at a high magnifying power by Mr. T. Andrews were of peculiar interest in illustrating the microscopically visible and tangible micro-flaws almost invariably present in steel railway axles, rails, tyres, propeller-shafts, &c. The importance of the subject is evident from the fact that the presence of "these germs of metallic disease" in steel (mostly due to sulphur and other impurities) greatly influences the deterioration by fatigue of the metal and is a potent factor in inducing sudden fracture of engineering constructions in steel. In connexion with these annual exhibitions of the Royal Society, we are gratified to learn of an important step that is being taken this year which cannot but prove productive of good. The Lords of the Committee of Council on Education have arranged for the public exhibition, in the Western Galleries of the Science Museum at South Kensington, of a number of the objects shown at the Royal Society's *soirée*. The exhibition will remain open to the public for about a fortnight. This is as it should be; the public have always been enabled to view the fruits of the year in the world of art, and why not similarly in the world of science?

THE METROPOLITAN HOSPITAL SUNDAY FUND AND MR. BURDETT.

A SPECIAL meeting of the Council of the Hospital Sunday Fund, held in the old ball-room of the Mansion House on Monday last, was notable for two reasons: it was the first time since His Royal Highness became a vice-patron that the Prince of Wales has attended a meeting of the Fund; and, secondly, it was the occasion of the presentation to Mr. Burdett of a magnificent album containing the portraits of the members of the Council with their autographs, including also that of Her Majesty the Queen as patron of the Fund. Mr. Burdett will, we feel sure, forgive us for giving the primary object of the meeting a second place, because no one will appreciate better than he the prestige which His Royal Highness's name will add to the Fund. The Prince of Wales has ever been ready to help the cause of charity and especially has his willingness manifested itself when the cause of the sick and suffering has been in question. His presence at the festival dinner in aid of the re-endowment of Guy's Hospital on Wednesday is one of the latest displays of His Royal Highness's goodness in this direction, but here in passing we may be allowed to express the hope that that function, important as it was, may not be allowed to overshadow the still more important one which will take place next Sunday. For it must be remembered that Guy's Hospital only represents a portion of the vast metropolis, while the Metropolitan Hospita Sunday Fund is representative of the whole of the hospitals in the great county of London. Last year, as our readers know, the total amount collected by the Fund amounted to

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some £60,000, a sum which should be maintained this year if the Fund is to efficiently carry on its important work. Towards this amount by the contributions of a few wealthy donors Mr. Burdett raised a sum of £15,000. For this help the Council of the Fund passed a special resolution of thanks to Mr. Burdett, which has been ornamentally emblazoned and enclosed in an album presented to him at the ceremony on Monday. We congratulate Mr. Burdett upon the recognition which he has received from the Council of the Metropolitan Hospital Sunday Fund for the services which he has rendered to the hospital charities of London.

MEDICAL MISSIONARIES.

WHILE congratulating the Church Missionary Society on the success of the medical branch in the mission field, and sympathising with them in their efforts to obtain funds for the further extension of the work carried out by that branch, we regret that one of the speakers at the annual meeting of the Medical Missionary Auxiliary should have seen fit to speak with levity of a profession which renders important aid to the work in which he takes a great interest. Mr. James Munro, C.B., while officiating at one of the society's stations with his son and daughter, felt it desirable that his wife should come out to them, and as in his opinion the evangelical work was of more importance than the medical it was decided that his son should be sent home to fetch his mother. "My daughter and I worked the dispensary ourselves," said Mr. Munro. "I was asked by several medical men whether I did not have any accidents, by which," continued the speaker, "I supposed them to mean deaths." This questionable joke having caused some laughter among the audience the speaker went on to explain that as he was not a professional man he did not have accidents, a remark which led to a fresh outburst of hilarity. We think that Mr. Munro would have shown better taste if he had abstained, even by implication, from casting ridicule on the profession for whose help he was pleading, and we advise him not to make a rule of adding to his other onerous duties the responsibilities of a medical practitioner.

GLOUCESTER SMALL-POX STATISTICS.

THE *Gloucester Chronicle* issued on Saturday last a special edition containing certain data as to the small-pox epidemic at Gloucester up to May 29th. The statistics given are as follows:—

—	Total.	Not vaccinated.	Vaccinated in infancy only.	Uncertain.
Persons attacked ...	1822	639	1056	127
Deaths	396	265	90	41
Proportion of deaths per cent.	21·7	41·4	8·5	32·2

In a note the statement is made that the "uncertain" cases consisted of 17 which were alleged to have been re-vaccinated but on insufficient evidence, 85 which were re-vaccinated after exposure to infection, and 25 about which no information could be obtained. From these figures it appears that the per case mortality of the unvaccinated patients was nearly five times that of the once vaccinated sufferers. If, however, we add the uncertain cases and the deaths among them in their entirety to the cases and deaths in the once vaccinated, we obtain figures as follows—namely, 1183 cases and 131 deaths, yielding a case mortality of 11·1 per cent., and thus still much under one-third that of the unvaccinated cases. These data are given, it should be remembered, while the epidemic is still progressing, and that at the rate of some 50 cases per week; they must therefore be taken only for what they are worth at the moment. And be it noted that no age statistics are here given, an important matter when considering the pros and cons of vaccination in relation to small-pox. But even as they stand the data afford a striking illustration not only of the protective efficacy of vaccination against death by small-pox, but also indirect evidence of the importance of vaccination in warding off attack by small-pox, since it will be seen that not one of the many hundreds of persons recently primarily vaccinated at ages above that of infancy finds place in the statement of attacks.

REMARKABLE INSTANCE OF THE APPRECIATION OF THE PASSAGE OF TIME DURING HYPNOSIS.

AT a meeting of the Society for Psychical Research held on the 5th inst. Dr. Milne Bramwell related the case of a young woman who in a state of hypnosis showed a remarkable power of appreciating the passage of time. The subject of experiment was nineteen years of age and had received an ordinary board school education, during which and since she had not shown any extraordinary capacity of calculation. Before treatment the patient had suffered for about twelve months from functional nervous affections, but at the time of the experiments she was in excellent health. The experiments consisted in suggesting to the patient during hypnosis that she should perform a simple act at the expiration of a certain number of minutes, such as making a cross with a pencil on a piece of paper, and at the same time writing down the time she thought it was when she did this. The interval suggested varied in the course of the experiments from a few hundred to over 20,000 minutes. Sometimes six such suggestions were made at the same time, and starting from different imaginary hours. For example, at four o'clock one day she was asked to fulfil the suggestion in 10,080 minutes, starting from ten o'clock the previous day, &c. Fifty-five such experiments were made, with only two failures. An interesting point was that on awaking, the patient had no recollection of what had been suggested and never complained of headache or gave any indication of nerve exhaustion. It was sometimes arranged that the suggestions should fall due in Dr. Bramwell's house when she was awake or asleep, and the result was always highly satisfactory. On many occasions several independent observers attested the results. The case is to be reported in detail to the International Congress of Psychology, to be held in Munich during the summer.

THE annual dinner of the Army Medical Staff will be held in the Whitehall Rooms of the Hôtel Métropole on Monday next, June 15th, at 7.30 P.M. Gentlemen intending to be present are requested to communicate at their earliest convenience with Surgeon-Lieutenant-Colonel James Hector, the honorary secretary, at 25, Anerley-park, S.E.

A LIFE-SAVING exhibition in aid of the Guy's Hospital Re-endowment Fund will be held at the Central Hall, Holborn, from July 9th to 18th next. The exhibition is promoted by the St. John Ambulance Association, of which the Prince of Wales is president, and by the Life-saving Society, of which the Duke of York is president.

AT the annual dinner of the survivors of the Lucknow garrison, which took place at the Holborn Restaurant on Wednesday evening, Surgeon-General Sir Joseph Fayrer,

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Bart., K.C.S.I., Surgeon-Major H. M. Greenhow, and Deputy-Surgeon-General S. B. Partridge, C.I.E., were present.

THE Colonial Office has been informed by telegram from the Governor of Hong-Kong that thirty-four fresh cases of bubonic plague occurred in the colony in the week ending June 9th, and that the number of deaths from the plague during the same period was thirty-five.

THE British Balneological and Climatological Society will hold a conversazione at Limmer's Hotel, Conduit-street, London, W., on Wednesday, June 17th, 1896, at 8.30 P.M., when Dr. C. Theodore Williams will deliver an address on Sea-bathing and the Open-air Treatment of Disease.

AS was generally anticipated, the Queen has appointed Dr. Thomas Barlow, F.R.C.P. Lond., to be Physician to the Household in Ordinary to Her Majesty, in the room of Sir John Russell Reynolds, Bart., deceased.

DIPHTHERIA AND ANTITOXIN AT THE GLASGOW FEVER HOSPITAL.

NEW remedies, whatever be their nature, are received in these days with caution and even with distrust, and this is more particularly the case when these remedies relate to diseases which are known to undergo naturally considerable variation in virulence. The evidence, however, which has now been adduced both at home and abroad as to the efficacy of diphtheria antitoxin must needs go far to convince all open-minded persons that in this method of treatment, though certainly not so potent for good as was once hoped, we have a weapon which if properly used is calculated to diminish in a very considerable degree the case fatality of diphtheria as manifested in recent years. The report of the medical superintendents of the Metropolitan Asylums Board, dealing as it does with a very large number of cases, can leave but little doubt as to the utility of antitoxin, and although it has been deplored by some that the serum was not applied in a more uniform fashion, and that other comparisons were not made, it is clear that the disparity in dosage has taught us very valuable lessons which otherwise might have been lost. Our object at the present moment, however, is to draw attention to another series of cases which, although numerically small as compared with the total of the Metropolitan Asylums Board, nevertheless supports the conclusions there arrived at in a very marked degree. The figures which relate to the Glasgow Fever Hospital, Belvidere, during 1895 are dealt with in a very concise manner by Dr. Ernest Marsh, senior assistant physician to that institution. As in the case of the Metropolitan Asylums Board report, Dr. Marsh takes for his chief standard of comparison the fatality rate of the hospital-treated cases in former years, but it is in a sense unfortunate that reliable statistics in this direction can be only obtained for the years 1890–4 inclusive. During these five years, however, the hospital fatality rates in percentages have been respectively 39·8, 38·8, 37·2, 40·5, and lastly in 1894, when 245 cases were under treatment, 35·5. Before 1890 the annual hospital figures were so small as to afford no reliable data, but the average fatality rate for the years 1871–94, taken together, was 40·4, i.e., 55·4 among those under five and 26·4 among those over five. Coming now to the antitoxin year 1895 we learn that out of 179 cases admitted during the year 137 were treated with antitoxin, while of the remaining 42 cases 38 were so mild as to give rise to no anxiety and 4 were moribund on admission. It will thus be seen that the severe cases only were treated with antitoxin. The antitoxin was as a rule administered shortly after admission in doses of from 10 to 20 c.c.; in 76 cases only one injection was made, while in the remainder additional ones were deemed necessary. Altogether (including 9 treated in 1894) there were 146 cases to whom antitoxin was administered, and of these 4 received doses of 5 c.c., 40 of 10 c.c., 15 of 15 c.c., 38 of 20 c.c., 10 of 25 c.c., 19 of 30 c.c., 17 of from 35 to 40 c.c., 2 of 50 c.c., and 1 of 67 c.c. In all cases simple local treatment and, when necessary, stimulants were used. Of the total 179 admissions during 1895, 25, or 14·0 per cent., died, as compared with a mortality of 35·5 in 1894, the lowest rate then recorded. To what then was this remarkable diminution due? Was it due to an accentuation, a marked accentuation, of the natural fall of the hospital cases observed in 1894, or to some marked difference in the age incidence of the cases? or was it due to the use of antitoxin? To these questions Dr. Marsh furnishes an answer which, if not actually convincing, must be held to carry enormous weight. If the fall in fatality-rate from 35·5 to 14·0 is to be accounted for by a natural decline in the virulence of the disease it may reasonably be expected that something approaching a similar fall will be seen in the home-treated cases. On looking, however, at the figures, it appears that the home-treated cases evinced during 1895, actually an excess in fatality-rate on similar cases during 1893 and 1894.

Year.	Treated at home.			Treated in hospital.			Total.		
	Cases.	Deaths.	Mortality per cent.	Cases.	Deaths.	Mortality per cent.	Cases.	Deaths.	Mortality per cent.
1893	670	145	22·0	153	62	40·0	823	207	25·0
1894	715	167	23·0	245	87	35·0	960	254	26·0
1895	468	114	24·0	179	25	14·0	647	139	22·0

Those, therefore, who contend that the natural variations of the disease explain the sudden drop in case mortality must account for this discrepancy in the home- and hospital-treated cases. Probably the position will be taken up that there has been during the year in question some remarkable shifting of age incidence and that this has been all to the advantage of the hospital cases. Unfortunately the age distribution in the two sets of cases is not given in the report, but in addition to the inherent improbability of this explanation is the fact that the fall has been equally apparent in the cases under five as well as those over five, and in the faucial as well as in the laryngeal cases. There is, however, another method of indicating the value of antitoxin, that is, by a comparison of the tracheotomy cases during 1895 with those of previous years, and probably in a sense this is one of the best comparisons which under the circumstances could be made. Here, again, we are met with the same encouraging results as was the case with the Asylums Board statistics. During 1895 there were 29 cases requiring tracheotomy, as compared with 76 between 1891–92, 42 in 1893, and 23 in 1894. Between 1871 to 1892 a fatality rate per cent. of the tracheotomy cases was 79; in 1893, 76·2; and in 1894, 86·9. In 1895, the antitoxin year, the fatality rate of the tracheotomy cases was but 34·5. What can, then, be the possible explanation of these figures? A sudden drop in the virulence of the disease has already been discussed, and it would seem that a high age incidence among the cases requiring tracheotomy; a deliberate selection of cases with a view to good results, or the introduction of a new and exceptionally skilled operator, are the only feasible explanations. But the reading of these figures alongside those of the Metropolitan Asylums Board is probably sufficient to carry conviction as to the improbability of any of these views being correct. Similarly with regard to the advantages of early treatment the Glasgow figures tell the same tale as the London ones. In the Glasgow figures, however, it is to be regretted that the age incidence of the cases in this connexion is not more fully given—for instance, out of 21 cases treated within forty-eight hours of the onset of the disease there were no deaths; but it is obviously open to the critic to suggest that the age incidence may have had something to do with the results. In the matter of urticarial rashes, abscesses of the seat of inoculation, &c., the Glasgow report tells practically the same tale as did the Asylums Board statistics, and the value of Dr. Marsh's carefully prepared report is most apparent when read side by side with the London figures.

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THOMAS WAKLEY,

THE FOUNDER OF "THE LANCET."

A BIOGRAPHY.[1]

CHAPTER XXIII.

A Barren Victory.—The Secession of Mr. William Lawrence.—His Demeanour towards Wakley.—Wakley Continues to "Peg Away."—The Insult to the Medical Officers of the Navy.—The Members Pass Resolutions in the Theatre of the College.—Wakley Treated by the Authorities as a Broiler and Rioter.—A Disgraceful Scene.

THE victory of the Members of the College of Surgeons over their autocratic Council was but a barren one. In obedience to the order of the House of Commons a return was made showing that the College had received from Government £15,000 in June, 1799, for the purchase of the Hunterian Museum (this sum was not granted directly to the College, but to the executors of John Hunter, who, however, in return for it handed over the Hunterian collection to the College); £15,000 in July, 1806, to erect a suitable building to contain the Hunterian Museum; and £12,500 in April, 1810, for building purposes in connexion with the edifice in Lincoln's-inn, a suitable home for the Museum again being mentioned as the chief object of appropriation. The return also showed that £30,000 in addition had been spent by the College in building, the money having been obtained as fees. Passing swiftly over the regulations concerning admission to the museum and certification for examinations, the return next dealt with the source of the income of the College. The years 1825 and 1826 were chosen as types, and the figures furnished showed the income for the years to have been in the gross £7261 16*s.* and £7704 9*s.* respectively. There the return ended, no details of expenditure being given. The document was laid upon the table and no debate ensued. No member of the House was sufficiently interested or sufficiently well-informed to consider it to be his duty to carry the matter further in teeth of the substantial opposition to practical reform that such men as Sir Astley Cooper, Mr. Abernethy, and Sir William Blizzard had been able to secure. The wealth of the College was exposed and its meanness to its commonalty was made no less manifest; but the only people who cared for these things—viz., a reforming section of that commonalty—knew it all before, so that the victory must be considered a barren one. It was a slap in the face for the authorities, but it was not only no rout of them, it did not form even a temporary check to their course.

The committee of Members who had organised the petition and who had hoped such great things from it were sorely disheartened, and almost immediately afterwards they received a great blow by the desertion of Mr. William Lawrence. Mr. Lawrence was a most powerful friend, and could if he chose be a most powerful foe. His mere presence at the assemblies of the reformers, being himself a hospital surgeon, and one of the very class who had most to hope from the prolongation of old abuses, had been of the utmost service; while his ready pen, his eloquence, and his clear brain had served them well, both in the columns of THE LANCET and from the chair at the general meetings. Now the prestige thrown over the movement by his participation in their counsels was gone, while the weight of his talents was thrown into the other scale, for he accepted an invitation from the Council of the College to become one of them. Wakley felt Mr. Lawrence's secession deeply, but the blow was not entirely unexpected. It will be remembered that from the first Mr. Lawrence had proposed milder counsels than suited the more thorough-going of the reformers, but had been always defeated by the general vote. Wakley recognised this, and when the shrill cry of "Traitor" or "Judas" was raised at the news that Mr. Lawrence had agreed to sit on the Council he did not join in it. He deplored Mr. Lawrence's action, but his language was much more measured than that of most of his followers and much milder than was expected by them. Mr. Lawrence was equally studious to preserve an outwardly amicable attitude towards Wakley, the terms of their curious truce having been arranged between them. In fact, they could not fight even if they had wished. Mr. Lawrence had been behind the scenes at the office of THE LANCET for years and knew things that could not be made public without immensely injuring many besides Wakley. All journals have their secrets, and sufficient has been said about the early career of THE LANCET to show that many men must have assisted Wakley in private by giving information, while in public they considered themselves at liberty to stand aloof from the cause of reform. It must be remembered that at most hospitals if a man connected with the institution whether as a student only or as one in authority had been convicted of being on the staff of THE LANCET his conduct would have been regarded by the surgeons as a distinct breach of trust, and he would have lost all chance of promotion at once. So that anonymity was the rule. In a perfect state of affairs this necessity for concealment could not have existed and honourable men need not have been ashamed to hold enlightened opinions; but in the condition of medical politics at that time it was not possible to be over-nice. Wakley had nothing to fear on his own account from any indiscretion of Mr. Lawrence, but he always made his contributors' cause his own cause; and when Mr. Lawrence deserted THE LANCET and the programme of the reformers Wakley felt that the future of many who had helped him was now in the hands of an adversary, one of the detested Council. But Mr. Lawrence, on the other hand, had his lips sealed by self-interest as much as by honour, though be it said Wakley, in common with most thoughtful persons, credited him with the finer motive. Mr. Lawrence had himself written in extraordinarily bitter terms of the leaders of the profession, and had it been known that some of the wittiest and most personal of the strictures that had been passed upon these worthies had been from his pen many among them would not have welcomed him back to the fold. They could not have exhibited even a semblance of friendship towards him. So, as has been said, a curious truce was concluded between Wakley and his late partner in the cause of reform. Mr. Lawrence was understood to esteem Wakley, and to hold his views up to a point, but not to be prepared to follow him to the extreme length that Wakley desired to go. Wakley was content to believe that Mr. Lawrence would still serve the cause of the commonalty even after he had thrown in his lot with the oligarchs, and his references to him were always civil and sincerely regretful.

In spite, however, of the defection of friends, the inaction of Parliament, the turbulence of some would-be reformers and the apathy of others, Wakley kept "pegging away," to use the phrase in which he himself promised that he would never desert the cause of medical reform. Every volume of THE LANCET was prefaced by an editorial statement in which he breathed threats against the Charter of the College. Almost every issue contained some article reflecting upon the government of the College. Now and then he had some little triumph to record, as when the hated back-door

[1] Chapters I., II., III., IV., V., VI., VII., VIII., IX., X., XI., XII., XIII., XIV., XV., XVI., XVII., XVIII., XIX., XX., XXI., and XXII. were published in THE LANCET, Jan. 4th, 11th, 18th, and 25th, Feb. 1st, 8th, 15th, 22nd, and 29th, March 7th, 14th, 21st, and 28th, April 4th, 11th, 18th, and 25th, May 2nd, 16th, 23rd, 30th, and June 6th respectively.

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entrance was done away with in 1827, or when the pressure brought by some popular teacher upon the Council to have his certificates officially recognised proved successful to its end. But generally the articles recapituated the complaints that had so often been made, and reading them now we wonder that they did not become wearisome in the ears of those to whom they were addressed, though it is impossible to withhold admiration from their writer's marvellous perseverance. Now it was the senility of certain members of the Council, and now the dirty condition of the library, and now the hauteur of the secretary, Mr. Belfour; but, week in week out, the Council of the College were reminded that they had in Wakley a critic who was frankly inimical to the existent constitution and ever watchful for an opportunity to bring it into discredit. The Council of the College at length redeemed the situation from a monotony of dreary bickering by furnishing Wakley with a legitimate and sensational reason for impugning their methods and manners.

On Feb. 12th, 1831, there appeared in THE LANCET a letter stating that the surgeons of His Majesty's Navy had been notified by circular that they were not to attend the King's levées. The reason for this extraordinary order was not given or even guessed at—and we may anticipate matters by saying that it was issued by the Lords Commissioners of the Admiralty under a grievous official mistake and was almost immediately rescinded. The writer only begged the profession to rally round their insulted brethren and insist upon a proper recognition by the Court of their position as officers and gentlemen. Wakley at once responded. He stigmatised the circular as a deliberate and cold-blooded insult which the profession as a whole was bound to resent, and he urged in THE LANCET that the following Monday at the Royal College of Surgeons would be a good time and place for a public demonstration of sympathy as well as for a public decision upon the steps to be taken towards the annulling of the offensive order. In consequence of this notice a large number of Members attended at the College, the official occasion for which the theatre was open being the delivery of the Hunterian Oration on Hernia by Mr. Anthony White, but the real object of their presence being to publicly protest against the insult inflicted on the naval surgeons by the Admiralty in forbidding them to attend the King's levées. It must be understood that their assembly for such a purpose was an entire and radical innovation, amounting to an assertion that the commonalty and not the Council could decide on the business of the day.

Wakley on entering the College was received with loud cheers and almost immediately rose to protest against the treatment to which "ships'-doctors" had been subjected. In the course of a humorous speech he pointed out that the surgeons of the navy had as much right to be considered officers as those of the army, and moved a resolution that they ought to enjoy the same privileges. Mr. Garland, a very well-known general practitioner and a keen reformer in spirit, seconded the resolution, when Wakley observed that their doings might be considered irregular as they had no chairman; he therefore took upon himself the task of putting the resolution. It was carried with enthusiasm. The second resolution, calling upon the College Council to vindicate the rights and dignity of its Members, was moved by Mr. T. King and having been duly seconded was also carried with acclamation. Mr. King was a popular lecturer on surgery at the General Dispensary in Aldersgate-street and a man of considerable scientific standing.

Just as these resolutions had been passed the officers of the College entered the theatre. Mr. Robert Keate, surgeon to St. George's Hospital, was acting as President for Mr. Headington on the occasion, and Mr. King rose and presented the resolutions to him. The discussion of these was postponed until Mr. White had delivered his oration, the acting President having very distinctly promised that after the oration the Council would listen to what their Members had to say. So poor Mr. White had to read his address to a very impatient audience, who treated his official remarks with scant ceremony, thereby evidently discomposing him. "God knows what to call it ..... a most extraordinary jumble," said Wakley of this oration in the next number of THE LANCET, but Mr. White was undoubtedly placed in a very trying position. When he had at last finished, the acting-President, having conducted certain visitors out, divested himself of his gown, and returning said that as a *member of the Council* he was now ready to hear Mr. King. Wakley said that an agreement to postpone the hearing of their complaints had been made with the acting-President and not with his gown. Sir Astley Cooper tried to cast oil on the waters, spoke highly of the naval surgeons, and characterised the action of the Admiralty as improper. He suggested that the purpose of the Members would be better served by their deputing six of their number to confer with the Council. Mr. Keate, supported by Mr. Thomas, a member of the Council, persisted that he would lay the resolutions before the Council and personally could hear no more on the subject as he was not present in an official position. The meeting terminated by Wakley's remark that the Members had done *their* duty and it only remained for the President and Council to do *theirs*.

The resolutions were duly laid before the Council by Mr. Keate, but were considered "irregular," and the Council "found it impossible" to act upon them. This decision was come to by a majority of 15 to 3, the three being Sir Astley Cooper, Mr. Lawrence, and Mr. Brodie. Wakley considered this a gross breach of confidence. The Members had allowed Mr. White to deliver his oration on the distinct understanding that the President and Council would listen to them afterwards. At the close of the oration the acting-President found himself unable to do more than convey a message to the Council, having hung up his official position in the ante-room with his gown—a piece of quibbling that had been received by the meeting with hearty disapprobation. Consequently, in the following week Wakley again begged the profession to attend at the College and decide what course should be taken to compel the Council to espouse the cause of the oppressed naval officers. The Members were enjoined to assemble at the College at three o'clock, at which hour the doors of the theatre would be open in preparation for the next Hunterian lecture at four.

Immediately upon this invitation being given by Wakley the Council issued a notice in the morning papers that the doors of the College would be opened at 3.45, and not until then, and that no public discussions would be allowed in the theatre of the College either upon that or any other occasion. Circular notices to this effect were also posted to some of the metropolitan Members. The Members, however, either being ignorant of the Council's action or believing it to be a ruse, arrived in great force, to the number of three or four hundred. The porter did his duty to his employers and refused to admit anybody until 3.45, in spite of the very inclement weather. At about twenty minutes to four Wakley arrived and demanded admission, but the porter stuck to his instructions, only exceeding them by making a special attempt to exclude the Editor of THE LANCET. At twelve minutes to four the doors were thrown open, and no sooner had the theatre been filled in every part, which occupied but a minute or two, than Wakley was called for on every side. He rose to speak in a scene of confusion and uproar which beggars description. The majority of the meeting was with him, but a small opposition was noisy and demonstrative. Wakley declared that nothing need now be done until the President's arrival, when the officers of the College must be asked by the

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assembled Members who was responsible for the advertisement and circular forbidding them to assemble in their own College.

At four o'clock the President, Council, and a *posse* of Bow-street officers entered the theatre. Wakley rose holding the circular in his hand, and tried to ask whether it was an official document issued by the Council. The President, Dr. Morson, and Mr. King, as well as Mr. Guthrie (a member of the Council), tried to make themselves heard without avail. The disorder seemed wildest in the immediate neighbourhood of Wakley, who remained on his feet without speaking, the centre of a circle of applauding supporters. A Bow-street officer was sent to order him out. The surrounding Members would have rallied to his aid, but Wakley forbade them, saying that the Council had not the least power to remove him. He informed the officer of this fact, who returned to the Council saying, "Mr. Wakley knows perfectly well what he's about." The Council were exasperated, and one gentleman went so far as to suggest the use of the constables' staves. The uproar still continued and at last the President rose and left the theatre, being followed by the Council and visitors. Wakley then addressed the meeting, imploring them to preserve quiet behaviour. He proposed that they should put themselves in order by electing a chairman, and suggested Mr. George Walker, a surgeon at Sheerness and a very senior Member. Mr. Walker was unanimously elected and Wakley at once continued his speech. He observed that they "had not listened to a lecture on *hernia*, but that *rupture* was a very appropriate subject on such an occasion." He asked the Members whether they did not consider that he had been right in enquiring of the Council whether the precious document he held in his hand had emanated from them officially; he described it as one of the most extraordinary pieces of composition he had ever seen, and suggested that it must be the work of Mr. Belfour's cook. He said he would not move a vote of censure on the Council for the indignities to which he and his brother Members had been subjected because he really thought that vote had already been as good as passed. He described for the meeting the gross insult put upon the naval surgeons by the Admiralty, and finally moved a resolution that the Members deeply regretted the unsympathetic attitude of the Council as shown by the fact that they had refused to notice the resolutions of the Members passed for their consideration at the previous meeting. "This refusal," said Wakley, "is another added to the already innumerable existing proofs that the President and Council are alike indifferent to the honour, happiness, and respectability of the commonalty of this chartered College." The resolution was seconded by a Mr. Complin and carried with only two dissentients.

A few moments later Mr. Belfour, the secretary of the College, and the person whose name had been appended to the offending circular, entered the theatre and handed to Wakley a paper bearing the following words: "Mr. Wakley, you are required by the President and Council to quit the theatre." Wakley refused point blank, when a similar order to the Members, written large and pinned to a board, was held up over the lecturer's desk. No one moved. Suddenly a number of Bow-street officers rushed into the theatre and making for Wakley seized him by the collar, arms, and legs, and proceeded to expel him by force from the building. The surrounding Members ran to his assistance and a tug of war ensued, Wakley playing the somewhat unpopular *rôle* of rope (his own description). While he was thus stretched out a Bow-street officer aimed a blow at his head with a truncheon. This providentially missed him and his struggles were so fierce as to throw himself and half-a-dozen persons down several benches to the floor of the theatre. The fighting might have been prolonged in spite of the nature of the odds, for Wakley was a man of great strength and large frame and an expert boxer and wrestler, but it was not his desire to continue the brawl. He consented to leave the building, and urged his friends to forego further resistance. On getting outside the officers released their grip when Wakley at once ordered them to take the officer Ledbitter, who had aimed the cowardly blow at him, into custody. This they refused to do, but at last two Bow-street officers to whom the previous occurrences were unknown were fetched who complied. The procession, consisting of the Bow-street officers, the arrested man and his custodian, Wakley with his clothes hanging on him in rags, and a body of sympathetic followers, made its way through Covent-garden accompanied by an enormous and uproarious crowd to Bow-street, where at seven in the evening Wakley charged his assailant before the chief magistrate, Sir Richard Birnie.

In the meanwhile the Members who had remained in the theatre proceeded with the business for which Wakley had convoked them. They passed a resolution that three of their number should form a deputation to the Lord Chamberlain (the Duke of Devonshire) to point out to his Grace the invidiousness of the position in which the naval medical officers had been placed by their exclusion from the levees of the Sailor-King and they selected to represent them Messrs. Wakley, Walker, and King.

(To be continued.)

THE SOUDAN CAMPAIGN.

As we surmised last week from the signs that were apparent in the Nile expeditionary force, things have recently assumed a far more active phase. With regard to the political or financial aspects of the Egyptian question we have, of course, nothing whatever to do; but we suppose all will be agreed that once an expedition of this kind has been undertaken the sooner and more decisively it is carried out the better. A forward movement has now taken place and a most successful attack has been made upon the Dervishes, who were surprised and defeated by the Egyptian army and driven out of their camp at Firket with considerable loss, and that station, with its camp, stores and equipment, arms, camels, horses, and provisions, has been captured by a force led by British officers under the command of the Sirdar, Sir H. Kitchener. The attack appears to have been admirably conceived and brilliantly executed, and the moral effect of it cannot fail to be great. It is satisfactory in the first place to learn that nothing could have been better than the behaviour of the troops, both Soudanese and Egyptians, and, in the second, the impression which this early exhibition of our power is likely to create in the minds of the Dervishes must not be lost sight of, to say nothing of the effect it will probably have upon the native tribes and population who may be wavering as to the side they will take in the campaign. As regards the quality of the Soudanese or black troops there has never been any doubt, they are born fighters; brave and well-disciplined, they have always given a good account of themselves; the doubt was with regard to the Egyptian soldiers, who, notwithstanding that they are men of fine physique and admirably drilled and disciplined, have not hitherto been remarkable for their display of courage and steadiness in actual war. On this occasion, however, everyone seems to be agreed that they fought well, and that the Egyptian army as it exists at the present time is a very different force indeed from what it was. Under British officers and British leadership Egyptian soldiers have acquired the requisite spirit and confidence to make them effective fighting material. The most advanced post of the Dervishes was at Firket on the banks of the Nile about twenty miles from Akasheh. The main body of the Nile expeditionary force having previously made a heavy march from Akasheh on the night of the 6th inst., attacked the enemy's position early on the following morning, and in about an hour and a half from the commencement of the fight the Dervishes were in full flight. Our casualties

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were trifling. One British officer, Captain Legge, of the 20th Hussars, received a sword wound. The Egyptian army had twenty killed and eighty wounded; of the latter eight are Egyptian officers. A hospital has been established and the wounded are reported to be doing well. The Dervish losses, which include the Emir Hammuda, who commanded, and several other emirs, are estimated to amount altogether to 800 or 1000. The number of prisoners taken is also large. Fortunately the weather during these operations was rather cooler than usual. The Egyptian army is reported to be well supplied and the medical arrangements have so far worked most satisfactorily. It is to be hoped that the success that has been achieved may facilitate our subsequent advance on Dongola, and that we may be sooner within measurable distance of the end of the campaign than was at first anticipated. Once peace and a settled government are established trade will begin to revive, railways will be constructed, and every attempt will be made to establish free intercourse and communication between the inhabitants of the Nile and desert and those of Lower Egypt.

According to the latest telegraphic intelligence a body of mounted troops, under the command of Colonel Burn Murdoch, have advanced from Firket thirty miles across the desert to Suarda, on the Nile, and have occupied that place. Infantry are being rapidly pushed on to hold Suarda, which is a strong and very valuable position. The Dervishes were evidently surprised by the Egyptian cavalry force. The entire Dervish camp has been captured with a great quantity of supplies, and a number of prisoners have been taken. This must prove a serious blow to the Dervishes. The campaign has evidently been pushed on so far with great energy and success.

THE OBLIGATIONS OF THE GENERAL MEDICAL COUNCIL, MEDICAL SCHOOLS, AND CORPORATIONS IN RELATION TO THE RIGHTS OF MEDICAL MEN.

A MEETING (adjourned from May 15th) of the Select Committee of the Civil Rights Defence Committee was held on May 22nd at the residence of Mr. Victor Horsley, Mr. Timothy Holmes being in the chair.

The minutes of the last meeting were read, adopted, and signed by the chairman.

General Graham brought up the letter to the Master of the Society of Apothecaries duly signed by the members of this Committee (see below), and reported that the Master had very kindly consented to receive Mr. Anderson and himself (the speaker) on Tuesday, May 26th.

A draft letter to the President and members of the General Medical Council was considered and adopted for signature by the members of the Select Committee.

Mr. Rivington inquired whether it would not be well to propose definite measures to the General Medical Council, and especially in relation to the Privy Council appeals, since the relations of the General Medical Council to the Privy Council in the administration of the Medical Acts, and presumably in maintaining them inviolate, are direct and intimate.

The Chairman said he understood the most urgent question was the appeal to the House of Lords in Anderson *v.* Gorrie and Others, and that as that decision destroys the rights of medical men under the Medical Acts the coöperation of the General Medical Council by appointment of representatives to, and by coöperation with, this Committee, and even by contribution from its funds in support of the Medical Acts, might reasonably be asked.

Mr. Anderson said that Lord Stamford's letter which the Committee was supporting invited the General Medical Council to receive a deputation, to appoint representatives to the Civil Rights Defence Committee, and to coöperate in such other ways as might be considered advisable. After discussion it was resolved to await the reply of the General Medical Council to this letter and to that of the Earl of Stamford.

On consideration of a letter inviting independent representations from the constituent bodies of the Civil Rights Defence Committee in support of the invitation to the General Medical Council, and asking the British Medical Association to arrange a deputation to the General Medical Council, it was resolved to postpone dealing with these proposed measures till a reply should be received to the present invitation to the General Medical Council.

Opinion of counsel was brought up by General Graham fully supporting the views and action taken by the committee and that the judgment was voidable, on the precedent of Dimes *v.* Grand Junction Canal Co. (3 H. L.Cas); that the court, though it had a discretion, had under the circumstances the power and the duty to set aside the judgment and hear the appeal; that Mr. Anderson was entitled to have the orders the court made drawn up; that by refusing to draw them up the court embarrasses Mr. Anderson in his appeal to the House of Lords.

Mr. Rivington laid on the table THE LANCET of May 23rd, with a very full report of the meeting of May 15th, and the meeting expressed its sense of the great advantage to the cause of such full publication of the proceedings.

With a vote of thanks to Mr. Holmes for his valuable services in the chair the meeting adjourned *sine die*, to be convened by special notice by the secretarial committee.

The following is a copy of the letter to the Master of the Society of Apothecaries mentioned above:—

5, Mitre-court, Temple, E.C., May 16th, 1896.

To the Master of the Worshipful Society of Apothecaries of London.

SIR,—We beg to address you as members of the Civil Rights Defence Committee and of the Select Committee to which has been referred the question of the obligations of the medical schools and corporations and General Medical Council in relation to the rights of medical men held out as inducements to young men to enter the profession.

Of all these rights Mr. Anderson, and with him all medical men, are deprived by the judgments pronounced in his case, the facts of which are already fully before you.

We desire, therefore, to support Mr. Anderson's application to your worshipful society to take part in defending the rights thus violated and to lend your powerful influence in enlisting in that defence the aid of other worshipful companies of the City of London whose charters are endangered by the infringement of your own in Mr. Anderson's case, and who, we feel every confidence, will readily respond to an appeal from you to unite in this defence of your ancient rights and liberties.

The circumstances of the case are so extraordinary that we feel sure on investigation your worshipful society will find our representations fully justified, and that not only will your sense of justice and regard for the dignity of your rights violated in the violation of your Licence to Mr. Anderson, but your sympathy for him as a grievously oppressed and injured man be fully enlisted in our support.

We beg to cordially support Lord Stamford's invitation to you of Nov. 21st, 1895, to appoint representatives to our Committee, on which we shall heartily welcome their coöperation.

General Graham and Mr. Anderson have been requested, with your permission, to convey this letter to you on our behalf.

We have the honour to remain, Sir, your obedient servants,

TIMOTHY HOLMES, M.A. Cantab., F.R.C.S.,
Chairman of Select Committee on Medical Defence, representative of Association of Fellows of the Royal College of Surgeons of England.
WALTER RIVINGTON, M.A., M.B., M.S. Lond., F.R.C.S.,
J. WARD COUSINS, M.D. Lond., F.R.C.S. Eng.,
Representing the Royal College of Surgeons of England.
J. WARD COUSINS, President of Council,
HENRY T. BUTLIN, Treasurer,
Representing the British Medical Association.
GEORGE D. POLLOCK, F.R.C.S.,
FREDERICK J. GANT, F.R.C.S.,
H. PERCY DUNN, F.R.C.S.,
Representing the Association of Fellows of the College of Surgeons.
VICTOR HORSLEY, F.R.S., F.R.C.S., President of the Medical Defence Union,
J. ALFRED MASTERS, M.D., M.R.C.P. Lond., Treasurer of the Medical Defence Union,
Representing the Medical Defence Union.
E. G. YOUNGER, M.D., M.R.C.P.,
J. ERNEST BULLOCK, M.D.,
Representing the West London Divisions of the London and Counties Medical Protection Society.

The following resolution was unanimously passed at a meeting of the Barbados Branch of the British Medical Association held on April 10th, 1896:—

"That this branch of the British Medical Association adopts the reports of the Civil Rights Defence Committee on the case of Mr. R. B. Anderson, F.R.C.S. Eng., as correctly stating the professional and civil rights involved in the injuries done to Mr. Anderson; identifies itself with the Committee in the measures adopted in defence of those rights; and unites with the Committee in cordially inviting Her Majesty's Ministers, Members of Parliament and other public men, the Guilds of the city of London, the General Council of Medical Education and Registration, the great professional corporations and the medical schools of the United Kingdom, and especially the University of London, the Royal College of Physicians of London, the Worshipful Society of Apothecaries, and the St. Mary's Hospital School, to unite with the Committee in defence of rights essential to the practice of the medical profession as a means of livelihood."

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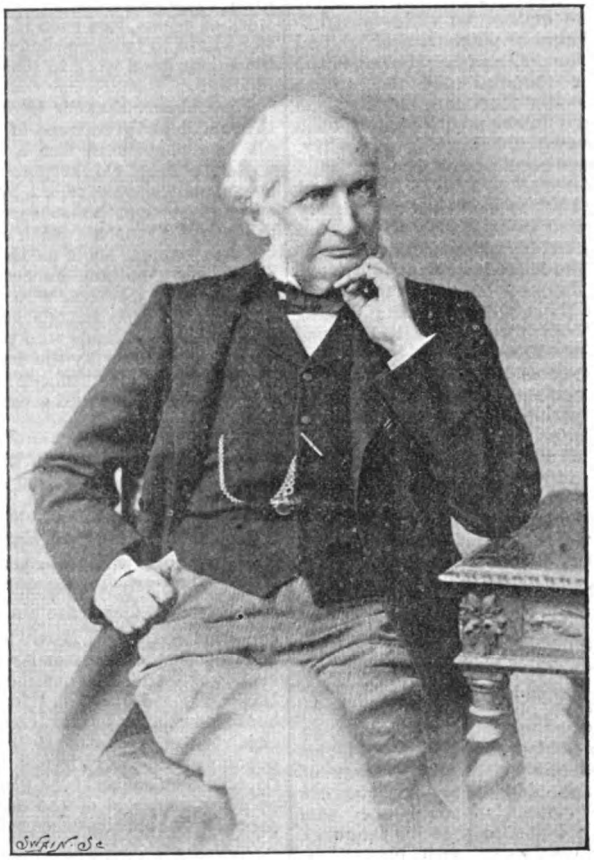
Obituary.

SIR GEORGE JOHNSON, M.D. LOND., F.R.C.P. LOND., F.R.S.,

PHYSICIAN EXTRAORDINARY TO HER MAJESTY THE QUEEN, CONSULTING PHYSICIAN TO KING'S COLLEGE HOSPITAL, &C., &C.

WE briefly announced last week the death of Sir George Johnson, which occurred at his residence, 11, Savile-row, on Wednesday, June 3rd. For many years he had suffered from paralysis agitans, and some five or six years ago his condition had caused considerable anxiety to his friends, but more recently he had been much better, and had been able to resume practice and literary work, and even on Monday, June 1st, he had spent the morning writing the memorandum, which we print in another page, on the treatment of cholera, the manuscript showing remarkably few corrections or alterations and exhibiting no indication of the approaching end. An hour after returning home in the afternoon he was found on the floor unconscious and was thought to have had a fainting fit; but when his colleague, Dr. Tirard, arrived the gravity of the condition, right hemiplegia with aphasia, was noted, a diagnosis confirmed later when he was seen again by him in consultation with Sir Alfred Garrod. Consciousness was partially regained on Monday and Tuesday, but late on Tuesday night the pulse became irregular and intermittent and he became less responsive; coma supervened at midday on the 3rd, and he passed away so peacefully that it was difficult at first to realise that the end had come.



SIR GEORGE JOHNSON, M.D., F.R.S.,
PHYSICIAN EXTRAORDINARY TO THE QUEEN.

George Johnson was born in November, 1818, at Goudhurst in Kent, and was educated at the grammar school there. His choice of the practice of medicine as a profession was the result of an accident. His maternal uncle was a general practitioner at Cranbrook in Kent, and in the early part of 1837 his arm was broken by a fall from his horse. He then asked young George Johnson to stay with him for a few weeks and drive him in his gig. At the end of six weeks Johnson decided to relinquish the plans that had been made for his future and to join his uncle as an apprentice. His father warned him that he must not expect to meet with the same amount of success, but young Johnson replied that he would be content with a modest income. After remaining two and a half years with his uncle he entered the medical department of King's College, London, in October, 1839. His college career was a highly distinguished one. He was awarded prizes in anatomy, chemistry, physiology, and materia medica, and at the end of his third winter session he obtained the first prizes in medicine, surgery, and midwifery, the first Warneford prize, and the King's College Medical Society's prize for an essay on "Auscultation and Percussion." He was also awarded the senior scholarship which had then just been founded, and he was elected an Associate of King's College. At King's College Hospital he served as clinical clerk to Dr. Todd and dresser to Sir William Ferguson. At the end of his college course he held in succession the offices of house physician and house surgeon to the hospital. In 1841 he passed the first M.B. London in the first class, and in 1842 the second M.B., again in the first class, and received the scholarship and medal in Physiology and Comparative Anatomy. In 1844 he took his M.D. degree at the London University. In 1846 he became a Member of the Royal College of Physicians of London and in 1850 was elected a Fellow of that College. In the same year he married Charlotte Elizabeth, the youngest daughter of the late Lieutenant White of Addington; he was left a widower with five children in 1860. At the Royal College of Physicians of London he served the offices of Examiner in Medicine, Censor, Councillor, Goulstonian Lecturer, Materia Medica Lecturer, Lumleian Lecturer, Harveian Lecturer, and Vice-President. In 1862 he was appointed a Senator of the University of London, and in 1872 he was elected a Fellow of the Royal Society. In connexion with his work at King's College he was the first to receive in 1843 the appointment of resident medical tutor, an office which he held for seven years. In 1847 he was appointed assistant physician of King's College Hospital and in 1856 he became a full physician. In 1857 he succeeded Dr. Boyle as Professor of Materia Medica and Therapeutics, a post he retained until 1863, when he succeeded Dr. George Budd in the Professorship of the Principles and Practice of Medicine. In 1876 he resigned the chair of Medicine in consequence of the pressure of private work, and was appointed Professor of Clinical Medicine. When in 1886 he resigned that office he was elected by the Council Emeritus Professor of Clinical Medicine and consulting physician to King's College Hospital. In 1876 the Council of the Royal College of Surgeons of England appointed him one of the examiners in medicine, but he was unable to fulfil the duties of this office, as they interfered with those of the Senior Censorship of the Royal College of Physicians of London. For eighteen years he was physician to the Equitable Assurance Office. In 1883 Dr. Johnson was appointed by the Prince of Wales consulting physician to the Royal College of Music. In 1884 he was elected President of the Royal Medical and Chirurgical Society. In 1885 the committee of the Athenæum Club paid him the compliment of electing him a member of the club under the rule which provides for the annual introduction of a certain number of persons of distinguished eminence in science, literature, the arts, or for public services. In 1888 past and present students united with other friends in presenting him with his portrait painted by Mr. Frank Holl, R.A. The public presentation was made by Sir Joseph Lister in the large theatre at King's College in the presence of numerous of his former colleagues and friends, and the scene was one which will long be remembered both for the kindly tribute of praise paid by Sir Joseph Lister and for the graceful and emotional response made by Dr. Johnson. In 1889 he was made a Physician Extraordinary to the Queen, and he received the honour of knighthood in 1892.

The following is the list of his principal contributions to medical literature:—"On Diseases of the Kidney: their

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Pathology, Diagnosis, and Treatment," published in 1852; "Lectures on Bright's Disease," 1873; "Epidemic Diarrhœa and Cholera," 1855; "Notes on Cholera," 1866; and "The Laryngoscope: Directions for its Use and Practical Illustrations of its Value," 1864. He also contributed largely to the current medical periodicals, and assisted Sir Thomas Watson in revising the last edition of his famous "Lectures on the Principles and Practice of Medicine." Referring to his coadjutor, and expressing his obligations to him in an epilogue, Sir Thomas Watson says of him, "I will only say that I think him unsurpassed for accomplishments and ability in his vocation. King's College may well be proud of him." It is generally acknowledged that Sir George Johnson's most important contributions to medical science are—"Notes Relating to Bright's Disease of the Kidneys," "The Pathology and Treatment of Cholera," and "The Diagnosis and Treatment of Diseases of the Throat by the Aid of the Laryngoscope." In 1884 he published a "Defence of Harvey as the Discoverer of the Circulation of the Blood." This defence was a reply to certain criticisms which had been evoked by his Harveian Oration of 1882. It may be remembered that in the oration he endeavoured to vindicate Harvey from the charge of plagiarism which had been made by some Italian professors, and he referred to the voluminous work by Professor Ceradini and also to an oration by Professor Scalzi. His Harveian Oration was attacked by Professor Scalzi, and Johnson with warmth once more resumed his defence of Harvey and Harvey's originality. In 1887, after relinquishing active hospital work, he published his "Medical Lectures and Essays," and in 1889 followed "An Essay on Asphyxia." In 1895 he published a "History of the Cholera Controversy," and in 1896 a small book on "The Pathology of the Contracted Granular Kidney."

We have permission to use the following remarks written some years ago by Sir George Johnson himself. They have a bearing upon his work, and those who knew him, either personally or by repute, will probably read them with interest. "The most anxious period of my life was that in which I first entered upon the controversy as to the pathology and treatment of cholera after the epidemic of 1854. My friend Dr. Todd knew that I was preparing to publish particulars of the cases which I had treated by evacuants, together with my views as to the nature of choleraic collapse. He said to me, 'I believe that in the main you are right, but you will not convince the profession that you are, and in the attempt to do so you will suffer serious harm to your reputation and your prospects. I therefore advise you to publish no more on the subject.' I told him that I could not act upon his advice, and that with a firm belief that I was right I would not shrink from contending for what I held to be true, however unpopular it might be. I have never regretted that I did not accept Dr. Todd's well-meant advice, for I am persuaded that the time will come when Sir Thomas Watson's judgment of my cholera theories and practice will be universally acknowledged to have been just." In these words, which to a large extent he repeated in his last publication on the "History of the Cholera Controversy," may be found the clue to much of Johnson's line of thought. Many of his writings provoked opposition, and it is characteristic that he never shrank from contention with one who differed from him in opinion; and also that his language and his arguments gained in strength with opposition. In the height of controversy he frequently employed terms which, perhaps, to a certain extent are to be regretted. In fact, to him the scientific world was divided into two classes—those who agreed with him and those who differed; and his language in dealing with most of the controversies aroused by his theories may sometimes seem to us more powerful than the occasion appeared to demand. His defence of the hypertrophy of the small arteries in Bright's disease was very forcible; and on one occasion—in 1876—an unfortunate dispute arose between him and Sir William Gull over a point of professional etiquette connected with the "Balham case." This question was referred to the Royal College of Physicians of London, and although the decision was given in Dr. Johnson's favour a great deal of ill-feeling was aroused. In his "Medical Lectures and Essays" many of the strong expressions of younger days were toned down, although in forcible and clear language he maintained the views expressed earlier in life. There is throughout this book ample evidence that the author had thought much upon the subjects about which he had formerly written. His views are expressed here and there in more guarded words; but in some instances he seems also to have taken pains to set them before the reader armed and ready—nay, even anxious—for the fight. There have been those who have blamed Dr. Johnson for the warmth and the pugnacity of his style of literary diction, but it may be doubted whether any really good work has been done in any profession without an abundance of hard hitting. In recent years men have been more tender in avoiding wounding the susceptibilities of others, but an enthusiastic belief in the truth of what he teaches is apt to lure the teacher into the hot places of controversy. All Johnson's convictions he taught with an enthusiasm which showed how fully he relied upon the accuracy of his statements and upon the importance of what he taught. In the "Medical Lectures and Essays" he appeared to write with the calmness of one who recognises the great truth that work of all kinds in the long run must take its proper place in the estimation of thinking men, and will be valued by them according to the truth which time has shown it to possess. To this tribunal he was, we think, willing to leave the last word concerning much of what he had written and taught. Beyond a doubt his work, even when most controversial, was most stimulating to the work of others, and even if some of his theories and observations have to be somewhat modified, they will none the less have done good work in rousing enthusiasm and encouraging inquiry.

We feel sure that Sir George Johnson's life as written in the medical literature of the past fifty years will lead all to recognise in him a competent teacher, a vigorous writer, a deep thinker, and one who when fighting most strenuously was impelled by an earnest desire to convince others of what he so earnestly believed to be the truth. Sir George Johnson's death severs largely the connexion with historic names, such as those of Sir Thomas Watson, Dr. Todd, Sir William Ferguson, Sir William Bowman, Dr. Bristowe, and others, who were his firm friends. Though many of his early friends have passed away, the number of admirers and friends who yet remain to respect his memory was amply shown by the large and representative gathering at St. James's Church, Piccadilly, when the last public tribute of affection and esteem was shown on Monday.

KENNETH McLAREN, M.B., L.R.C.P. LOND., M.R.C.S. ENG.

THE death of Dr. Kenneth McLaren took place at his residence, Newport-road, Cardiff, on May 29th. The deceased gentleman was thirty-five years of age and had been in practice in Cardiff for six years. About a week previously he contracted a cold and acute pneumonia followed. Dr. McLaren was educated at St. Bartholomew's Hospital and graduated M.B. of London University in 1890, having two years previously taken the qualifications of M.R.C.S. Eng., and L.R.C.P. Lond. He had formerly held the appointments of house surgeon to St. Bartholomew's Hospital and house physician to the Royal Free Hospital. Dr. McLaren was extremely popular and during his residence in Cardiff had made many friends. The funeral took place on June 1st and was attended by many members of the medical profession as well as residents, by whom the deceased was much respected.

T. CANNING HUNTER, L.R.C.P. EDIN.

WE regret to announce the death of Mr. T. Canning Hunter, Pontypridd, the eldest son of Mr. R. C. Hunter, J.P., who has practised in the town for over thirty years, which took place after a brief illness early on the morning of June 7th. The deceased, who was only twenty-eight years of age, a week previously complained of feeling unwell and went to bed. A severe attack of pneumonia set in, and he was in a very critical condition during the week. All that medical skill could do was done for him by Mr. Jenkins, Pontypridd; Dr. Sheen, Cardiff; and Mr. Evan Jones, Aberdare. On the morning of the 6th he rallied slightly, but a change for the worse again occurred, and shortly after midnight he passed peacefully away, having lost consciousness half an hour before the end came. Mr. Hunter had a bright, cheerful disposition, and his untimely death cuts short a career which gave every promise of success. He was educated at Mr. Shewbrook's school, Monckton House, Cardiff, and finally in Scotland, and last January he qualified as a physician and surgeon at Edinburgh. The funeral took

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place on Wednesday, when the remains were laid to rest in Glyntaff Cemetery.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. J. W. Scott, Professor of Materia Medica in the Western Reserve University, Cleveland, U.S. Dr. J. Lojo y Batalla, Professor of Children's Diseases in Santiago (Spain). Dr. Nicolás Montells Bohigas, Professor of Clinical Surgery in Saragossa. Dr. J. A. Stoltz formerly Professor of Midwifery and Gynæcology in the Nancy Medical Faculty.

THE ASSOCIATION OF BRITISH POSTAL MEDICAL OFFICERS.

THERE was a very numerous and representative gathering at the fourth annual dinner of the Association of British Postal Medical Officers, which was held in the Whitehall Rooms of the Hôtel Métropole on May 19th. The event proved to be a successful one. Mr. Matthew Halton, J.P., President, occu ied the chair and there were also present: Sir Walter Foster, M.P., Sir Thomas Roe, ex-M.P., Sir Dyce Duckworth, Sir Robert Hunter, solicitor to the Post Office; Mr. Lewin Hill, third secretary to the Post Office; Mr. Baillie Gage, solicitor to the Post Office, Dublin; Dr. Farquharson, M.P., Mr. Alfred Arnold, M.P., Dr. Thorne Thorne, C.B., Dr. Henry Fitz-Gibbon, Dr. Walton Browne, Dr. W. Dougan, Mr. Frank Iliffe, Dr. Ritchie Giddings (hon. secretary), Mr. Bertram Thornton, J.P., Dr. Leonard Adeney, J.P., Dr. West Symes, Mr. McVeagh, Surgeon-Lieutenant-Colonel Murray, Captain H. Berkeley, R.N., Dr. Matthew Coates, Dr. I. Brown, Mr. Poole Lansdown, Dr. Domett Stone, Mr. J. W. Burbidge, Mr. Philip Jones, Dr. W. Taylor, Mr. C. Pemberton, Mr. Picton Phillips, Dr. Thomas Higgs, Dr. Richard Paramore, Dr. James Oliver, Mr. Biddulph Goss, Dr. Ridley Hilder, Mr. W. B. Hallowes, Mr. S. Evans, and many others. The Duke of Norfolk, Postmaster-General, wrote expressing regret at his inability to be present, and similar letters were received from Mr. Cresswell (secretary to the Post Office, Dublin), Sir John Lubbock, M.P., Dr. A. Whitelegge (Chief Inspector of Factories), Mr. Luke Fildes, R.A., Mr. Alma Tadema, R.A., &c.

The loyal toasts having been duly honoured, Dr. Paramore proposed "The Army, Navy, and Reserve Forces," to which Captain Henry Berkeley, R.N., Surgeon-Lieutenant-Colonel Murray, and Surgeon-Lieutenant-Colonel Phillips replied. Sir Dyce Duckworth then in a brilliant speech proposed "The Houses of Parliament." Sir Walter Foster, in responding, said Sir Dyce Duckworth had said, "Thank God we have a House of Lords." His feeling would have been considerably more intense if we had arrived at the stage of civilisation in which we had life peerages and medical men, on account of their intellectual and social qualifications and their self-sacrifice for the good of humanity, found a place in the House of Lords. The medical men connected with the postal service had done wisely and well in organising themselves. They had under their charge in various parts of the kingdom one of the most deserving class of public servants. They had grave and reasonable duties to perform, and they should frame such a policy for themselves as would tend to the better performance of their duties and the elevation of the class to which they belonged. They could then raise the postal medical officers of this kingdom to that position which they ought to enjoy as a very important part of the Civil Service. No men in the Civil Service deserved higher honours than its medical men when they did their work honestly and well. He saw around him men receiving distinction for services infinitely smaller than the services rendered to the State by the medical profession, and it was in a combination such as this that they would finally win their way to that just recognition of their work which was the duty owed to them by the State for long and faithful service. The association had only been in existence for some four years, but he believed there was a great future before British postal medical officers if they acted together for the common good and the elevation of their calling, which was, after all, for the good of humanity. The medical profession was of professions the most neglected among politicians; they were carrying on a war against the greatest enemy of humanity, but their laurels were not given them by the State, but by their approving consciences. He hoped the time would speedily come when the State would recognise as worthy of the highest honour medical men whose life aims were those of preventive medicine.

Mr. Alfred Arnold, M.P., having also replied, Mr. Bertram Thornton, J.P., proposed "The Postmaster-General, the Secretary, and other Officers of the Department." Mr. Lewin Hill and Sir Robert Hunter replied, the former remarking that he did not consider that the present severe educational test was the most reliable one for securing efficient recruits for the postal service, in whom a thorough aptitude for business was an essential.

Sir Thomas Roe proposed "The Association of British Postal Medical Officers." He said this association had been organised not for purposes allied to trades unionism, but for the purpose of joining together all the members of the medical profession connected with the postal service in the United Kingdom, so that they could compare notes and see that any advantage, however small, that might have been discovered in one individual district should be conferred upon every district connected with the association. He considered that the association merited the support and sympathy of the Department and of all public men generally. Dr. Henry Fitz-Gibbon responded.

Dr. Farquharson, M.P., in proposing "State Medicine," emphasised the necessity and importance of having one special department in the State duly represented in the Government, whose duty it should be to deal with all medical questions of every kind that may arise instead of the diffuse and unsatisfactory arrangement which obtains at the present time. Dr. Thorne Thorne replied.

"The Chairman," proposed by Dr. Walton Browne in a felicitous speech, was most cordially received, and a very enjoyable evening terminated by the President toasting "The Secretary," in doing which he remarked that the two reports which had been framed by him for the association during the past year for presentation to Lord Tweedmouth's Committee, the one dealing with several questions concerning the general health of postal employés and the other with the average sanitary condition of the post-offices of the country, would be memorable incidents in the history of their association.

The annual general meeting of the association, which has made extensive strides during the past year, was held in the hotel in the morning, when many matters were under discussion by a large number of the members from all parts of the kingdom. The following executive was elected for the ensuing year:—President: Dr. Henry Fitz-Gibbon, Dublin. Vice-Presidents: Dr. Watson, Manchester; Mr. Iliffe, Derby; and Mr. Halton, Barnsley. Hon. Secretary for Scotland: Dr. W. Dougan, Glasgow. Hon. Secretary for Ireland: Dr. Walton Browne, Belfast. Hon. General Secretary and Treasurer: Dr. Ritchie Giddings, Nottingham. Committee: Mr. McVeagh, Coventry; Mr. Thornton, Margate; Mr. Walker, Middlesbrough; Dr. Coates, London; Dr. Paramore, London; Dr. Taylor, Cardiff; and Mr. Lansdown, Bristol. Auditors: Dr. West Symes, Halifax; and Dr. Dougan, Glasgow.

DEATH CERTIFICATION.

THE following report was circulated amongst the members of the Liverpool Medical Institution and approved by them at the last meeting of the council of that institution.

LIVERPOOL MEDICAL INSTITUTION.

At a meeting held on April 18th, 1895, a sub-committee was appointed to consider the recommendations of the Select Committee of the House of Commons on Death Certification, and to draw up resolutions thereon, to be submitted to a future meeting of the Institution.

The sub-committee consisted of—

Dr. William Carter, Chairman.
Dr. James Barr, Dr. E. W. Hope, Mr. F. W. Lowndes, Dr. W. Macfie Campbell, Dr. W. Permewan, Dr. D. Smart.
Dr. Hugh R. Jones, Secretary.

The sub-committee met three times—on April 22nd and 29th and on May 7th.

Mr. Lowndes submitted a synopsis of the principal recommendations of the Select Committee of the House of Commons, 1894.

RECOMMENDATION 1.—That in no case should a death be registered without production of a certificate of the cause of death, signed by a registered medical practitioner or by a coroner after inquest.

Resolved.—That this recommendation be amended so as to read:

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That in no case should a death be registered without production of a certificate of the cause of death signed by a registered medical practitioner or by a coroner after inquest or after informal inquiry with medical assistance.

A fee of one guinea was suggested for a medical report and an additional fee of one guinea for a post-mortem examination.

It was thought desirable that the medical practitioner first called should be selected, whenever possible, to make the report.

RECOMMENDATION 2.—That in each sanitary district a registered medical practitioner should be appointed as public medical certifier of the cause of death in cases in which a certificate from a medical practitioner in attendance is not forthcoming.

Resolved.—That this recommendation be rejected.

RECOMMENDATION 3.—That a medical practitioner in attendance should be required, before giving a certificate of death, to inspect personally the body; but if on the ground of distance or for other sufficient reason he be unable to make this inspection himself he should obtain and attach to the certificate of the cause of death a certificate signed by two persons, neighbours of the deceased, verifying the fact of death.

Resolved.—That this recommendation be approved.

RECOMMENDATION 4.—That medical practitioners should be required to send certificates of death to the registrar instead of handing them to the representatives of the deceased.

Resolved.—That this recommendation be rejected.

RECOMMENDATION 5.—That a form of certificate of death should be prescribed, and that, in giving a certificate, medical practitioners should be required to use such form.

Resolved.—That this recommendation be approved.

The following form of death certificate was approved:—

BIRTHS AND DEATHS REGISTRATION ACT, 1874.

MEDICAL CERTIFICATE OF THE CAUSE OF DEATH.

To be given by the Medical attendant to the person whose duty it is to give it with information of the death to the Registrar of the sub-district in which the death took place, and to NO OTHER PERSON.

No. of f. ..... corresponding entry in Register Book of deaths to be inserted here by Registrar.

I HEREBY CERTIFY that I attended ..... at ..... during h..... last illness; that such person's age was stated to be .....; that during that illness I first saw h..... on the ..... day of ....., 18.....; that I last saw h..... alive on the ..... day of ....., 18.....; that ...he died* ..... on the ..... day of ....., 18.....; that I saw and identified the body on the ..... day of ....., 18.....; and that, to the best of my knowledge and belief, the cause of h.....death was as hereunder written—

Cause of death.	Duration of disease in years, months, days, or hours.†
Primary	.....
Secondary	.....

† The duration of each form of disease or symptom is reckoned from its commencement until death occurs.

Witness my hand, this.....day of.....18.....

Signature.....

Registered qualification.....

Residence.....

N.B.—This certificate is intended solely for the use of the Registrar, to whom it should be delivered by the person giving information to him of the particulars required by law to be registered concerning the death. Penalty of £2 for neglect of informant to deliver this certificate to the Registrar.

*** The Registrar-General cautions all persons against accepting or using this certificate for any purpose whatever except that of delivering it to the Registrar.

The medical practitioner in attendance is required, before giving a certificate of death, to inspect, personally, the body; but if on the ground of distance or for other sufficient reason he is unable to make this inspection himself he must obtain and attach to the certificate of the cause of death a certificate signed by two persons, neighbours of the deceased, verifying the fact of death.

* If from any circumstances the death be not verified by the certifying medical practitioner a certificate of verification must be attached. The words, "As I am informed," must be inserted after the words "that he died," and the words "that I saw and identified the body on the ..... day of ....., 18....." must be erased.

COPY OF COUNTERFOIL.

COUNTERFOIL FOR THE USE OF THE MEDICAL ATTENDANT WHO SHOULD IN ALL CASES FILL IT UP.

Name of deceased .....

Age.....

Last seen living.....

Died on.....

Body identified .....

At .....

CAUSE OF DEATH.

(*a*) .....

(*b*) .....

Signed .....

Date .....

THE HOLIDAY SEASON.

THE advent of summer weather brings with it the momentous questions, "Where shall we go?" and "How shall we get there?" For the invalid the first question will, no doubt, be settled by the medical attendant, who is also frequently consulted with regard to the second question. We therefore propose to call attention to the facilities which are afforded by the various railway and steamship companies for reaching popular health resorts and watering places, and to give such information as will enable our readers either to select a suitable place for recouping their own flagging energies after the year's daily round of toil or to give useful advice on the subject to their patients. The rate at which we live in the present day makes it a duty which every one owes to himself to take a rest once a year and, if need be, some sacrifice should be made to procure it. By rest, however, we do not mean inaction, for it must be remembered that physiological rest does not necessarily consist in inactivity. What is required is a change from the work that has occupied the mind or the body during the year. The old lines—

> "Arise betimes, to pump repair,
> First take the water, then the air,
> Most moderate be in meat and drink,
> And rarely, very rarely, think,"—

contain wisdom which might with advantage be applied, not only by visitors to "baths," but by all.

Those who are quite undecided as to the direction in which to travel will do well to seek the advice of the indispensable Cook or Gaze, but having once decided the question of "where" the "how" is a matter that can be readily settled.

THE GREAT EASTERN RAILWAY.—The activity of this company in opening up to holiday seekers such places as the Broads in England, the Ardennes in Belgium, and various parts of Holland and Germany deserves a word of praise, but it is to be regretted that it does not minister to the comfort of its third-class passengers with the same ardour as the Midland and Great Northern Railways. It can hardly be said that the Broads and the Ardennes afford "fresh woods and pastures new," especially since this enterprising company has arranged its annual tours and excursions, but in both places the traveller will experience that rest and novelty which he needs if he will only plan his holiday judiciously. Holland, Germany, Denmark, and Scandinavia fare countries to which the Great Eastern Railway offer special acilities for travellers. Scheveningen, the Dutch Brighton, is most easily reached. At 8 P.M. it is possible to dine in London, and at 8 A.M. the next morning to be breakfasting by the Dutch sea. Combined with mornings in the bright little court capital, The Hague, with trips to Delft, to Haarlem, to Leyden, to Amsterdam, and the other historic, antiquarian, and artistic centres of Holland, the holiday may be made a pleasant and profitable one. The return fares from London to Scheveningen (tickets available for sixty days) are: first class, 50*s.* 4*d.*; second class, 34*s.* 6*d.*; while fares from the north and midlands are equally moderate. The journey home from Scheveningen is made under the same comfortable conditions as the outward trip. The traveller catches the train leaving The Hague at 10.2 in the evening and arrives in London at 8 o'clock next morning, at the north and midland towns in the afternoon. The excursions to Germany *viâ* the Hook of Holland are equally cheap and convenient, and special fares are announced till October to the Berlin Industrial and Budapest Millennial Exhibitions. The possible combinations of tours in Denmark, Norway, and Sweden are only limited by considerations of purse and leisure. For those seeking rest and quiet and fond of yachting and fishing the Land of the Broads is fast becoming a favourite holiday ground. To describe all the tours which may be taken by the aid of the Great Eastern Railway Company in this district would occupy too much space, but two excellent little pamphlets, "Summer Holidays in the Land of the Broads," containing descriptive notes with particulars of facilities for fishing, yachting, holiday parties, &c., and "Holiday Notes in East Anglia," to be obtained at any of the company's offices, will supply the holiday maker with all the information he requires. A pamphlet giving a list of furnished lodgings to be let in farmhouses and country

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villages in Essex, Hertfordshire, Cambridge, Suffolk, and Norfolk will also be found useful. "Circular Tours by Rail and Saloon Steamboats" will be issued in July next. All these pamphlets are issued gratis. Various tours by this company are advertised from time to time in our columns and further information can be obtained on application to the traffic manager.

THE MIDLAND RAILWAY.—The ramifications of the lines of this company, extending as they do to so many parts of England, make it difficult to locate its boundaries. In a north-westerly direction there are termini at Liverpool and Morecambe, in the north the line extends to Carlisle, and in the north-east to York. The southern extremities of the line are London, and the south of England on the one side, and Bristol, Bournemouth, and the West of England on the other. Swansea, in Wales, and Cambridge, Lynn, Cromer, Yarmouth, and other eastern counties towns are also in touch with this company's iron ways. A glance at the company's map will show that the line runs through the entire length of England from north to south, with connexions from east to west, enabling it to bring within the scope of its carrying arrangements most of the important business centres and health and holiday resorts of Great Britain. For comfort and ease of travelling this company compares very favourably with the other lines, and the introduction of third-class carriages on all trains and the abolition of the second class is noteworthy. The carriages are warmed by steam and on some of the express trains third-class dining carriages are provided. Such luxuries, too, as pillows for night passengers and luncheon baskets are readily obtained. Stop over (or break of journey) privileges are allowed at many points of interest on the journeys, and through tickets are issued to places on other companies' lines. The programmes of tourist ticket arrangements give details of various cheap excursions and tours to and in the principal holiday resorts in the British Isles, including Morecambe and the Lakes, Isle of Man, Ireland, Bournemouth, Isle of Wight, Channel Islands, the Peak of Derbyshire, Norfolk Broads, North Wales, the watering places of Yorkshire and Lancashire, the west and south of England, Scotland, &c. The new edition of the illustrated pocket guide to the Midland Railway, price 6*d*., gives a succinct account of the scenery and places of interest through which this line passes, embellished with charming vignettes, while the Midland Railway holiday tours in the British Isles (price 3*d*.), also illustrated, contains descriptive notes, tourist fares from principal towns, and list of furnished lodgings in farmhouses, country villages, &c., adjacent to the line. The arrangement of this latter publication is excellent, and the guide should be in the hands of everyone who contemplates a journey on the Midland Railway.

THE GREAT NORTHERN RAILWAY.—This is another company which studies greatly the convenience of its passengers, and both first- and third-class dining corridor cars are attached to many of the trains. The Great Northern Railway communicates with Nottingham, Sheffield, Manchester, Liverpool, Leeds, Bradford, Keighley, Halifax, York, Newcastle, Edinburgh, Glasgow, and all parts of Scotland. In connexion with the NORTH-EASTERN RAILWAY this company issue a tourist programme giving details of the East Coast Route to Scotland, with descriptive notes and vignettes of the principal objects of interest by which the line passes. Tourist tickets which offer some advantages will be issued until October 31st and will be available by all trains, except that tourist tickets issued to Scarborough, Whitby, Robin Hood's Bay, Filey, and Bridlington will not be available by the 10 A.M. Scotch express from King's-cross during the time the 10.25 A.M. express is being run. Tourist tickets between Great Northern stations and stations in Scotland, and between Great Northern and other stations in England will, with a few specified exceptions, be available for the return journey without extra payment until Dec. 31st, 1896. Scarborough, Whitby, Filey, Bridlington, Saltburn, Harrogate, Ilkley, Ben Rhydding, Barnard Castle, Whitley, Cullercoats, Hexham, Alnmouth, Alnwick, Berwick, &c., are readily reached by this line, as are also Norwich, Sheringham, Cromer, North Walsham, and Yarmouth. Intending visitors to Scotland will also find some cheap and comprehensive tours by consulting the "Programme." "The Farmhouse, Country, and Seaside Lodgings' and Hotels' Guide" (illustrated), issued by this company, will prove useful. Information as to trains, fares, &c., may be obtained at the booking and other offices of the Great Northern and North-Eastern Railway Companies.

THE LONDON, BRIGHTON, AND SOUTH COAST RAILWAY communicates with such places as Portsmouth, Southsea, Sandown, Shanklin, Ventnor, Worthing, Bognor, Hastings, and Newhaven, and *viâ* Dieppe to Paris, Rouen, Havre, Honfleur, Trouville, Bayeux, Caen, and Cherbourg. The South of France, Italy, and Switzerland are also readily reached by this railway. The tourist and excursion programme gives particulars of a number of excursions and tours on the South Coast, Isle of Wight, Scotland, Ireland, and the Isle of Man, the Lake district, Wales, &c. The Italian tours give a wide range for choice.

THE LONDON AND SOUTH-WESTERN RAILWAY.—The programme of cheap tickets and general excursion arrangements will be found useful to travellers to Guernsey, Jersey, the West of England, and Isle of Wight. The various tours are too numerous to mention individually, but the programme, which contains a list of farmhouses and other apartments to be let in North Cornwall during the summer months, can be obtained on application to the General Manager, Waterloo Station, or at any of the Company's offices.

THE LONDON, CHATHAM, AND DOVER RAILWAY.—The summer service of this company includes cheap week-end and day excursions to the principal seaside and country towns on the line.

In connexion with the "Belle" Steamers, Limited, cheap through tickets are issued to Southend, Clacton-on-Sea, Felixstowe, Harwich, and Ipswich.

(To be continued.)

THE FESTIVAL DINNER IN AID OF THE FUNDS OF GUY'S HOSPITAL: THE PRINCE OF WALES PRESIDES.

THE Prince of WALES presided on Wednesday evening last over a great festival at the Imperial Institute in aid of Guy's Hospital, whose funds, in consequence of the depreciation in the value of land, have sadly fallen away. About 500 guests sat down at the dinner. Among others present, in addition to the staff of the hospital, were: Lord Alington, Sir F. Abel, Dr. Adler, Dr. Clifford Allbutt, Mr. A. J. Balfour, the American Ambassador, Mr. Bonsor, M.P., Mr. T. Bryant, Mr. Henry Burdett, Mr. W. H. Burns, Mr. Burdett-Coutts, M.P., the Earl of Denbigh, Lord Egerton, Lord Elcho, Sir H. Farquhar, M.P., Mr. W. L. T. Foy, the Duke of Fife, Alderman Faudel-Phillips, Mr. H. S. Foster, M.P., Dr. A. D. Fripp, the Rev. the Hon. E. Carr-Glyn, the Earl of Gosford, Sir E. Green, Sir W. C. Gull, M.P., Lord George Hamilton, M.P., Lord Herschell, Mr. H. G. Howse, Mr. S. Hoare, M.P., Sir J. H. Kennaway, M.P., Admiral Sir Henry Keppel, Mr. Letchworth (Grand Secretary of English Freemasons), Mr. E. H. Lushington (treasurer), the Duke of Marlborough, the Rev. H. L. Paget, Lord Penrhyn, Dr. P. H. Pye-Smith, Lord Roberts, the Bishop of Rochester, Lord Rothschild, Mr. J. B. Robinson, Mr. Reuben Sassoon, Sir J. Sebag-Montefiore, Dr. L. E. Shaw (dean), Mr. J. Stern, Mr. Sykes, Mr. Abel Smith, M.P., Sir C. Tennant, Lord Tweedmouth, Cardinal Vaughan, Sir Somers Vine, Dr. Wilks, Lord Wandsworth, Lord Wantage, the Earl of Warwick, the Bishop of Winchester, the Rev. J. E. C. Welldon, and Sir Sydney Webb.

The Prince of WALES proposed the toast of "The Queen," which was drunk with enthusiasm.

Mr. A. J. BALFOUR proposed "The Prince and Princess of Wales and the rest of the Royal Family," which was heartily drunk, and to which the Chairman briefly responded.

The Prince of WALES proposed "The Army, Navy, and Reserve Forces," to which brief response was made by Admiral of the Fleet Sir H. KEPPEL and Field-Marshal Lord ROBERTS, V.C., both of whom testified to the excellent work of the medical men in the services.

The Prince of WALES then proposed the toast of the evening, "Guy's Hospital." He said: We have met here this evening to take steps that the benevolent work of Guy's Hospital may be continued uncontractedly, the long exemption from the necessity for an appeal having made it difficult for the authorities to remove the impression that Guy's is permanently and sufficiently endowed. The founder, Thomas Guy, a bookseller and publisher of London, invested his money for the hospital so that for 150 years the income

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derived placed the governors in a position to inform intending donors that there were other charities in greater need than Guy's. It was in 1724 that Guy founded the hospital which bears his name. One hundred years later—in 1829—a second merchant and citizen of London, William Hunt, left £180,000 to enable the original foundation to support the increased demands upon it. Guy's building is now used entirely as surgical wards, and the block known as "Hunt's House" is wholly devoted to medical cases. During the next fifty years—1830 to 1880—the hospital was able to maintain its wards, comprising 600 beds, fully equipped and always crowded, but adequately endowed. At last, however—fifteen years ago—there occurred the great fall in the value of land, in which, according to the will of the founder, the entire capital bequeathed had been compulsorily invested. Then, for the first time, the endowment proved insufficient. The governors, hoping the depression was only temporary, closed 100 beds. This decline in the value of land not only continued, but increased, and the governors, brought face to face with the necessity of still further curtailing the scope of the operations of the hospital, or of enlisting public support, appealed for £100,000 to carry them over what they still hoped was only a temporary difficulty. £114,000 was generously given, but has all been expended, for, notwithstanding that 100 beds have been closed, and that no hospital is more economically managed, £40,000 a year is required to maintain this great charity, whereas the endowment now only brings in £20,000 per annum. We must now, unfortunately, recognise the fact that the depression has proved to be not merely temporary, but permanent, and we have met here to-night to decide whether the board of governors, who are again in the same dilemma, can continue to carry on the work of this noble institution with its former thorough efficiency without curtailment of its previous extensive sphere of action. Owing to its position, on the outskirts of a densely-populated and poor district, it has been able to minister to the medical requirements of no fewer than 160,000 needy patients a year. This immense number includes 3,300 maternity cases, which were attended at their own homes, and often provided with the necessities of life, as you will see by the statistics which are in the hands of you all. Every day cases have been turned from the doors and sent on a tedious, sometimes a painful, journey through the London streets to some less crowded hospital. If any of those whom I meet here to-night would go to Guy's—and I speak from personal experience—and see for themselves the overcrowded state of the wards and the disappointed faces of those for whom beds cannot be found, they would, I am sure, agree with me that it would be deplorable were the authorities compelled to close more beds. If we are unable to act on the recommendation of the House of Lords' Commission, and to establish a third great general hospital in South London for the poor, we may, at all events, strive to strengthen the endowment of our forefathers, so that the funds which result from them may not be impaired since we succeeded to the inheritance. To achieve this in the case of Guy's a large sum, it is true, is required; but, when I think of the generosity with which the people of England so often come forward in aid of any really good cause, I cannot but hope that the amount necessary, or at least the greater part of it, will be forthcoming. The sum necessary for this purpose is £15,000 per annum, or half a million of money capitalised. For reasons which I have already indicated, our accounts do not show that we have derived any benefit from legacies; but we hope in the future many benevolent testators will not be forgetful of the merits and needs of Guy's Hospital. I trust, in addition, that through donations to the special endowment fund and through increased annual subscriptions a sufficiently large sum will be forthcoming to render practicable shortly the extensions to the building and further development of the administration. Many who cannot afford a large donation at present in a single sum would perhaps be willing to supplement what they are now able to give by the promise of a larger amount distributed over three or five years; I would ask those who are kindly inclined to inscribe their names as donors to be good enough to intimate to the secretary whether they desire to pay their entire contributions at once or to spread them over a period of say three or four years. I must remind you, in conclusion, that the whole of the money given in response to this appeal will be invested by a strong committee of well-known financiers, and that only the interest derived from the investments will be expended. The money already subscribed, and which is large enough to make this evening for ever memorable in the annals of charity dinners, amounts to £151,000, which, capitalised, would bring in an increased annual income of £5000. The donations are upwards of £100,000, Mr. Gladstone's fund £16,000, and Mr. Incleden has left £35,000.

Mr. E. H. LUSHINGTON, in the absence of Lord Aldenham, replied to the toast.

The Prince of WALES then proposed "Guy's Hospital Medical School" in a few well-chosen words, in which he alluded to its size, efficiency, and complete scientific and recreative equipment and announced that he had accepted the office of President in succession to Lord Aldenham, who had retired through illness.

Dr. WILKS briefly replied, and the company then adjourned to the galleries, where a reception committee, consisting of the Duchess of Marlborough, the Duchess of Portland, the Duchess of Sutherland, the Marchioness of Londonderry, the Countess Cowper, the Countess of Crawford and Balcarres, the Countess Grey, the Countess of Warwick, Lady Aldenham, Lady Randolph Churchill, Lady A. Gordon-Lennox, Lady Esther Smith, Lady Tweedmouth, Mrs. Cosmo Bonsor, Mrs. A. L. Cohen, Mrs. W. Grenfell, Mrs. R. M. Harvey, Mrs. Howse, and Mrs. Pye-Smith, received many friends and supporters of the hospital. The heavy downpour of rain marred the proceedings of the reception and prevented the visitors, who were present in great numbers, from resorting to the gardens.

The total sum given in aid of the Hospital, in response to the Prince of Wales's appeal, including the sums stated in his speech, amounts to £167,528. Included among individual donations are those of the Queen, £105; the Prince of Wales, £105; Mr. A. Beit, £5000; Mr. H. Cosmo Bonsor, £5000; Mr. J. B. Robinson, £5000; Messrs. J. S. Morgan and Co., £5000; Messrs. Barclay, Perkins and Co., £2000; the Earl of Leven and Melville, £1000; Sir Frederick Wigan, £1000; Mr. Fred. Wills, £1000; the Mercers' Company, £1050; the Bank of England, £1000; Messrs. Bass and Co., £1000; Mr. Everard Hambro, £1000; Lord Rothschild, £1000; Butler's Wharf, £1000; Mr. C. Gassiot £1000; Messrs. Barnato Bros., £1000; Mr. W. W. Astor, £1000; Mr. S. Newman, £1000; the Rev. C. H. Wellbeloved, per Mr. H. M. Thornley £1000; White's Club, £1000.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6678 births and 3700 deaths were registered during the week ending June 6th. The annual rate of mortality in these towns, which had declined in the four preceding weeks from 18·5 to 17·6 per 1000, rose again last week to 17·8. In London the rate was 17·3 per 1000, while it averaged 18·1 in the thirty-two provincial towns. The lowest rates in these towns were 11·5 in Croydon, 12·1 in Plymouth, 12·3 in Derby, and 12·7 in Burnley; the highest rates were 21·4 in Oldham, 21·5 in Liverpool, 22·8 in Salford and in Gateshead, 22·3 in Manchester, and 23·8 in Bolton. The 3700 deaths included 559 which were referred to the principal zymotic diseases, against 591 and 540 in the two preceding weeks; of these, 192 resulted from measles, 172 from whooping-cough, 73 from diphtheria, 53 from diarrhœa, 35 from scarlet fever, and 34 from "fever" (principally enteric). The lowest death-rates from these diseases were recorded in Norwich, Derby, Preston, and Newcastle-upon-Tyne; and the highest rates in Wolverhampton, Salford, Birmingham, Manchester, and Gateshead. The greatest mortality from measles occurred in London, Portsmouth, Manchester, Oldham, and Gateshead; from whooping-cough in Cardiff, Wolverhampton, Birmingham, Salford, and Huddersfield; and from "fever" in Gateshead. The mortality from scarlet fever showed no marked excess in any of the large towns. The 73 deaths from diphtheria included 52 in London, 6 in Birmingham, and 3 in Liverpool. No fatal case of small-pox was registered in any of the thirty-three large towns. There were 25 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 6th inst., against 20, 22, and 19 at the end of

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the three preceding weeks; 8 new cases were admitted during the week, against 6, 5, and 3 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2717, against numbers increasing from 2523 to 2679 on the five preceding Saturdays; 318 new cases were admitted during the week, against 293, 305, and 297 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 217 and 230 in the two preceding weeks, declined again to 213 last week, and were 39 below the corrected average. The causes of 44, or 1·2 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Nottingham, Bradford, Newcastle-upon-Tyne, and in fourteen other smaller towns; the largest proportions of uncertified deaths were registered in Bristol, Birmingham, Preston, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·2 per 1000 in each of the two preceding weeks, was again 19·2 during the week ending June 7th, and was 1·4 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 14·7 in Leith and 14·9 in Edinburgh to 21·5 in Glasgow and 22·2 in Perth. The 560 deaths in these towns included 26 which were referred to whooping-cough, 25 to measles, 14 to diarrhœa, 8 to scarlet fever, 4 to diphtheria, and 4 to "fever." In all, 81 deaths resulted from these principal zymotic diseases, against 82 and 83 in the two preceding weeks. These 81 deaths were equal to an annual rate of 2·8 per 1000, which was slightly above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had declined from 38 to 27 in the three preceding weeks, were 26 last week, of which 19 occurred in Glasgow and 4 in Paisley. The deaths referred to measles, which had been 21 and 20 in the two preceding weeks, rose again to 25 last week, and included 23 in Glasgow. The 8 fatal cases of scarlet fever showed a further increase upon the numbers recorded in recent weeks, and included 2 in Glasgow and 2 in Aberdeen. The deaths referred to different forms of "fever," which had been 6 and 10 in the two preceeding weeks, declined again to 4 last week, of which 2 occurred in Glasgow. The fatal cases of diphtheria, which had been 3 in each of the two preceding weeks, were 4 last week, and included 2 in Glasgow. The deaths from diseases of the respiratory organs in these towns, which had been 109 and 97 in the two preceding weeks, further fell to 93 last week, and were 19 below the number in the corresponding period of last year. The causes of 36, or more than 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased in the four preceding weeks from 21·9 to 23·9 per 1000, declined again to 19·8 during the week ending June 6th. During the past ten weeks of the current quarter the death-rate in the city has averaged 23·1 per 1000, the rate during the same period being 18·3 in London and 17·2 in Edinburgh. The 133 deaths registered in Dublin during the week under notice showed a decline of 27 from the number in the preceding week, and included 8 which were referred to the principal zymotic diseases, against 9 in each of the two preceding weeks; of these, 3 resulted from "fever," 2 from scarlet fever, 2 from diarrhœa, 1 from whooping-cough, but not one either from small-pox, measles, or diphtheria. These 8 deaths were equal to an annual rate of 1·2 per 1000, the zymotic death-rate during the same period being 3·4 in London and 0·9 in Edinburgh. The deaths referred to different forms of "fever," which had been 3 and 5 in the two preceding weeks, declined again to 3 last week. The 2 fatal cases of scarlet fever exceeded the number in any recent week, while the mortality from diarrhœa showed a decline. The 133 deaths in Dublin last week included 22 of infants under one year of age, and 34 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from the numbers recorded in the preceding week. Five inquest cases and 7 deaths from violence were registered; and 48, or more than a third, of the deaths occurred in public institutions. The causes of 3, or more than 2 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

Surgeon-Colonel Alexander F. Churchill, M.B., to be Surgeon-Major-General, vice J. Jameson, M.D., appointed Director-General, Army Medical Department.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Captain B. G. Seton (Bengal), Officiating Medical Officer of the 18th Bengal Lancers, is appointed to officiate as Medical Officer of the 1st Regiment Central India Horse until further orders. The services of Surgeon-Major A. V. Anderson (Bombay) are placed permanently at the disposal of the Government of Bombay. The services of Surgeon-Captain J. J. Bourke (Bengal) and Surgeon-Lieutenant E. C. Macleod (Bengal) are placed temporarily at the disposal of the Chief Commissioner of Assam. The services of Surgeon-Captain Hudson, Surgeon-Captain J. Garvie, and Surgeon-Captain Lumsden are placed temporarily at the disposal of the Government of the North-West Provinces and Oudh. Surgeon-Major R. R. Whitwell is appointed to be Civil Surgeon of Champaran. Surgeon-Captain C. R. M. Green, who is placed on special duty with Professor Haffkine in connexion with anti-choleraic inoculation, is also appointed to be Civil Surgeon of Bankura. Surgeon-Major J. H. T. Walsh, First Resident Surgeon of the Presidency General Hospital, is appointed to be Civil Surgeon of Rangpur and Gya. Surgeon-Captain H. W. Pilgrim, Second Resident Surgeon of the Presidency General Hospital, is appointed to be First Resident Surgeon of that institution. Surgeon-Captain D. M. Moir, Deputy Sanitary Commissioner, Metropolitan and Eastern Bengal Circle, is appointed to be Second Resident Surgeon of the Presidency General Hospital.

NAVAL MEDICAL SERVICE.

Staff-Surgeon John Lewis Bagnall-Oakeley has been placed on the Retired List.

The following appointments are announced:—Staff-Surgeon S. T. O'Grady to the *Medusa*. Surgeons: George A. S. Bell to the *Vulcan*; William R. M. Young to the *Vernon*; and Thomas C. Meikle, M.B., to the *Nelson*.

VOLUNTEER CORPS.

Artillery: 2nd Glamorganshire: Robert John Richard Cobden Simons, Gent., to be Surgeon-Lieutenant. *Rifle:* 4th Volunteer Battalion the Devonshire Regiment: Surgeon-Lieutenant-Colonel J. Harper resigns his commission, also is permitted to retain his rank and to continue to wear the uniform of the Battalion on his retirement. 1st (Hertfordshire) Volunteer Battalion the Bedfordshire Regiment: Surgeon-Lieutenant A. J. Boyd, M.D., to be Surgeon-Captain. 3rd Volunteer Battalion the Welsh Regiment: Surgeon-Lieutenant E. S. Warburton resigns his commission. 1st Bucks: James Shaw, M.D., to be Surgeon-Lieutenant. 2nd Volunteer Battalion the Duke of Edinburgh's (Wiltshire Regiment): Surgeon-Lieutenant-Colonel E. N. Carles resigns his commission, also is permitted to retain his rank and to continue to wear the uniform of the Battalion on his retirement.

THE LONDON COMPANIES OF THE VOLUNTEER MEDICAL STAFF CORPS.

The new headquarters of the London companies of the Volunteer Medical Staff Corps were opened on Wednesday, June 10th, and the prizes were distributed by H.R.H. the Princess Louise. Among those present were Surgeon-Major-General Jameson, Director-General of the Army Medical Department; Surgeon-Major-General Taylor, Surgeon-Major-General Inkson, Surgeon-Colonel T. O'Farrell, the principal medical officer of the district; Surgeon-Major Bedford, and Deputy-Surgeon-General Ryeson of the Canadian army. In opening the proceedings Surgeon-Lieutenant-Colonel Norton stated that the corps numbered 484 men, some twenty under the authorised strength, and urged the necessity of keeping the corps up to the full strength in order that the capitation grant might not be curtailed. He also dwelt upon the importance of training volunteer corps in camps with the Regular Army. Referring to the dearth of officers from

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which this corps suffered in common with other Volunteer corps he called attention to the fact that the Government had made arrangements by which every officer entering from this time would be allowed the sum of £20. This was important because many officers did not join owing to the inconvenience perhaps of expending some £70 for uniform, &c. After the prizes had been distributed the Marquis of Lorne, acknowledging a vote of thanks enthusiastically accorded to her Royal Highness, said the Medical Staff Corps was a branch of the auxiliary forces in which Lord Wolseley, the Commander-in-Chief, took a very great interest. On behalf of the Princess he congratulated the corps on their numbers, zeal, and organisation, and remarked that they set an excellent example to the ladies, who, he suggested, might form organisations for nursing the wounded in cases of urgency.

THE MASIELLO SYSTEM OF FENCING.

The system of fencing lately introduced into the Army has been the subject of some criticism in THE LANCET,[1] and last week Colonel Fox gave a private demonstration of the *rationale* of the new infantry sword exercise before Sir William MacCormac and a number of other medical gentlemen interested in the matter. Of course there are two sides to the question—the practical and the theoretical—but judging from the swordsmanship seen at the Royal Military Tournament this year, both mounted and on foot, which has shown a very marked improvement over that displayed in any previous year, it would seem that there was some practical ground for the official adoption of the Masiello system last year.

THE FRENCH LOSSES IN MADAGASCAR.

According to an official return made by General Billot it appears that the total loss in Madagascar amounted to 5592, that of Europeans being 4189 and of non-Europeans 1403. The military forces lost 2767 in Madagascar, 350 at sea, and 220 in hospital at home, and 80 were missing. The officers who were killed or died amounted to 35.

THE MATABELE RISING.

There has been a good deal of sharp work with the Matabeles in the vicinity of Bulawayo. The wounded in the recent fighting are reported to be doing well.

Correspondence.

"Audi alteram partem."

HOSPITAL SUNDAY.

To the Editors of THE LANCET.

SIRS,—The twenty-fourth anniversary of "Hospital Sunday" in London falls on Sunday next, and as President and Treasurer of the Fund I invite your courteous assistance in giving publicity to the annual appeal which each successive Lord Mayor has felt it his duty to make since the movement was initiated at the Mansion House.

At no period in the history of the Fund were the claims upon it more urgent. Last year the voluntary hospitals and medical charities relieved over 1,463,000 patients at a cost of £718,264. The ordinary income of these institutions only amounted to £576,447, leaving a deficit of £141,817. The receipt of substantial legacies enabled some of the hospitals to balance the year's accounts, but the majority of the institutions remain in debt, anxiety, and difficulty. But the most serious point is that even these results were only attained through a compulsory abandonment, for want of funds, of a large portion of the work of which the hospitals of London are capable. This is seen from the fact that while the number of beds available for the sick and suffering poor is 9005, only 6351 were able to be used last year, leaving no fewer than 2654 empty, solely for lack of the resources necessary to maintain and restore to health the patients for whom they were intended.

This year the Hospital Sunday Fund has applications from 127 hospitals and 54 dispensaries to participate in the collections to be raised on Sunday, and it is estimated that at least £100,000 will be required to meet their pressing needs. The progress of the Fund has been continuous and gratifying. In 1873 the receipts were £27,700. Last year they reached a total of over £60,000, but of this £15,000 was the result of a special collection on the Stock Exchange and a few munificent offerings which this year will be missing. In all, £828,697 has been raised on Hospital Sunday in the past twenty-three years, and the expenses of collection have averaged only 2·6 per cent. The increase in the contributing congregations has been equally striking for these have risen from 1072 in 1873 to 1817 at the present time. A few congregations now omit to take part in the movement. These figures establish that while much has been done in the past, the need of providing for the requirements of the sick poor of London is increasingly and pressingly growing, and that the necessity for enhanced liberality on Hospital Sunday becomes correspondingly great. Any diminution of public sympathy in this movement can only result in a further reduction of hospital usefulness and an addition to the already large number of empty beds and disused wards.

To dwell in detail on the work done in the hospitals would be wearisome, but if the record of patients attended is insufficient to commend them to public support I would allude to those other aspects in which they may be regarded—as the great training schools for medical men and skilled nurses and their use in the discovery and the application of scientific methods for the prevention and treatment of prevalent disease inseparable from a huge city like London, where multitudes of people are forced to live in unhealthy, injurious, and insanitary surroundings.

"Hospital Sunday" has another beneficent feature. It is the only one day in all the year in which people sink their religious differences and combine in a solemn act of devotion and charity in behalf of their sick, suffering, and dying fellow creatures. To coöperate in so beneficent a work is, indeed, a privilege, and I venture to think that "Hospital Sunday" may, under the Divine blessing, not only have the direct result of largely benefiting the hospitals, but produce such feelings of unity and goodwill as cannot fail to have a wide influence in our religious, social, and charitable work.

I have the honour to be, Sirs, your obedient servant,

WALTER WILKIN, Lord Mayor.

P.S.—Contributions of those who may be prevented from sending their donations through a place of worship will be gratefully received by Mr. H. N. Custance, the Secretary of the Fund, at the Mansion-house.

Mansion-house, June 11th, 1896.

EXAMINATION REFORM.

To the Editors of THE LANCET.

SIRS,—Mr. Teale's admirable address and your excellent article in support of it encourage the hope that we may be in sight of some reasonable solution of the examination problem. Up to the present time vested interests have had it all their own way and common sense has been excluded from the discussion. Is it too late to hope that reason may prevail? I have no doubt that the vast majority of the profession or at least of those who have ever given any thought to the subject will agree that there ought to be a simple and uniform system of qualifying examinations in each division of the kingdom, held directly or indirectly under the control of the General Medical Council, which should give the right to registration in the first instance. After being once upon the Register the practitioner could subsequently obtain any special qualifications he desired and these could be added to his registered description. All this might be done by adapting the machinery already established by the Conjoint Boards.

I am, Sirs, yours truly,

Birmingham, June 10th, 1896. ROBERT SAUNDBY.

AUGMENTATION OF THE BLOOD-MASS IN CHRONIC HEART FAILURE.

To the Editors of THE LANCET.

SIRS.—In his masterly lectures on the Causation of Dropsy recently published in THE LANCET[1] Dr. Starling refers to

[1] THE LANCET, Nov. 30th, 1895, March 28th and April 11th, 1896.

[1] THE LANCET, May 9th, 16th, and 23rd, 1896.

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the tendency of the blood-mass to increase in cases of chronic heart failure. After pointing out that the primary effect of cardiac failure is to lower capillary pressure he insists on the clinical fact that there is often evidence of high capillary pressure in uncompensated heart disease. How are these facts to be reconciled? "The clue to this difficulty is," he believes, "to be found in the fact that all cases of uncompensated cardiac lesions are associated with hydræmic plethora. This association has been shown actually to exist by the observations of Stintzing and Gumprecht. I wish, however, to show you," continues Dr. Starling, "that such a condition of hydræmic plethora must be an inevitable physiological consequence of the failure of the heart pump. We have just seen that heart failure causes a fall of ..... capillary pressure. This fall, like that consequent on artificial anæmia, will disturb the relationship between the blood and the lymph; there will be an absorption of lymph from the tissue spaces—the blood will be increased in volume." I had myself already come to the conclusion that the blood-mass tends to be augmented in chronic heart failure, and as this is a point of considerable practical interest to the physician I may perhaps be permitted to quote from an unpublished manuscript (written some two years since) in which my reasons for this conclusion are set forth. "In many cases of passive congestion of the lungs and systemic veins, or of the latter alone, the volume of blood is, I believe, increased. It is evident that an accumulation of blood in these parts must, unless the blood-mass be augmented, lead to a depletion of the systemic arteries and a defective supply to the capillaries, causing a fall of capillary blood pressure. So far as these latter vessels are concerned, the effect of transferring for any length of time a portion of blood which should be in the arteries to the veins is much the same as removing that amount of blood from the body. In each case the essential result is a diminution in the quantity of blood passing through the capillaries, the diminution being actually greater in passive venous engorgement than from bleeding owing to the circulatory defect accompanying the former condition. Now, after bleeding the blood tends to regain its wonted quantity and quality, the organism appreciating the loss by reason, we may suppose, of the capillary dearth of blood, and one would expect the same kind of thing to happen when the individual bleeds into his systemic veins and pulmonary vessels. This conclusion is supported by clinical observation. While passive venous engorgement is often accompanied by emptiness of the systemic arteries, as shown by the smallness of the radial pulse, this is by no means always the case. Sometimes the radial artery is quite large and there is every evidence of arterial plethora, which would be impossible were there no increase in the total volume of blood. Again, in marked venous engorgement there would sometimes appear to be high capillary pressure, as shown by a florid complexion and a copious urinary flow, and it would be impossible to get this were the arteries defectively supplied with blood, as would happen if its mass were not augmented." It will be observed from this passage that I go even further than Dr. Starling, holding, as I do, that the increase in the blood referred to is not merely a watery increase, but that the solid constituents of the blood are at the same time augmented, though doubtless hydræmia is often observed.

The degree of augmentation of the blood mass consequent upon heart failure differs greatly in different cases. I have now under observation two patients presenting extremes in this respect. The one has great distension of the superficial vessels of the face; his radial artery is large and tense, and if he allows his hand to hang down by the side of the bed it rapidly becomes œdematous. In this case capillary pressure is high and the volume of blood must be considerably augmented. The other patient, who has an enormously dilated heart, is anæmic in appearance; his radial pulse is very small and scarcely perceptible, only one out of every three heart beats being felt at the wrist. It is clear that in this case capillary pressure is low, and it is probable that the blood-mass is not greatly augmented. I may observe that the tendency to dropsy in this patient is less than in the other, and this bears out Sir William Broadbent's suggestion that cardiac dropsy is more apt to occur when arterial tension is well maintained than when it is very low, a conclusion, by the way, in entire keeping with Dr. Starling's teachings as to the causation of cardiac dropsy.

I am, Sirs, yours truly,

Devonshire-street, W. HARRY CAMPBELL.

"THE PREVALENCE OF DIPHTHERIA IN CONNEXION WITH ELEMENTARY SCHOOLS."

To the Editors of THE LANCET.

SIRS,—I shall be obliged if you will grant me space to make a few comments upon the article which appeared in THE LANCET of May 23rd relative to a report which I have recently presented to the School Board for London in response to the following resolution: "That the medical officer be requested to report generally on the prevalence of diphtheria in London and elsewhere, and its alleged connexion with the elementary schools, and, further, to advise what, if any, steps the Board should take in the matter."

You are in error in implying that this resolution was arrived at consequent upon the publication of any memorandum by Mr. Shirley Murphy. The notice of the Board had on several occasions been drawn to the increasing prevalence of diphtheria in London and the opinion which had been expressed by various writers, amongst them Mr. Shirley Murphy, of the possible agency of the schools in spreading the disease; and for these reasons the above resolution was passed. In the course of my report I had occasion to refer to the observations of certain writers, and in this way to those of Mr. Shirley Murphy; but in your article the whole question is made apparently to revolve round the personality of that gentleman. I note that you think Part I. of the report, which deals with the geographical distribution of the disease since 1861, although "interesting," is not "relevant" to the question. But why? Elementary schools are found all over the country; diphtheria is not, scarlet fever is not, and measles is not; doubtless all these diseases are sometimes communicated in schools, as they are sometimes in churches, children's parties, &c. But if schools are the main cause or even a principal cause of the diffusion of infectious diseases, why, may I ask, do the schools select diphtheria in Sussex and measles in Staffordshire? Should not the words "not ..... relevant" contained in your article be read "not convenient"? for questions like these would appear very important to the enquiry, "How much do elementary schools have to do with the selection and diffusion of the different zymotics that prevail in different localities"? and they point to the fallacy of assuming that when the schools have been denounced the last word has been said. The comparison which I made between 1881–90 and 1871–80 is a perfectly right one. The question for me to consider was, When diphtheria increased in 1881–90 how did it affect different ages? Other factors beside school attendance would have been present in making a comparison with a more distant period, the character of the disease might have changed, certainly the conditions of housing had altered, &c.

I see that a somewhat adroit manipulation of figures is suggested by the writer of the article to enable him to escape from the difficulty in which he finds himself. I have constructed, however, the following table:—

—	Death-rate 3–10 (all ages 100).	Percentage attending Elementary Schools.	Percentage addition.	
1871–75...	324	31·6	5·9	39·2
1876–80...	343	44·0	2·7	15·7
1881–85...	352	50·9	1·1	9·2
1886–90...	356	55·6	1·1	5·0
1891–94...	360	58·4		
Totals	—	—	11·1	81·6

From this it will be seen that in 1891–94, as compared with 1871–75, there is an addition of 81·6 per cent. to the number of children attending school, and at the same time there was an addition of 11·1 to the diphtheria rate compared with that at all ages. I have admitted that children do sometimes contract diphtheria at schools, and apparently the effect of nearly doubling the school attendance is to add 11 per cent. to the risk of diphtheria calculated in this way. I regret that something like a sneer is sought to be conveyed in your criticism of my use of the Asylums Board nurses and teachers of the School Board. It would appear impossible to carry out an inquiry into school influence without the aid of the latter, and I

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venture to think the services of the nurses were also of a most valuable kind; at any rate, comfort is sought for Mr. Murphy in the result of the investigation, which shows only 7·6 per cent. of the cases to be possibly attributable to school influence, "a complete justification of the position which he has assumed" being found therein. One is tempted to ask, what about the origin of the remaining trifle of 92·4 per cent. of the cases? That the schools are not to blame for the great increase of diphtheria in London I am convinced, and the sooner we abandon this unstable view and set to work to find out the real cause the better for science and the better for the metropolis.

I am, Sirs, yours faithfully,

June 8th, 1896. WILLIAM R. SMITH, M.D. Aberd.

*** The space at our disposal does not permit us to do more than comment briefly on the matter referred to in Dr. Smith's letter. We must be pardoned if we have assumed that his report is intended as a reply to the reports of Mr. Shirley Murphy, seeing that of the pages in Dr. Smith's report which we can regard as relevant to the subject of the influence of schools on diphtheria prevalence at least three-quarters are devoted to a criticism of Mr. Murphy's two points—(1) the change in the age incidence of diphtheria mortality since 1870; and (2) the reduction in the number of notified cases of diphtheria at the time the London board schools are closed for the summer holidays. Dr. Smith's remarks concerning the comparisons of the decades 1871–80 and 1881–90 make it evident that he still fails to see that a change effected in the main in the decade 1871–80, and conspicuous when comparison is made between 1861–70 and 1871–80, need not (to meet the school hypothesis) be again conspicuous between 1871–80 and 1881–90. We pass by Dr. Smith's incomprehensible reference to a "somewhat adroit manipulation of figures" by the writer of our article "to enable him to escape from the difficulty in which he finds himself." The table in Dr. Smith's letter leads us to the conclusion that he is now prepared to abandon the position he assumed in his report when he wrote "that while the percentage of children attending elementary schools has largely increased—viz., from 24·8 per cent. in 1871 to 59·8 per cent. in 1893—the comparative death-rate at ages three to ten has remained throughout these years fairly constant." As Dr. Smith now evidently sees, it has done nothing of the sort; but, as we pointed out in our article, "with increase of school attendances there has been a gradual increase of comparative diphtheria mortality at the school ages." In studying these figures there is, however, another consideration which must be held in view, and that is that the diphtheria rate at 3—10 *compared with all ages* does not make evident the whole story of the increased incidence of the diphtheria rate on that age. The result is masked and greatly minimised by the fact that the deaths from 3—10 constitute a very large proportion of the deaths at all ages. The comparison, therefore, between the increase of 11·1 per cent. in the comparative death-rate and the increase of 81·6 per cent. in the proportion of the children attending school is absurd. How much of the increase in the death-rate at all ages is due to increased school attendance still remains unknown, and certainly we are not prepared to accept Dr. Smith's 7·6 per cent. of the cases at school age as including anything like all which are "possibly attributable to school influence." Dr. Smith concludes his letter by stating that "schools are not to blame for the great increase of diphtheria in London." We challenge him to refer us to the statement of any person who has said they are. There is a wide difference between the position which regards schools as contributing in important degree to this increase and that which regards schools as the sole factor in such increase. All the evidence at present available points to the inaccuracy of Dr. Smith's conclusion that school influence "plays but an unimportant part" in the increase.—ED. L.

THE CASE OF MR. LIONEL SMITH.

To the Editors of THE LANCET.

SIRS,—Will you allow me through your columns to thank those gentlemen who so kindly came forward to assist me out of the difficulties in which I was placed by the action of the West Australian Government? I have now reached my new home and I hope to make a fresh and successful start in life which, but for the generous aid accorded me, I should have been unable to accomplish.

I am, Sirs, yours faithfully,

H. LIONEL SMITH.

N'Qutu, Zululand, South Africa, May 11th, 1896.

ISOLATION AND THE PUBLIC HEALTH ACT.

To the Editors of THE LANCET.

SIRS,—The following matter, which I will put as briefly as possible, may be of interest and use, perhaps, to some of your readers. Since the introduction of "notification" by the Public Health Act (London), 1891, I have had some trouble with the sanitary authority of this parish of St. George, Hanover-square. During this period it has been the custom to remove as many as possible of the cases of scarlet fever and diphtheria to the Metropolitan Asylums Board Hospitals. Certain cases, however, which I have met with in my practice I have decided, for reasons stated below, to retain and attend at their own homes, and have expressed to the patients' relatives my approval that they should so remain, provided that my directions as to isolation and treatment were faithfully carried out, and therefore they could remain. Notwithstanding this, and knowing that I had expressed this opinion, the sanitary inspector has stepped in, has insisted on the patients being removed to the hospital, and they have been so removed, the grounds given for this action being that the patients were not properly isolated in his opinion.

The cases in question were mostly scarlet fever or diphtheria, occurring in families occupying generally three or four, sometimes only two, rooms; but in each case the patient was put into a separate room from the rest and confined there without any direct communication with other members of the family, the only person going backwards and forwards at all from the sick room being the nurse—usually, of course, the child's mother—whom I made take sufficient precautions against spreading the disease. I have attended many such cases in pre-notification years and have never known the disease to spread after such isolation has been established in any case. Now the question of what is proper isolation is, I maintain, essentially a medical question, and it is intolerable that an unqualified person, such as a sanitary inspector, should be allowed to override the opinion of a medical man on a medical question or to interfere with his patients, nor is it professionally correct for a medical officer of health to disregard the opinion of another medical man. I complained more than once to the medical officer of health (Dr. Corfield), but he supported the sanitary inspector and the offence was repeated. The Public Health Act is not very definite on the matter; but as it declares that any legally qualified medical practitioner may certify that an infectious patient has *not* proper accommodation one would suppose (and this seems to agree with common sense) that he would be equally able and entitled to certify the obverse—viz., that an infectious patient was properly accommodated and isolated. I therefore wrote to the Local Government Board last February, stating the case and giving particulars, and asked for an authoritative opinion. The Local Government Board corresponded with the sanitary authority of St. George's, Hanover-square, and replied to me on the 2nd inst., enclosing a copy of the Board's final reply to the Vestry, as follows:—

Local Government Board, Whitehall, S.W., March 28th, 1896.
To the Clerk of the Vestry, St. George's, Hanover-square.

SIR,—I am directed by the Local Government Board to acknowledge the receipt of your letter of the 18th inst. enclosing a copy of a report which the Vestry of the Parish of St. George, Hanover-square, have received from their medical officer of health respecting the complaint of Dr. Benham, and in reply I am to state that whilst the Board concur with the view expressed by the medical officer of health as to the desirability of securing isolation in hospital of such cases of the infectious fevers as are referred to in his report, they are of opinion that where a medical practitioner is known to be in attendance on any such case, removal to hospital by the officers of the sanitary authority

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should not be effected without some communication either at the time or immediately after the removal, with the medical practitioner in question.

I am, Sir, your obedient servant,
A. D. ADRIAN, Assistant Secretary.

I hope that there will now be no further friction over this subject. The principal reasons I have had for retaining such patients at home are these:—1. The parents of the child often wish it. 2. It is part of the duty of a medical man to attend such cases. 3. It is very unjust, although it may be legal, for the ratepayers to bear the entire cost of maintenance and treatment, even though the relatives could afford to pay. 4. Patients are longer in recovering if treated at the hospitals—at any rate, they are always detained there, I believe, for ten weeks at least, whereas they can be got well almost always in about six weeks if treated at home. 5. I believe, though it would be difficult to demonstrate it, that cases of scarlet fever have a better chance of recovery and avoiding complications—e.g., diphtheritic sore-throat at a late stage—if treated at home. 6. It is a very easy matter to isolate cases of scarlet fever and diphtheria. By strictly observing a few simple precautions there is scarcely any risk, according to my experience, of the infection spreading. Surely as a matter of fact most cases of scarlet fever arise from infection by slight and unnoticed cases and most of the rest from imperfect disinfection of clothes, furniture, &c.

I think that it has yet to be proved that the adoption of notification and the removal of every detected case to a fever hospital have any material effect in lessening the prevalence and spread of scarlet fever in London, and what chance is there of stamping the disease out? The question is one of interest and importance, especially considering the enormous cost of the Metropolitan Asylums Board hospitals and the extravagant rise of the rates which the over-burdened ratepayers have to pay. And yet some enthusiasts are beginning to talk of removing cases of measles to fever hospitals. What next?

I am, Sirs, yours faithfully,
F. LUCAS BENHAM, M.D. Lond.

Elizabeth-street, Eaton-square, S.W., June 8th, 1896.

"THE REGISTRATION OF MIDWIVES."

To the Editors of THE LANCET.

SIRS,—I willingly accept Mr. Humphreys' corrections, although I would have imagined that the term "Midwives Institute and its Supporters" as employed by me was sufficiently comprehensive to have included the Midwives Bill Committee. The Local Government Board will perhaps be able to find time for drawing up a code of instructions for the guidance of midwives, as the sanitary portion of these should be an easy day's work for a specialist in that department of knowledge, and the post-office provides a very simple and expeditious means of communication with the local medical officers of health. I am pleased to learn that the Privy Council imported itself into the administration of the Midwives Registration Bill and so provided a good example of unconscious humour, although I would regret to be placed under the necessity of believing Mr. Humphreys capable of anything of that kind. "The rights of existing midwives" do, however, seem to me a rather uncertain quantity, and I am afraid that the legal formulation of these would more than exhaust the resources of even a Philadelphia lawyer, had he the courage to make the attempt. If progress is the development of order it is perhaps desirable that the profession should try to create a little order in the matter now under consideration.

I am, Sirs, yours faithfully,
Salford, June 6th, 1896. WILLIAM FRASER.

"THE CHILDREN OF THE STATE."

To the Editors of THE LANCET.

SIRS,—The report of the Departmental Committee on Poor-law schools having received notice in THE LANCET, allow me to draw attention to certain statements and recommendations in that report which bear my name in the margin, but which are not in accord with my evidence thus referred to and which I cannot approve. In 1890-91 I examined individually 9831 children in Poor-law district and separate schools for a joint committee of the Charity Organisation Society and the British Medical Association, who presented a report embodying those observations to the President of the Local Government Board at his request in June, 1892. At the request of the Departmental Committee I gave evidence from published records as to the children I had seen. This showed that 15·0 per cent. of the boys and 12·2 per cent. of the girls presented some degree of congenital developmental defect predisposing them to low health with mental dulness. In the departmental report conditions found among the children are mainly ascribed to their environment in aggregation, sanitation, and education. Evidence showed that great care in selecting children for boarding-out was necessary; only perfectly normal children should be placed in the less protected position. This would necessarily leave all the cases of developmental defect in the schools. With regard to the "feeble-minded children" I was asked my experience of the best methods of training, and in reply referred to patients who paid £100 to £150 a year for living and training in private families. This evidence is referred to as a ground for recommending that pauper children feeble minded should be boarded out—a proceeding that, in my opinion, would be unwise and unfair to the child. Under the heading "Feeble-minded Children Attending Public Elementary Schools" the committee say: "322. When boarded out or placed in small homes the children attend public elementary schools"; my name is again given in the margin, but does not refer to evidence in support of the statement; I am not aware that feeble-minded children have been boarded out. A statement in the form of a question was made by a member of the committee as to the number of children who required special training at the Mile-end Schools; I did not agree with that statement; the question in place of my reply is inserted in a paragraph of the report. Other points might be mentioned to which exception may be taken; but enough has been said to show that before accepting the conclusions of the report the scientific and medical evidence needs to be compared with the statements and recommendations made.

I am, Sirs, yours faithfully,
Kensington, W., June 6th, 1896. FRANCIS WARNER.

THE FREE HOME FOR THE DYING: THE NELSON BED.

To the Editors of THE LANCET.

SIRS,—We ask those who take an interest in the seafaring class to lend us a hand in keeping up this bed in the Free Home for the Dying. There being no paid staff at the Home all donations are for the benefit of the inmates. Last year kind friends contributed £78 15*s.*, and we now ask for five shillings from all who can afford it, which will provide for the wants of this real charity for this year. Postal orders may be sent to the honorary secretary, at the office, 281, Strand, W.C., or to the bankers, Messrs. Hoare and Co., 37, Fleet-street, E.C.

We are, Sirs, yours faithfully,
W. PORTLOCK-DADSON, Captain, Honorary Secretary.
WILLIAM HOARE, Honorary Treasurer.

June 18th, 1896.

"INDURATED PSEUDO-CHANCRES."

To the Editors of THE LANCET.

SIRS,—Conclusions Nos. 4 and 5 in Mr. A. Shillitoe's paper I thoroughly agree with if the expression "spontaneously" be omitted. The experience of one case in private practice and a few in prison work has taught me that a sore may appear on the place where a chancre has been due to the irritation of masturbation; and, further, that this sore may have a for-all-the-world resemblance to a fresh chancre, and yet that it will not be followed by true secondary symptoms.—I am, Sirs, yours faithfully,

Canterbury, May 30th, 1896. PUGIN THORNTON.

"A DECEPTIVE ETHER INHALER."

To the Editors of THE LANCET.

SIRS,—We notice in THE LANCET of June 6th a letter from Messrs. Mayer and Meltzer disclaiming any connexion with a Clover's inhaler with transposed viscera, mentioned by Mr. M. S. Paul of Nagasaki, Japan, as having come under his notice. As we are just now advertising a Clover's ether inhaler we should be glad if you would insert this letter to the effect that the inhaler mentioned by Mr. Paul is not one of our making, as your readers might think from Messrs. Mayer and Meltzer's letter, which says nothing about it being

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made in London or that it was one made by us. We beg to say that all of our Clover's inhalers are made on perfectly correct lines and are guaranteed by us.

We are, Sirs, yours faithfully,

PHILIP HARRIS AND CO., LTD.

Birmingham, June 5th, 1896.

THE BATTLE OF THE CLUBS.—XXXII.[1]

(Continued from p. 1527.)

THE BITTER CRY OF THE MEDICAL AID ASSOCIATIONS.

WE cannot pretend to feel sorry for the well-to-do whose little arrangements for being attended by the association medical men at 3*s.* 6*d.* a year have been much upset of late. We are happy to find that *bonâ-fide* members of friendly societies are recognising that the medical profession has its rights and even its duties of combination to insist that the terms of accommodation proper to men of small means shall not be claimed by men who can afford to pay the proper and ordinary fees for medical attendance. At the meeting of the Annual Movable Committee of the Manchester Unity of Oddfellows, held at the Colston Hall, Bristol, on May 28th, on a discussion of a Bill for consolidating the various Friendly Society Acts, Mr. Keyworth of Lincoln (so the *Daily Chronicle* of May 29th reported) introduced the question of the strained relations existing between the medical profession and the medical aid associations in different parts of the country, and proposed "that the Parliamentary agent be instructed to use his best endeavours to obtain a clause in the Friendly Societies Act enabling medical men to take positions as doctors to medical aid associations without let or hindrance." He said that they had suffered very much in Lincoln from the agitation among the medical profession not to accept service under medical aid associations. The proposal was seconded by Mr. Evans of Kidderminster, who actually reported that the profession there had gone so far as to ask their officers to resign their position. Some complained that the profession was proposing to deny the benefits of such associations to those whose wages exceeded 30*s.* or 40*s.* a week or rented a house of £20 a year. Many respected private patients of medical men are to be found with such limited means, the practitioner being quite capable of adapting his charges to their need. But withal the common sense of the British workman, who knows what his class have gained by combination, found expression, and very clear expression too, and in the end the proposal was rejected by a majority of 235 against 195. Our correspondent whose letter follows is not a person with common sense. We are happy, however, to print his letter, that any "medical servants" who read it may recognise in their medical ruler a wise and far-seeing person—if they can.

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Aug. 24th, 1895, Brussels; (2) Aug. 31st, 1895, Brussels; (3) Sept. 21st, 1895, Portsmouth; (4) Sept. 28th, 1895, Portsmouth; (5) Oct. 5th, 1895, Eastbourne; (6) Oct. 12th, 1895, Lincoln; (7) Oct. 26th, 1895, Lincoln; (8) Nov. 2nd, 1895, Grimsby; (9) Nov. 9th, 1895, Bexhill-on-Sea; (10) Nov. 16th, 1895, Hull; (11) Nov. 23rd, 1895, Hull; (12) Dec. 7th, 1895, York; (13) Dec. 14th, 1895, Northampton; (14) Dec. 21st, 1895, Fermanagh Medico-Ethical Association; (15) Dec. 28th, 1895, Northampton; (16) Jan. 4th, 1896, Birmingham; (17) Jan. 18th, 1896, Birmingham; (18) Jan. 25th, 1896, Club Practices in Rural and Mining Districts; (19) Feb. 1st, 1896, The Formation of a Provident Medical Association at Folkestone; (20) Feb. 8th, 1896, The Manchester Medical Guild and Medical Aid Associations; (21) Feb. 15th, 1896, The Leicester and Leicestershire Provident Dispensary; (22) Feb. 22nd, 1896, The Organisation of the Profession at Leicester; (23) March 7th, 1896, Loughborough: Local Efforts defeated by Consultants from Neighbouring Towns; (24) March 14th, 1896, Medical Aid Societies in Small Heath; Medical Clubs at Stockport; (25) March 21st, 1896, General Meeting of the Profession and the Formation of a Union at Nottingham; (26) April 4th, 1896, Nottingham; the London and Manchester Industrial Assurance Company, Limited; the Public-house Medical Aid Clubs; United Action at Lincoln; (27) April 11th, 1896, Leicester and Wolverhampton; a Hastings Dispensary wound up; (28) April 25th, 1896, Walsall, Formation of a Medical Union; the Medical Profession and the Friendly Societies; Trade and Medicine; the Family Clubs; Women's Public-house Clubs; (29) May 9th, 1896, Sheffield: An Ancient Medical Society; Workmen Sweaters; The Old Grievances; Probable Formation of a Medical Union; (30) May 16th, 1896, Lincoln: Medical Protection Fund started; Benefit Societies and Medical Men; Medical Union at Nottingham; (31) May 30th, 1896, Derby: The Abortive Movement of 1872; the Apathy of the Profession; Female Canvassers; the Gainsborough Dispensary; Lincoln Medical Protection Fund; "A Doctors' Strike."

LETTER FROM A MEMBER OF THE MANCHESTER EXECUTIVE.

To the Editors of THE LANCET.

SIRS,—I presume your columns are open to the criticism by a layman of the attitude you are adopting towards friendly societies, medical institutions, and towards clubs in general. The hostile feeling on the part of the profession will make no difference to clubs whatever, it will end as it did in Lincoln—viz., defeat, ignominious defeat. The unity amongst the flower of the industrial class is too strong for the profession. The latter should understand that it was decreed at Bristol by the delegates representing three-quarters of a million of the Manchester Order "that if in any town the conduct of our medical employés is unsatisfactory, or if they demand a higher rate of payment the lodges should join in the formation of a friendly societies institution worked by one or two medical officers under the superintendence of the committee." The profession will well understand what this means. Recent events do not speak much for the business attitude of the medical profession—a friendly hint, Sirs, when I tell you that the profession will have to be officered by men of tact, experience, and business ability—i.e., a little less of the professional air about them if they intend to cope with friendly societies officials. While the latter are disposed to treat magnanimously their medical officers, as it is to the interests of the lodges that their medical servants should work in perfect harmony with them, the lodges will strenuously resist that spirit of interference which medical journals have encouraged of late. The people of England are not slow in the reception of new ideas as shown by the fact that the Manchester Order is increasing at the rate of 1000 a month in spite of secessions, and women are now swelling the ranks of Oddfellows, so that our future is indeed a glorious one. The Friendly Societies Act was altered early this year, allowing medical institutions managed by us to extend our work to all trades unions and to admit children from two years upwards. This coöperation may be a deadly danger to your profession, but it is indisputably a great blessing to the country. It is predicted that medical attendance for the working classes will be under the direct control of the friendly societies within five years and that the labour distributed amongst some thousands on the Medical Register will fall into the hands of a few hundreds willing to coöperate with the friendly societies officials, from whom every consideration can and will be given. We also propose to engage medical women for large associations where the number of female clubs will justify it. We have now 740 medical men on our Friendly Societies Register, many of these being only too anxious for a job.

I am, Sirs, your obedient servant,

A MEMBER OF THE MANCHESTER EXECUTIVE.

Derbyshire.

LINCOLN: THE PROVIDENT MEDICAL ASSOCIATION.

We have received a copy of the rules and constitution of the newly formed Lincoln Provident Medical Association. We have not space this week to quote the document in full, but the following extract from the rules shows the scale of payment adopted:—

"Families: 1*d.* per week for every several adult, i.e., over sixteen, and 1*d.* per week for each child. In cases where the combined wages of the parents are above 25*s.* a week the total payments shall not be more than 5*d.* per week. When the wages are under 25*s.* a week the total payments shall not exceed 3*d.* a week.

"Single persons: Wages above 25*s.* a week shall pay 2*d.* per week. Wages below 25*s.* a week shall pay 1½*d.* per week.

"Confinements: 15*s.* or 10*s.* 6*d.*, according to whether the wages are above or below 25*s.* a week."

We look upon this as an earnest and honest attempt to get over the differences which have arisen between the friendly societies and their former medical officers. Those unable to pay the full fees are thus given an opportunity of getting medical advice at a price proportionate to their means, while the medical officers, being answerable to no one but their fellow practitioners in the town, will feel in a much more free and dignified position than if they were in the hands of a committee of laymen.

LINCOLN MEDICAL PROTECTION FUND.

The following subscriptions have already been received, and the ready response does credit to the profession. To

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make the movement a quick as well as a sure success more money is wanted. Dr. Carline of Lincoln is the treasurer.

	£	s.	d.
S. H. Agar, Henley-in-Arden	1	1	0
H. Barnes, Carlisle	1	1	0
G. H. and H. W. Barton, Market Rasen	1	1	0
W. H. Battle, Mansfield-street, W.	3	3	0
Fred. Birtwhistle, Barton-on-Humber	1	1	0
J. Gordon Black, Harrogate	1	1	0
C. J. Bond, Leicester	1	1	0
G. S. Boulton, Ingham	2	2	0
J. O. Brookhouse, Nottingham	1	1	0
J. Fenn Clark, Leamington	1	1	0
H. A. Collins, Saxmundham	1	1	0
G. W. Crowe, Worcester	1	1	0
W. E. A. Cummins, Cork	1	0	0
W. G. Curgenven, Derby	1	1	0
C. Deanesly, Wolverhampton	1	1	0
R. Domenichetti, Louth	1	1	0
Wm. Dyson, Sheffield	5	0	0
T. B. F Eminson, Scotter	0	5	0
R. Farrer, Stamford	0	10	6
E. B. Ffennell, Kimberly	0	10	6
F. de Havilland Hall, Wimpole-street, W.	2	2	0
A. J. Hall, Sheffield	0	10	6
A. Hawkyard, Leeds	0	10	6
T. J. Higgins, Louth	2	2	0
John Housley, Retford	1	1	0
J. Iredale, Mablethorpe	0	5	0
W. H. Jalland, York	1	1	0
O. Johnson, Bassingham	1	1	0
E. Jones, Aberdare	0	10	6
J. H. Keeling, Sheffield	2	2	0
Geo. Kirkwood, Peterborough	2	2	0
C. A. Lee, Hull	1	1	0
H. O. Lucas, Newark	1	1	0
R. F. Mackenzie, Birmingham	1	1	0
Frank Newcombe, Ancaster	1	1	0
Arthur Oakes, Birmingham	0	10	0
W. E. Parkes, Birmingham	1	1	0
J. E. S. Passmore, Gainsboro'	1	1	0
F. M. Pope, Leicester	1	1	0
Wm. and T. J. Pritchard, Retford	1	1	0
H. Rainbird, Saxilby	1	1	0
W. B. Ransom, Nottingham	1	1	0
R. T. Richardson, Trowbridge	0	10	6
Tom Robinson, Princes-street, W.	1	1	0
W. W. C. Robson, Walkeringham	1	1	0
F. E. Row, Devonport	0	10	6
E. A. Sadler, Ashbourne	0	5	0
P. Sharp, Brant Broughton	0	10	6
G. W. Shipman, Grantham	2	2	0
W. P. Simpson, Tattershall	0	5	0
W. H. Sissons, Barton-on-Humber	0	5	0
Simeon Snell, Sheffield	1	1	0
E. Solly, Harrogate	1	1	0
James Taylor, Chester	0	10	0
W. P. Thomas, Heckmondwike	0	10	6
T. J. Walker, Peterborough	3	3	0
T. M. Watt, Leeds	1	1	0
N. V. Wise, Trowbridge	1	1	0
Gainsboro' District Medico-Ethical Society	3	3	0
Anonymous	3	3	0
Previous lists	£138	0s.	6d.

FIFESHIRE MEDICAL ASSOCIATION AND MEDICAL AID APPOINTMENTS.

At the last meeting of this association, held at the Royal Hotel, St. Andrews, on June 8th, Dr. W. Stuart Palm, president, Dr. J. Sutherland Mackay moved a resolution: "That the holding of a 'medical aid' society's appointment shall render the holder ineligible for membership in this association." This was seconded by Dr. Curror and unanimously agreed to. The correspondence between the association and Dr. Bruce of Dingwall was then read, and discussion ensued upon the whole question, in which Dr. Nasmyth, Mr. Berwick, Mr. Graham, Dr. Petrie, and Dr. Douglas took part, and the council was instructed that any member holding such appointment should be requested either to resign it or his membership. After the meeting a notice of motion was handed in by Dr. Hamilton Kyle, who was unavoidab'y prevented from being present at the meeting: "That a committee be appointed to inquire and report as to the conditions upon which members of the association may hold friendly or other society appointments, to formulate a code of ethics for the guidance of its members, and to define the powers and duties of an ethical committee."

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Hospital Saturday.

HOSPITAL Saturday in Birmingham has always been a popular occasion. It is essentially a working-class movement and has been always conducted with much enthusiasm and vigour. Last year the amount realised was £13,057; this year an appeal for a larger sum was made, not only for the distribution among the medical charities of the town, but for the maintenance of the convalescent homes in Wales. These separate institutions for men, for women, and now, thanks to a liberal anonymous donor, for children also, have been ever regarded with high favour; they have been productive of an untold amount of benefit and happiness. With the same untiring energy and zeal which have characterised the many workers on former occasions the amount this year has reached the sum of £13,777. More will yet come in, and the committee's sanguine expectation of £14,000 will evidently not be very much out of reckoning.

The New Sanatorium.

A valuable addition to the existing benevolent institutions of the town was formally opened at Sutton Coldfield by the Lord Mayor on the 4th inst. This institution is the gift of Lieutenant-Colonel J. H. Wilkinson. The site is a splendid one, the building, formerly an hotel, being well adapted and fitted for the purpose. It is intended more particularly for clerks, warehousemen, assistant school teachers, shop assistants, and small tradespeople—those of a class often poorly paid, whose breakdown in health means stoppage of supplies and great inconvenience and frequently privation. A large audience witnessed the opening and cheered the various proceedings. Donations amounting to £2000 have been promised as well as annual subscriptions of £500. The institution is thus favourably floated. It is entitled to confidence and success for the future.

Singular Death: Heavy Insurance.

A case involved in exceptional and even extraordinary circumstances is now occupying the attention of the police authorities at Acock's Green. A servant girl aged twenty-nine years had been in the service of a family for a little over twelve months. She had been subject to attacks of hysteria and had been warned by the medical man against drinking brandy to what was obviously a detrimental degree. At 7.30 on June 3rd she was apparently in normal health, at 11.30 the same night the medical man received a note to say that she was dead. He wrote to the coroner stating the fact and also that as he had not attended her lately he should recommend an inquest to be held. An inquest was accordingly held, a post-mortem examination made, and evidence of acute inflammation of the stomach of long standing was found. In the medical man's opinion she died from syncope the result of continued sickness, due to the state of her liver and stomach, brought about by the undue use of stimulants. It seems that the girl was examined for insurance on May 6th and passed as quite sound. Now a claim for £8000 has been made by the people with whom she lived, in whose favour she made a will. The body has been again opened and the contents of certain parts placed in the hands of the county analyst.

Medical Benevolent Society.

At the annual meeting, held on May 29th, the directors reported that the invested funds now amounted to £12,109; sixteen annuitants were upon the books, and the annual grants ranged from £15 to £40. The society was stated to be in a flourishing condition.

June 8th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Deadlock at the Lying-in Hospital.

THE offer made by the board of management to submit the questions of difference between them and the late staff to the arbitration of the Lord Mayor has been declined both by the staff and by the council of the Medical Institution as representing the profession. The reasons assigned by the latter for declining the intervention of Lord Derby are as follows: That "the existing difference involves a question of principle in regard to which the medical profession are wholly unable to modify their view. They will, as has been so often stated, with readiness give their services to the charity on condition that their position and responsibilities are those accorded in other hospitals to honorary medical officers. That is to say, they shall have sole and entire professional charge of the patients and a proper representation on the board of management. Upon these points no compromise is permissible. If the board has not sufficient confidence in the honour and discretion of its medical officers to place in their hands the full charge of the patients, and, while withholding it from them, places that charge in the hands of the matron-midwife, the profession, once for all, decline to have any share in a system so unprecedented, so unsatisfactory in the interests of the patients, so dishonourable to themselves, and so subversive of all progress in medical science." They suggest that a special meeting of the subscribers be summoned under the presidency of the Lord Mayor at which both representatives of the profession and of the late staff be present,

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in order that the whole subject may be dispassionately and impartially considered. The late staff, in also declining arbitration, give their reasons in more forcible language, which reads thus:—"After the resolution passed by your board on May 19th, accusing the medical profession of wanton cruelty and of being utterly regardless of common humanity; and, further, as it is questionable whether your board longer represents the wishes of the majority of the subscribers to the charity, we feel that further communication with your board is attended with difficulty. Moreover, there is no room for arbitration. We have repeatedly laid before you our request for complete authority in our own department, and for representation on the board of management, which we have formulated in these words: (1) that the medical officer on duty at the hospital shall have sole and entire medical charge of all patients in the hospital; and (2) that the medical staff shall be represented on the board of management by four members of the medical board to be selected from time to time by the staff. We consider that at this stage the only possible appeal must be to the subscribers who maintain the charity and are responsible for its future. If they grant our request we shall be happy again to give those gratuitous services which we have given in the past; if they refuse things must remain in their present unhappy position." They proceed by saying that when the meeting of subscribers takes place they hope that the Lord Mayor may take the chair, as they feel confident that under his presidency opportunity will be afforded to explain their position which was denied to their chairman and secretary at the last meeting. They conclude by pointedly drawing the attention of the board of management to the fact that the question of utilising the opportunities of the hospital in assisting students of medicine in their education forms no part of the present dispute. They strongly deprecate the fact that the board should have made use of this question as a side-issue to divert the attention of the subscribers from the real question between them. There can be no doubt from remarks of individual members of the board made in conversation with friends, and from the report of the proceedings of the ladies' committee which have just come to light, that a revolt has taken place in the citadel of management which will probably lead to the retirement of the president from office. The daily papers of June 6th have published, at the request of the ladies' committee, a copy of three resolutions carried at their meeting on May 22nd, and which are as follow: "1. In view of the position taken by the medical profession, the ladies' committee of the Lying-in Hospital desire to record their opinion that the medical officer at the hospital should have sole and entire medical charge of all patients in the hospital. 2. That the medical board be represented on the board of management by two members of the medical staff having a right to vote. 3. That the matron-midwife should stand in the position of house surgeon under the honorary medical officer on the rota." It is satisfactory to find one section of the managing body acknowledging its mistakes by offering the olive-branch, and it will not cause much surprise to find the board of management climbing down from their position of *non possumus* now that it has been so forcibly demonstrated to them that the solid phalanx of a determined unity of action hitherto unparalleled on a similar scale leaves them without hope of conducting their charity on such discredited lines. The contest waged is looked upon as one of principle by the profession, and should serve as a warning to the managers of kindred institutions not to put too great a strain on the susceptibilities of an unpaid staff.

New Ambulance for the Northern Hospital.

Mr. Louis S. Cohen has generously presented this hospital with a new ambulance carriage fully equipped. It is a fine specimen of mechanical skill, and is supplied with everything requisite in the way of surgical appliances and dressing. It affords accommodation for three patients in the recumbent posture, and will carry two or three more in cases of need besides the surgeon and driver. The springs under the body of the ambulance are so contrived as to reduce the vibration to a minimum. The carriage is built of ash and weighs 15 cwt., and by means of an ingenious arrangement the entire harness can be instantaneously removed or applied as the case may be, and a start made within half a minute of the receipt of intimation of accident. The vehicle was specially constructed by the St. John Ambulance Association.

The Heath Scholarship.

The many friends of Mr. George P. Newbolt, surgeon to the Stanley Hospital, have heard with much pleasure of his successful competition for the Heath Scholarship, a prize of the value of £200. Prior to his appointment to the Stanley Hospital Mr. Newbolt was surgeon to one of the sections of the Manchester Ship Canal during its construction, where he gained a large surgical experience from the numerous accidents occurring, The subject of the essay was the Surgical Diseases of the Jaws.

Health of Liverpool.

The medical officer, Dr. Hope, reported that 375 births were registered in the city during the week ending May 30th, representing a birth-rate equal to 30·4 annually per 1000 of the population. The deaths registered during the same period amounted to 254, making a total mortality-rate equal to 20·6 annually per 1000 of the population. Of the total deaths, 88 were those of children below five years of age, and of these 53 were infants below one year of age.

June 9th.

WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Thornbury Board of Guardians and Small-pox.

THE Thornbury board of guardians and rural council are evidently of opinion that if a medical man attends small-pox cases he should confine his attention solely to those patients, for at the last meeting of the board on May 29th the sanitary inspector, in reply to an inquiry, said that several persons had called his attention to Mr. Lane visiting private patients and their consequent fears of the epidemic spreading. It was resolved that the clerk be instructed to give seven days' notice to Mr. Lane to terminate his agreement, and that Dr. Bond be requested to engage a medical man to attend all small-pox cases only in the district subject to the approval of the council. An amendment was proposed: "That, subject to Mr. Lane complying with such condition as attending to small-pox cases only, he shall be appointed"; but this was defeated, the resolution being carried, 15 voting for it, 1 against, and 2 neutral. It was further resolved that the cost of the medical man should not exceed five guineas weekly, and that the officers be instructed that no visitors be allowed in the hospital except in extreme cases when a minister of religion is sent for. The guardians seem to be unaware that if a medical man has been revaccinated, and uses ordinary disinfecting precautions, there is no danger of his carrying any contagion.

The Vaccination Question at Swindon.

The lesson to the anti-vaccinationists at Gloucester has had no effect upon the guardians at Swindon, for at their last meeting the vaccination question was again discussed at great length, and it was decided by 16 votes to 11 not to enforce compulsory vaccination but to await the report of the Royal Commission.

The South Wales University College.

At a meeting of the council of the University College of South Wales and Monmouthshire held on June 3rd, Lord Tredegar was unanimously elected President of the College, in succession to the Very Rev. the Dean of Llandaff, who has resigned. Lord Tredegar takes great interest in the institution, and has already given £2500 towards its funds.

The Better Housing of the Poor in Bristol.

The sixth annual meeting of the Bristol Committee for Promoting the Better Housing of the Poor was held on May 29th. The report stated that during the past year, out of a large number of houses visited, it was found necessary to call the attention of the sanitary authority to ninety-five. Of these a considerable number had been repaired and improved, some had been converted to other uses, whilst those that were past repair had been closed. There were, however, still remaining in the city a large number of houses of the above class, which from a moral and social point of view should be closed. It was also stated that Mr. Lewis Fry, M.P., wished to resign the position of chairman of the committee as he was unable to devote time to the work. Canon Cornish was accordingly elected to fill the vacancy. This society is doing good work in a quiet way. The committee visit the poorer parts of the city and if they discover any defective drainage, &c., communicate with the owners to make the necessary alterations, and if this is

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not done the sanitary authority is informed, the committee and the sanitary authority working harmoniously together.

The Wells (Somerset) Board of Guardians and their Medical Officers.

The Wells Board of Guardians recently proposed that their medical officers, in addition to their duties, should also dispense medicines for their patients, and instructed the clerk to write to the four medical officers of the union asking them if they would, at an increased salary, consent in future to dispense the drugs, in addition to giving advice. At the last meeting of the guardians the clerk stated that three of the four medical officers decidedly disapproved of the proposal, while the fourth only consented to giving it a conditional trial. Some of the guardians suggested that the board should adhere to the proposed system for the medical attendants to dispense and that the said officers be asked to give a definite acceptance or rejection of the proposal by the next meeting, but on a division this was defeated, and it was eventually decided to refer the question to the General Purposes Committee.

The Cardiff Water-supply.

An alleged contamination of the water-supply at Cardiff was discussed at the meeting of the Waterworks Committee of the corporation last week, a scare having been caused by reports of a somewhat sensational nature. The engineer stated that he had received about fifty complaints and a number of samples of water. Mr. Hughes, the borough analyst, presented his analysis of a sample of Cardiff water. According to his report the water yielded no evidence of animal or sewage contamination, but it contained, apparently, more than the usual amount of vegetable or peaty matter, and Mr. Hughes was of opinion that the taint, apart from the taste and smell, was not such as to cause uneasiness, but was mainly due to fermentation of vegetable matter in the water in the service reservoir. The committee decided to arrange for seven additional ventilators to improve the ventilation of the service reservoir. It is stated that the borough analyst will make an analytical examination of the water before it enters the filter beds.

The Nursing at the Merthyr Tydvil Union Workhouse.

The committee appointed to inquire into the complaints of the two assistant nurses at the Merthyr Tydvil Union Workhouse who had recently resigned have presented their report to the guardians. It appears that the chief grievance was in respect to the dietary. The board decided to give certain extras upon the advice of Mr. Ward, the house surgeon, consequent upon which the resignations were withdrawn. Upon the recommendation of the committee it was decided to advertise for probationary nurses.

June 9th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Sanitary Congress and Health Exhibition.

A MEETING was held on Friday last at the town hall, Newcastle-on-Tyne, to make arrangements for the Congress and Health Exhibition of the Sanitary Institute in the autumn. The Mayor presided, and the meeting was attended by the following gentlemen representing the Sanitary Institute: Mr. A. Wynter Blyth, M.R.C.S. Eng., chairman of the Council; Mr. H. Law, M.Inst. C.E., chairman of the Exhibition Committee; and Mr. E. White Wallis, F.S.S., secretary. The date proposed for the meeting is Sept. 2nd to 9th. H.R.H. the Duke of Cambridge, President of the Sanitary Institute, has expressed his intention to be present at the meeting and to open the exhibition, which will remain open until Sept. 26th.

Appointment of Surgeon to the Eye Infirmary, Newcastle.

Dr. Charles Lightfoot has been selected to fill this important post. He is a son of Mr. R. Lightfoot, who for many years was a leading surgeon in Newcastle, and is one of the best-known and most respected members of the profession in the North of England. Mr. R. Lightfoot was the first, it is believed, who treated strabismus by operation in Newcastle, and for long he was known far and wide for his success in eye surgery. Dr. Charles Lightfoot has had an excellent training as an ophthalmic surgeon and much will be expected from him.

Dr. Stainthorpe of Hexham has just received the congratulations of his friends upon his eightieth birthday. He is hale and well and enjoys a hard day's work as well as many younger men. May he long be able to do so.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS)

The New Edinburgh City Hospital.

IN view of the erection of a new city hospital in Edinburgh Baillie Pollard, the convener of the Public Health Committee, has published a memorandum containing his views on the subject after having visited a number of the Infectious Diseases Hospitals on the Continent, from Budapest and Vienna to Hamburg and Copenhagen. He prefers the one-storey pavilions, but thinks that with advantages of site and purity of atmosphere two-storey pavilions might be as satisfactory. The point to which special reference may be made is his treatment of the important question of research. He says that in constructing the new hospital the city will have a unique opportunity to render, at a comparatively trifling cost, one of the most valuable services to the Edinburgh Medical School that it has ever received. That service lies in providing adequate laboratory accommodation for bacteriological research, and for the investigation of the nature, causes, and prevention of all kinds of febrile disease. The Edinburgh school has never yet been able to take its proper place in relation to this all-important field of inquiry. The prosperity of the medical school tended in no small degree to the general prosperity of the city. Anything, therefore, that the city could do to promote the interest of the medical school was a contribution to the best interests of the city itself. Down to the present time almost all the material which increased fever hospital accommodation provided had gone to waste. There were no proper means of conducting such systematic inquiry as that which is carried on in the principal centres on the continent. The opportunity to meet this great defect now lay ready to their hands. In every well-appointed fever hospital on the continent, but especially in Germany, well-equipped laboratories are found where students and graduates conduct methodical and patient investigation into every aspect of every kind of infectious disease. There is also provided a museum and a post-mortem room. It was the part of the city to provide the necessary accommodation, which it could now do in the simplest and most economical way in setting apart suitable rooms for the purpose. It might be assumed that the medical school would not be slow to do its part in making the best use of facilities so provided. Mr. Pollard's views are excellent, and his opinion as to the desirability of such a departure as he indicates will be readily granted by the profession. But when he admires the excellence of the arrangements in Germany for studying infectious diseases he must bear in mind that it is public money which subsidises all that and makes it possible. If Mr. Pollard would find the money there will be no lack of energetic and able workers found in Edinburgh for the work there; but it is quite in vain to suppose that men can live on air, however great their devotion to science may be.

Harveian Society of Edinburgh.

Dr. Peel Ritchie (Fellow and Past President of the Royal College of Physicians of Edinburgh) chose for the subject of his Harveian Oration before the Harveian Society of Edinburgh the Early Days and First Knights of the Royal College of Physicians of Edinburgh. The orator's remarks, which were very interesting, dealt with the establishment of the Edinburgh College of Physicians and its connexion with many necessary reforms in the medical profession, and as regards Scotland in preparing and publishing a Pharmacopœia. We hope to publish an abstract of the oration in a future issue.

New Cottage Hospital, Aberdeenshire.

A cottage hospital is to be erected at Bridge of Alford, Aberdeenshire, by the Alford District Committee of Aberdeen County Council. The cost will be about £1100. There will be a four-roomed cottage and a pavilion, with two wards (for six or eight patients) and nurses' room.

A Medical Staff Corps' Encampment.

On the 6th inst. the Aberdeen University Volunteer Medical Staff Corps went into camp for three days at Pitfour, Aberdeenshire. The departure from the city was marked by

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a popular demonstration, which did not, however, bring good luck in the shape of dry weather, at the outset at least, to the corps, which numbered about a hundred, including officers. Colonel Ferguson of Pitfour did his utmost for the comfort of the men, and during the wet spell the riding school within the beautiful policies was placed at the service of the corps for drill. The inspection took place on Saturday afternoon to the satisfaction of the inspecting officer and amid favourable atmospheric conditions. A church parade followed on Sunday forenoon. Staff-Surgeon J. Mackenzie Booth, M.D., C.M., was in command of the corps.

June 9th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Army Medical Deadlock.

IN a leading article in the *Irish Times* of June 8th an unqualified contradiction is given to a statement which appears in the current number of a medical contemporary to the effect that an effort is being made by certain teachers belonging to the Dublin medical schools to induce Irish candidates to present themselves for examination for commissions in the Medical Staff under present regulations. So far, the writer states, is this from being the case that the responsible teachers in all the schools have given timely warning of the absolute necessity that candidates should obtain satisfactory assurance that the necessary reforms will be carried out before they present themselves for examination. It is pointed out that any other course would be suicidal and disloyal to their brethren in the service, whose hopes of redress depend largely on the inability of the War Department to obtain a sufficient number of medical recruits. As I have more than once mentioned in these columns the dearth of candidates for the Army Medical Service really commenced in Ireland, while the falling off in their number has always been more marked here than elsewhere. It is not likely that while the grievances which destroyed the army medical classes of Dublin remain unredressed candidates will present themselves in any number from here. The fact, however, that a deficiency of competitors in August next would probably lead to the promulgation of a new and fovourable warrant will doubtless keep back many sensible men who wish to ultimately join the service.

Mater Misericordiæ Hospital, Dublin.

This hospital has been for some years the largest of the general hospitals of Ireland, containing, as it does at present, 330 beds. A new wing has, moreover, been planned and is soon to be erected. The hospital, as is well known, was originally designed to form a square, with sides about 100 yards in length, enclosing an exercise ground for the patients. Three sides of the square are in existence, while the idea of erecting a fourth has been very properly abandoned. Instead of this a new building to contain wards for the reception of fever cases, and about 130 feet in length, will be erected to face the North Circular-road, with, of course, an entrance on that road quite distinct from the main approach to the general hospital in Eccles-street. The commencement of this new wing is now delayed only by the strike which prevails in the building trade.

The Royal Hospitals, Belfast.

On June 6th the working-men's committee and their friends paid their annual visit to the Throne Hospital, and having inspected the various departments they held a meeting, at which they passed resolutions strongly recommending the claims of the Throne Hospital, as well as the Royal Hospital, to the support of their fellow working men and women. It was stated that during the past year they had collected over £2400 from their fellow employés, the amount being subscribed in halfpennies and pennies.

Belfast Asylum.

At the monthly meeting of the governors, held on June 8th, it was reported that there were 627 inmates in the asylum and 90 at the Purdysburn Auxiliary. There is to be a friendly discussion between the board of guardians and a committee of the governors of the asylum on June 15th in reference to the often discussed question of transfer of patients to the workhouse. The committee of inspection reported that they were of opinion that the water-supply of Purdysburn Asylum was insufficient. They thought the question must be considered should artesian wells, with large cisterns for storing purposes, be made, or should a supply be obtained from another source. They also thought the new sewage works and filtering tanks were unsuitable for a large establishment.

The Study of Mental Diseases.

At the Asylum Board on Monday last a communication was received from the office of Lunatic Asylums, forwarding a copy of a letter which they had addressed in reply to a Belfast medical man, who requested to be allowed to visit the Belfast District Asylum for the purpose of studying mental diseases. The inspectors in their reply said they would be very pleased that the medical man should avail himself of any opportunities which the medical superintendent might think fit to offer him. The board of governors decided that the medical man might attend during the ordinary hours of the students' class conducted by the medical superintendent for the study of mental diseases, but that no special arrangement could be made.

Cork: the Legal Value of Medical Evidence tendered by Policemen.

The Royal Irish Constabulary are a fine body of men, but when they aspire to play the part of medical men by giving medical evidence they are undertaking the performance of duties outside their sphere. Last week a man was brought before the local bench of magistrates charged with "assaulting, wounding, and inflicting grievous bodily harm." After the ordinary evidence had been given Mr. Horne said he would require medical evidence of the grievous bodily harm. The following colloquy then ensued:—Mr. Ewart (District Inspector of Police): "Strike out 'grievous bodily harm.' The sergeant saw the wound." Mr. Horne: "Oh, no; I don't think the sergeant is competent to prove grievous bodily harm unless you have other evidence. I for one will not take that. I will either return information for trial to quarter sessions or refuse information." Mr. Ewart: "I ask you to return information on the charge of wounding." Mr. Horne: "I refuse." The sergeant was then put forward by his inspector and gave as much medical evidence as he could, but Mr. Horne, alive to his legal responsibilities, said: "We don't find grievous bodily harm and we cannot return informations, but we order a summons for common assault to be issued against him." In future similar cases the district inspector must either provide medical evidence or omit the graver charge. Should he adopt the latter course there may be a serious miscarriage of justice.

Election of Coroner for East Limerick.

Last week Dr. P. J. Cleary of Kilmallock was elected coroner for East Limerick by a large majority. The other candidates, all medical men, were Mr. Hennessy (Galbally), Mr. Lee (Kilfiane), and Dr. Connery.

June 8th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Disinfection by Formaldehyde.

I HAVE already in the columns of THE LANCET enlarged on the virtues as a disinfecting agent of formic aldehyde, giving details of experiments conducted with that gas in hospital wards. I make no apology for once more referring to such an important subject. MM. Roux and Trillat and M. Bosc publish in the *Annales de l'Institut Pasteur* (May 25th) two separate reports on the sterilising properties of formaldehyde. The experiments of the first-named collaborators were conducted in rooms whose cubic capacity varied from 70 to 1400 c.m. The destruction of pathogenic germs was absolute even in the room of the larger dimensions. The sterilisation of the air-dust and of the walls may be considered as practically perfect, the aldehyde vapour acting almost instantaneously and simultaneously in every part of the room. No danger of poisoning with carbonic oxide is incurred, although the irritating nature of the gas renders it incumbent on the manipulators to prevent its escape into the neighbouring rooms. M. Bosc states that the dry vapours of formaldehyde destroy after an exposure of five hours' duration all pathogenic micro-organisms existing on dry squares of linen, the presence of a little moisture not having an appreciable retarding effect. The spores of pathogenic fungi are

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likewise destroyed if they be dry. The only germs that resist are the bacillus subtilis (of hay) and the bacillus mesentericus, neither of which possesses any practical importance. When contact with the vapour is difficult the result is precarious. Thus, of two specimens placed in a coat-pocket whose flap had been turned down one (the staphylococcus) was killed, whereas the other (bacillus coli) survived and furnished a weak culture in five days. The staphylococcus and the charbon bacillus survived exposure to the vapour when placed inside a heap of sheets and in the thickness of a mattress respectively. The wool of this mattress yielded a culture of the streptococcus. Germs placed on a mattress simply doubled on itself were, on the contrary, killed. Moist specimens were also killed when perfect access of the aldehyde vapour was ensured. Of some such moist specimens exposed in test tubes some were destroyed and others escaped. Koch's bacillus tuberculosis contained in dry sputa or in sputa triturated with sterilised sand was killed, and even fresh sputum spead on linen to a thickness of one or one and a half millimetres was disinfected. It is evident that the freer the contact of the aldehyde the more complete is the disinfection. Quilts, sheets, curtains, &c., to be disinfected should, therefore, be hung on lines, pockets should be turned inside out, and woollen mattresses unsewn. After the disinfecting process is over the windows are widely opened. A quarter of an hour later the room can be entered (the windows being still open). After two days of thorough ventilation the room is odourless and habitable. The formaldehyde does not deteriorate or decolourise any object. Formaldehyde generators are sold in Paris in the form of lamps. I had one in use in a furnished apartment the other day in a case of chicken-pox, the result being quite satisfactory. I would strongly recommend this method in preference to the old sulphur plan.

Professional Etiquette.

A considerable part of the correspondence pages of THE LANCET being devoted to points of professional etiquette, the following rules formulated by the Conseil Général des Sociétés d'Arrondissements de Paris will be of interest to your readers:—

"Tout médecin appelé pour la première fois dans une famille doit, s'il aperçoit ou apprend qu'il a été appelé à défaut du médecin traitant absent ou malade, ne donner ses soins que pendant l'absence de son confrère. Si le médecin, appelé en l'absence du médecin traitant, constate que le malade a l'intention formelle de réclamer ses soins pour l'avenir, il peut continuer à voir le malade après avoir averti son confrère. Tout médecin appelé accidentellement près d'un malade en traitement devra se borner à prescrire les médicaments nécessaires pour parer aux accidents du moment et ne se représenter chez le malade que s'il est appelé en consultation par le médecin traitant. Tout médecin appelé près d'un malade, dans le cours d'une maladie aiguë ou chronique régulièrement suivie, fera ses efforts pour faire rappeler le médecin traitant; s'il échoue il doit prévenir, sans délai, le confrère auquel il succède. Tout médecin appelé en consultation devra s'abstenir, vis-à-vis du malade et de son entourage, de toute réflexion. La consultation étant faite à part, le traitement convenu sera fait par le médecin ordinaire. Le médecin appelé en consultation par le médecin traitant ou par la famille ne devra retourner voir le malade que s'il est appelé à nouveau et autorisé par le médecin traitant. Il est d'une bonne confraternité d'accepter un médecin consultant proposé par la famille, quels que soient son âge, son grade, ou sa situation, pourvu que son honorabilité personnelle et professionnelle soit indiscutable. Le cabinet de consultation est un terrain neutre où le médecin peut donner ses conseils à tous ceux qui les lui réclament, et quel que soit le médecin traitant."

June 11th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Direct Vision by Means of the "x" Rays.

PROFESSOR BUKA of the Technical College (Berlin) announces in the *Deutsche Medicinische Wochenschrift* that he has succeeded in directly observing by the "x" rays without the aid of photography, not only the bones, but also some of the internal organs. The proceeding he describes as follows. Instead of a photographic sensitised glass-plate he uses a screen consisting of a plain glass plate closely covered with paper in which a U-shaped window is cut out. Barium platinocyanide is very evenly spread over this U-shaped space, and the whole is then covered with a second layer of paper. The remainder of the apparatus is the usual covered Crookes's tube, a Ruhmkorff induction coil, &c. When the screen is placed before the luminous vacuum tube the U-shaped space becomes fluorescent, and if the outspread hand is brought between the screen and the vacuum tube the bones, which of course are not penetrated by the "x" rays, appear on the screen as dark shadows with outlines as distinct as in a good photograph. They may thus be directly observed, and the movements of the joints are equally visible on the screen. A still more striking phenomenon was the direct observation of the ribs, the respiratory action of which was quite perceptible; and in addition to the osseous parts of the thorax there came into view a dark mass on its left side showing the distinct outlines of the heart. The liver also became visible, but the lungs, which are penetrated by "x" rays, were not to be seen. Foreign bodies also could be directly observed. Professor Buka lays stress on the fact that by his method it is possible to explore the living body in all directions by simply moving the screen and the vacuum tube, whilst by the photographic method, not only would a long series of pictures on glass be necessary for the same purpose, but the photographic method has hitherto failed in depicting the internal organs.

The German Surgical Association.

The association, which has just celebrated its twenty-fifth anniversary, was founded in 1872, when those civil and military surgeons who had taken part in the Franco-German war gathered together in Berlin to discuss their campaigning experiences. Regular annual meetings have since then been held in Berlin under the presidency of the late Professor von Langenbeck, the founder of the association, who acted as chairman until removed by death. The most eventful meetings were those of 1873, when Professor Esmarch described his method of artificial anæmia for operations on the extremities; of 1874 and 1875, when Professor Lister's antiseptic treatment was discussed at length; and of 1891, when Professor Koch's tuberculin was the principal theme. By 1891 the membership of the association had greatly increased and it was able to inaugurate its new home, Langenbeck House, erected in commemoration of its distinguished president. Foreign surgeons, and especially visitors from Great Britain, have always taken part in the proceedings, and in 1889 Professor Victor Horsley read a paper in excellent German on the Injuries of the Motor Area in the Cortical Substance of the Brain. It is worth mentioning, too, that of the nine honorary members three are English—Sir Joseph Lister, Sir James Paget, and Sir Spencer Wells. The celebration began with a concert on the evening of May 25th in the Great Hall of the Reichstag Palace, courteously placed at the disposal of the members by the President of the Parliament. On the next morning a formal meeting took place in Langenbeck House, the great hall of which was adorned with oil paintings of the former presidents and the honorary members. The meeting was attended by a very distinguished assembly, including delegates from the Berlin professional societies and from foreign surgical associations, as well as representatives of the Government, the University, the town council, the Army Medical Staff, and the Red Cross Organisation. All the leading German surgeons and many foreign ones were also present. The Royal College of Surgeons of England was officially represented by Mr. Reginald Harrison and Mr. John Langton. Sir Spencer Wells also took part in the proceedings. The chairman, Professor von Bergmann (Berlin), in his presidential address welcomed the assembly and especially the delegates, gave a short account of the history and the aims of the association, and finally an obituary of the members deceased during last year. A series of papers on different subjects illustrative of the present state of surgery was then read by several of the leading members especially appointed for this purpose by the committee and a banquet at which the delegates proposed the toast of the association closed the first day's proceedings. On May 28th the members of the Congress and their ladies were entertained at Krolls Theatre by the Berlin Surgical Society. The evening began with a series of *tableaux vivants*, acted by Berlin surgeons and their ladies, and depicting the history of German surgery from the time of the ancient Teutons till the modern era. The performance was honoured by the presence of the Emperor and Empress, and was followed by a supper and a concert. During the proceedings the question of international surgical congresses, as suggested by American surgeons, which had been adjourned at the last year's meeting, was discussed. It was resolved unanimously that the Congress should assemble every fourth year; that the members of the great national surgical associations should take part in it; that from those countries where such associations do not exist only a limited number of surgeons should be admitted; that the official languages should be German, English, and French; that a committee of the country where the Congress is held should organise

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the meeting; that questions of general and immediate interest previously selected by a committee should have precedence, and that other subjects should be discussed only after those questions had been exhausted. The forthcoming Congress will probably be held in London in 1900. A detailed account of the papers read at the meetings of the association will appear in the next issues of THE LANCET.

June 8th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Anthropometry in Italy.

BIOLOGY in its wider and more practical sense will find much to profit by in the elaborate work now given to the world under the following title: "Antropometria Militare. Risultati ottenuti dallo Spoglio dei Fogli Sanitari dei Militari delle Classi 1859-63. Eseguito dall' Ispettorato di Sanità Militare, per ordine del Ministero della Guerra" ("The Anthropometry of the Soldier. Results obtained by gleaning the Sanitary Literature of the Army on the Levies taken in 1859-63. Executed by the Inspecting Staff of Military Hygiene, by order of the War Office.") No military power in Europe has yet, I believe, produced a statistical return so rich in material of anthropological and ethnographical interest as this just issued in Rome. The conception of such a compilation is due to Lieutenant-Colonel Dr. Salvatore Guida, who first proposed it in the *Giornale di Medicina Militare* in 1879. At the military levies of non-Italian countries the statistics used to be confined to stature and the perimetry of the chest. Of late years Germany took the lead in appointing a special scientific commission to assist at the inspection of the incipient soldier and on its own account to take note of other measurements. Dr. Guida, in the article above referred to, was of opinion that anthropology and ethnography (to say nothing of medico-military practice) would have much to gain by carrying the inspection some steps further and filling up for each soldier enrolled a paper representing his health conditions at the first inspection, to be followed periodically by other entries, forming a running commentary on his health vicissitudes during his military career (invaliding, leave, withdrawal from service, death), particularly affecting his stature, weight, and thoracic circumference in successive years. At the close of his military services by retirement or death the paper (*foglio*) of each individual was to be consigned to a central bureau charged with the general review of these *fogli*. The War Office fully accepted Dr. Guida's proposal, and the compilation on its lines was to include the period between 1859-63. No fewer than 300,000 *fogli*, attesting the physical condition of as many soldiers at the first inspection up to death or withdrawal from active service, were thus available, giving the variable characteristics of physique (stature, weight, thoracic girth) with their variation in each year; then the non-variable or slightly variable physical qualities (the colour and form of the hair, the eyes, the complexion, the teeth, eyebrows, the forehead, the nose, the mouth, the chin, the general outline of the visage, and the diameter of the head); and, finally, the physical defects and the illnesses undergone. The *spoglio* (gleaning) of these *fogli* and their scientific arrangement were performed under the direction of Captain Ridolfo Livi, M.D., and the results under the title given above have just been published in a volume of 420 pages, with relative atlas of twenty-three plates and other subsidiary indications. The whole publication amply justifies the proposal of its original author, Dr. Salvatore Guida—a proposal which elicited the cordial approbation of anthropologists and ethnographers like Virchow, Rancke, De Lapouge, Ammon, Olorez, Lagneau, Chervin, Dujardin, Galton, Beddoe, Kollmann, Boas, Ripley, and others.

June 5th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Suprarenal Extract.

DR. VELICH has been experimentally investigating the action of suprarenal extract, and the results as published by him entirely confirm those of Oliver and Schäfer. He observed an increase of the blood pressure, irritation of the vagus nerve, and an acceleration of the pulse after injection of atropine or section of the medulla oblongata. Increase of the blood pressure also follows on sections of both splanchnic nerves or on bleeding, and is due to the contraction of the small vessels and capillaries of the abdominal viscera. The acceleration of the heart's action is produced by the influence of the extract on the heart. After the injection of suprarenal extract the extirpated heart pulsates more strongly than is normal.

Zymotic Diseases during 1895.

The report on Zymotic Diseases in Austria during 1895, which has just been published by the Sanitary Commission, shows that there were 2901 cases of small-pox, 2366 of which occurred in Galicia; there were some outbreaks in Styria, but no case has been registered in Tyrol and Vorarlberg. The report also shows an increase of 14,055 cases of scarlet fever above the number recorded in the previous year; this disease was prevalent in Moravia, Bohemia, and Istria, and the death-rate amounted to 18·8 per cent. Diphtheria exhibited an increase in Dalmatia and Galicia; the death-rate fell to 31·6 per cent., against 37·6 per cent. in 1894 and 43·8 per cent. in 1893. There were also 19,462 cases of enteric fever, against 36,349 in 1892.

The Antitoxin Treatment of Diphtheria.

Dr. Zuppinger has published in the *Klinische Wochenschrift* a report on the Antitoxin Treatment of Diphtheria in the Rudolf Hospital for Children. During 1895 there were 160 admissions of children suffering from diphtheria, of whom 120 recovered and 40 died. Following the classification of Behring he distinguishes three varieties of diphtheria—pharyngeal, pharyngo-nasal, and pharyngo-laryngeal. Among the 160 children there belonged to the first group 72 cases with 8 deaths (a mortality of 11 per cent.), to the second group 32 cases with 13 deaths (a mortality of 40 per cent.), and to the third group 56 cases with 19 deaths (a mortality of 33 per cent.). With respect to the age of the patients there were 13 children in their first year, of whom 9 died (69 per cent.); 32 in their second year, of whom 12 died (37 per cent.); 57 between their second and third year, of whom 10 died (17 per cent.); 32 between their fourth and sixth year, of whom 6 died (18 per cent.); and 26 at higher ages, of whom 3 died (11 per cent.). In some cases there was infiltration and erythema resembling the eruption of scarlet fever; sometimes the children complained of pains in the leg. In cases of croup with grave symptoms the dose injected during the first twelve hours was from 2000 to 3000 units, and if no improvement resulted a further injection with from 1000 to 1500 units was given. In slight cases 1000 to 1500 units were sufficient. In spite of these large doses no important disturbance was observed. In 20 cases there was albuminuria, and in 3 there was post-diphtheritic paresis of the soft palate. Serum was injected in 51 out of the 56 cases of laryngeal diphtheria, with the result that 36 recovered (71 per cent.) and 15 died. In 12 cases the stenosis disappeared, in 36 cases intubation was performed, and in 3 cases tracheotomy. Among the cases in which intubation was employed 14 died (38 per cent.), and 1 case in which tracheotomy was performed died from bleeding due to erosion of the innominate artery. Bacteriological examinations were made in 122 cases, including 67 pharyngeal cases, 28 laryngo-nasal cases, and 27 laryngeal cases. In 17 cases belonging to the first group Löffler's bacilli were found, in 25 cases these organisms were associated with streptococci and staphylococci, and in 25 cases there were only staphylococci. There were 45 pure forms and 44 combined forms of diphtheria, while in 33 cases no Löffler's bacilli were to be seen; of the 45 cases of pure diphtheria 17 died, whereas the death-rate of the combined forms amounted to 6 and that of the last group to 7. In order to show the presence of antitoxic serum in the blood subsequently to its subcutaneous administration Dr. Loos examined the blood of a boy three years of age suffering from varicocele. It possessed only a trifling antitoxic quality, but a sample taken some hours after the injection of 2000 units of antitoxin showed a decided increase of antitoxic power. It is, further, of great importance to decide whether the formation of antitoxic substances ceases on recovery from diphtheria. Cases not uncommonly occur where Löffler's bacilli are found in the mouths of healthy children and an examination of the blood shows that it possesses a highly antitoxic power. Children who have recovered from diphtheria may also have virulent

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bacilli in the pharyngeal mucous membrane without again falling ill.

Tuberculous Leprosy.

A case of tuberculous leprosy has been exhibited by Dr. Rille at a meeting of the Dermatological Society. The patient was a boy aged fifteen years, who was admitted to hospital some months ago, and was treated with arsenic, thyroid tablets (about 1000 in number), and finally with an ointment containing Goa powder. Some nodes have disappeared, but at present there are several in the pharynx, larynx, and conjunctiva. The case is interesting from the presence of reddish nodes on the sole of the foot—a place where the occurrence of leprosy has been denied by writers such as Boeck and Danielssen—the lesion being supposed to be syphilitic. Histological examination showed the bacilli and the typical structure of nodes. The patient came from Roumania, where of late years about a hundred cases of leprosy have been observed. There is no alteration of sensibility, and no albuminuria or implication of the internal organs.

Insurance against Sickness.

Compulsory insurance against sickness among the working classes was introduced some years ago, and the Government has just submitted to Parliament a further Bill on the same subject. The medical profession does not seem to realise the importance of this fact, for, with the exception of the Vienna Medical Chamber, no society has hitherto taken measures to oppose this Bill. Indeed, the impoverishment of the profession is increasing to such a degree that in Vienna there are many young medical men who no doubt wish for the introduction of this compulsory scheme and would be satisfied with receiving a penny a visit. The medical chambers have but little influence and any opposition of theirs to this Bill will be unsuccessful. Notwithstanding its high scientific position the profession in Vienna and in Austria has no business organisation, and its boards possess so little disciplinary power that they are not even able to check medical advertising.

Honours to Medical Men in Austria.

During this week high distinctions have been conferred upon Professor Neusser and Professor Wiederhofer. Professor Neusser, who is one of the most eminent authorities on internal medicine, has been appointed a Privy Councillor, an honour which is so much the greater as he is, perhaps, the youngest man in Austria whom the Emperor has distinguished in such a degree. His name is widely known by his researches on the diseases of the blood and by his chemical and bacteriological knowledge. His lectures are attended not only by students, but also by a great many physicians who appreciate his skilful diagnoses. Professor Wiederhofer has received a letter from the Emperor wherein His Majesty pays a highly flattering tribute to his merits and thanks him for his attendance on the deceased Archduke Karl Ludwig.

June 8th.

BRITISH ORTHOPÆDIC SOCIETY.—This Society met at Birmingham on May 30th, 1896. The new General Hospital, the General, the Children's and the Royal Orthopædic Hospitals were visited by the members. The meeting was held at the Birmingham Medical Institute. Mr. Wm. Thomas showed cases of Congenital Torticollis, severe Lateral Curvature in a male adult, Congenital Absence of Metacarpus and Phalanges, and Double Congenital Displacement of the Hip and Talipes, treated by Tarsectomy.—Dr. Warden showed a case of Partial Absence of the Fibula, Marked Lateral Bending of the Tibia, associated with Congenital Talipes Valgus.—Mr. E. Luke Freer brought forward cases of Congenital Hip Displacement, Rhachitis Adolescentium, Relapse after Tarsectomy for Double Talipes Equino-Varus, and Cervical and Upper Dorsal Scoliosis.—Mr. Keetley and Mr. Openshaw discussed the cases, and Mr. W. Thomas, Dr. Warden, and Mr. Luke Freer replied.—Mr. Robert Jones brought forward an interesting case of Recrudescent Rickets in a girl eight years of age. He stated that he had seen twenty or thirty cases, and in most of these the lower extremities alone were affected; in some, as in the present case, the head, chest, and upper extremities participated in the deformities.—Mr. Tubby drew attention to the fact that hitherto no microscopical examination of the bones had been made in cases of so-called "late rickets."—After votes of thanks to the Birmingham members for their hospitality and to the Council of the Birmingham Medical Institute the proceedings terminated.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

THE Council was much gratified on Monday last by the presence of Sir Henry Acland for an hour or more during the discussion on the Apothecaries' Hall of Ireland. He seemed to enjoy his visit to old friends and to the new room, and said to one member that it made him feel quite young again.

The Recommendation of the Council on instruction in practical midwifery has at last been altered and brought more into consonance with reason and the nature of the case. The Council has resolved that henceforth the alternative of three months' attendance on the in-door practice of a lying-in hospital shall be to have been present at not less than twenty labours, at least five of which have been conducted *throughout* under the direct supervision of a registered practitioner. The word "throughout" is meant to cover the period of the puerperium as well as the mere labour. The Scottish schools will doubtless bring themselves as soon as they can into harmony with this reasonable recommendation on one of the gravest subjects of medical education. It is only fair to them to say that they have been bound by the Commissioners of the Scottish Universities, and that their representatives, including Dr. Tuke, chairman of the Education Committee, have been earnest parties to the alteration. The result must be so far satisfactory to Dr. Glover and those who for years have shown the absurdly loose and inadequate nature of the Council's recommendation on this important subject.

Not the least important part of the Council's proceedings was the consideration of a letter from the Medical Defence Union, dated May 28th, on the bearing of the recent judgments in the cases of Bridgewater and Frickhart respectively. Bridgewater practised and advertised extensively at Cardiff under the title Dr. Bridgewater, M.D., U.S.A. Mrs. Frickhart's case was different. She had been on the Register as a L.K.Q.C. Phys. Irel. and M.D. of Zurich. For violating the rules of her college by advertising, she was deprived of her only British diploma. The Council also saw fit to remove her name from the Register after vainly attempting to procure her appearance before them to answer for her conduct. The Medical Defence Union regard their failure to get convictions in these cases—a failure so far endorsed by the High Court—as a proof of the nee for amendment of the Medical Acts so as to make them more efficient as a means for enabling the public to judge between qualified and unqualified practitioners. It will be seen that Mr. Muir Mackenzie, from his statement to the General Medical Council, is not yet satisfied that it was the Acts themselves that were to blame so much as the mode of presentin the cases to the Court. The cases of apparent breach of the fortieth clause are numerous, and there should be no difficulty in putting Mr. Muir Mackenzie's views to the test. The sooner this is done the better. Though the judges do not pretend to have settled or decided anything by their recent action, it has had the effect of encouraging pretenders of all sorts and discouraging those who do their best at great cost to defend the public and the profession.

It will be observed that the Council dealt with several cases of charges of infamous behaviour in a professional respect. In three the Council removed the names of the offending practitioners; in another instance the practitioner was found not guilty of the offence. Even in cases where the practitioner's name is removed there are very

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different degrees of blame. In one of the recent cases—though reported by a coroner and associated with the death of a child suffering from extensive pneumonia, apparently undetected by the unqualified assistant and never seen by the principal—the decision of the Council seemed to come on the offender as a surprise, though the Council has been warning the profession for years of the risks of such methods of practice.

Mr. Teale has been placed on the Examination Committee of the General Medical Council.

There was a very significant unanimity in the Council in favour of a more thorough preliminary examination, and Mr. Bryant carried a resolution asking the Education Committee to consider whether the time has not come for erasing from the list of recognised preliminary examinations the examination for *second*-class certificate (of first or second division) of the College of Preceptors. The Commissioners of the Scottish Universities have set an admirable example of raising the preliminary standards. The immediate result is to diminish the number of their students. But the ultimate and not remote effect is to raise the standard of education and the public estimate of their degrees.

THURSDAY, JUNE 4TH.

IN THE LANCET of June 6th we reported at length the proceedings during the first two days of the session of the Council, and stated that on this, the third day, the business was chiefly the consideration of penal cases. We now take up the report at that point.

The Case of James Charles Ady.

The first case considered was that of James Charles Ady of Brighleigh, Trent-road, Brixton-hill, London (registered in Scotland May 7th, 1878, as "Lic. R. Coll Phys., Edin., 1878, and Lic. R Coll. Surg., Edin., 1878"), who had been summoned to meet the following charge formulated by the Council's solicitor:—

"That, in conjunction with a woman named Graham, he held himself out to persons who consulted him and the said female as being ready, in return for a sum of money, to treat pregnant women in such a manner as to cause them to be delivered of stillborn children, or, in the event of a child being born alive, to procure some one to take over the child in such a way that the mother would never hear of it again."

Mr. Ady appeared without professional assistance, while Mr. Horace Avory, on behalf of the *Sun* newspaper, attended to support the charge. The latter opened the case with a speech and thereafter called as witnesses two representatives of the *Sun* newspaper who had interviewed Mr. Ady and the woman Graham. Mr. Ady cross-examined one of these witnesses. Subsequently he was heard in his own defence, and he called Mrs. Minnie Graham, who gave evidence in support of his denial of the charge. In answer to members of the Council he admitted that he was the Mr. Ady who had at one time been in practice at Rangoon, and who while there had had his name struck off the list of members of the British Medical Association for no reason that had been explained to him. Strangers having, by direction of the Council, withdrawn, the Council deliberated on the case *in camerâ*. At the conclusion of the deliberations, on motion made from the chair, it was resolved:—

"(*a*) That the Council do proceed at once to pronounce its judgment on the case. (*b*) That the charge made against Mr. James Charles Ady has been proved to the satisfaction of the Council. (*c*) That the further consideration of the charge against Mr. James Charles Ady be not adjourned until the next session. (*d*) That Mr. James Charles Ady is judged by the Council to have been guilty of infamous conduct in a professional respect, and that the Registrar be directed to erase from the Medical Register the name of James Charles Ady."

Strangers, including Mr. Ady, having been re-admitted, the PRESIDENT announced the finding of the Council.

Shorthand as an Optional Subject.

The REGISTRAR read the following letter:—

"50, Queen Anne-street, Cavendish-square, London, W.,
"April 9th, 1896.

"DEAR SIR RICHARD QUAIN,—I beg to transmit a petition to the General Medical Council which will be supported by Sir Dyce Duckworth. It is signed by 180 members of our Society of Medical Phonographers and signed with approval by Sir Joseph Lister, Sir Russell Reynolds, Sir John Williams, and (individually) Mr. Christopher Heath.

"Its object is the promotion of the acquisition of shorthand before medical study is commenced by making it an optional but mark-bearing subject at the preliminary examination and sanctioning this course.

"Other signatures and many other approvals have yet to come in and will be sent before the meeting of the Council. Since the petition is now, however, effectively supported, I beg, as President of the society, to send it in, in the hope that some consideration of the means of giving effect to it, in the event of approval, may be possible before the meeting of the Council. "Very truly yours,
"W. R. GOWERS.

"To the President of the General Medical Council."

The REGISTRAR also read a statement to the effect that on May 16th Dr. Gowers stated that at the ordinary examinations of the College of Preceptors shorthand was already an extra optional subject, and that there would be no difficulty in having it made such at the special examination held for medical candidates if the Council expressed a wish that it should be done.

The text of the petition has already been published.

Sir DYCE DUCKWORTH recommended that this petition should receive the most careful consideration of the Council. Although he could not believe there could be much difference of opinion as to the advisability of adopting the course that the petitioners asked them to take, he yet thought the question involved was too large a question to be debated in the Council sitting as a Council, and as it was an educational matter it should be laid before the Education Committee for its consideration. He moved to that effect, suggesting that the committee should submit a report on the subject during the present session.

Sir WILLIAM TURNER seconded the motion. He did not think there was any necessity to say anything on the merits.

The motion was unanimously agreed to.

Dr. TUKE, chairman of the Education Committee, hoped the Council would not ask for a report this session. The matter was no such simple one as it looked.

Sir WILLIAM TURNER saw no occasion to report this session. The matter was not one of urgency.

The Case of George Ingersoll Currah.

The Council proceeded to consider the case of George Ingersoll Currah of 70, Hyde-road, Hoxton (registered in England, Nov. 22nd, 1880, as Lic. Soc. Apoth. London, 1880, with the address Belmont House, Falmouth), who had been summoned to appear on the following charge, as formulated by the Council's solicitor:—

"That he acted and acts as cover to an unqualified person named Charles Keating, who, acting, or purporting to act, as his (Currah's) assistant, was permitted, authorised, and enabled by him to carry on medical practice and administer medical treatment to patients as if he were a duly qualified and registered practitioner, and in such a manner as to lead those on whom he attends to believe that he is so duly qualified and registered."

Mr. Currah appeared for himself and Dr. Bateman represented the Medical Defence Union. The latter stated that the case was originally reported to the Medical Defence Union by Mr. Westcott, one of the coroners for the East London district. It arose out of an inquest on a child named Webster, whose mother had gone to Mr. Currah's chemist's shop at 92, St. John's-road, for medical assistance and had been served with medicine by Mr. Keating, to whom it was stated she had spoken as "the doctor" without contradiction on his part.

Mr. CURRAH informed the Council that Mr. Keating had been engaged by him to attend the shop in the capacity of a chemist's assistant, and had received strict orders from him never to prescribe or interfere in any way with the medical practice of the accused. His interference in the case of the child Webster was, therefore, in disobedience of orders, and had led to his immediate dismissal. Keating, however, had afterwards resided with the people who occupied the apartments above the shop.

The Council having further considered the case in private passed a series of resolutions similar to those adopted in the Ady case, the final resolution being as follows:—

"That Mr. George Ingersoll Currah is judged by the Council to have been guilty of infamous conduct in a professional respect, and that the Registrar be directed to erase from the Medical Register the name of George Ingersoll Currah."

The Council adjourned.

FRIDAY, JUNE 5TH.

The Council resumed its work, Sir RICHARD QUAIN presiding.

The Case of Gordon Griffiths Jones.

The Council proceeded to the consideration of the case of

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Gordon Griffiths Jones, of 15, Welbeck-street, London, registered in England June 18th, 1883, as Lic. Fac. Phys. Surg. Glasg., 1883, and Lic. R. Coll. Phys. Edin., 1883, who had been summoned to answer the following charge, as formulated by the Council's solicitor—viz.:

"The complaint has relation to the medical practice carried on by an unregistered person named David Jones at 15, Welbeck-street, and 10, Dean-street, Soho, and by the complaint it is alleged—

"1. That G. G. Jones, being a duly qualified registered practitioner, covers the unregistered practitioner, and by his assistance and association with him in his practice and the aid of his professional qualifications enables him to carry on a medical practice as though he were duly registered.

"2. That in the carrying on of the said practice G. G. Jones promotes and associates himself with methods of obtaining and attracting patients which are professionally discreditable—that is to say, by systematic advertisements of cures practised by the said unregistered person and publications invoking persons to resort to the unregistered person for such cures."

Dr. BATEMAN, of the Medical Defence Union, made a statement and presented evidence in support of the complaint. He explained that the person with whom Mr. Jones associated was his father, Mr. David Jones, who was formerly on the Medical Register and who was removed from it in consequence of a misdemeanour.

Mr. MUIR MACKENZIE read the statement of defence prepared by Mr. Jones. In this statement it was said by Mr. Jones that his father had been in practice as a homœopath for thirty years at 15, Welbeck-street, and his name had been erased from the Medical Register in 1861. He (Mr. Jones) understood covering to mean a registered practitioner helping and aiding and protecting an unregistered and unqualified man with no medical or surgical pretensions. He was not doing this and never had done so. No one covered his father during the seventeen years prior to 1883 when he (the son) qualified. His father did not require covering then nor did he now. His father's name was erased from the Register in 1861, and after paying his debt to his country according to law he considered his wrong expiated, and having a family to provide for sought to reclaim his steps and resume the practice of his profession. He accordingly took the L.R.C.P. London in 1865, but information having been laid against him for his former misconduct his name was removed from the roll of Licentiates. If he (the son) had erred in associating himself too closely with his father in his practice he was sorry, but he would respectfully request the Council to consider the feelings which he as a son must have felt, and still felt, at the continued persecution directed against his father. As regards the advertising he had absolutely nothing to do with it and he did not think it was for him to dictate to his father in what manner he was to conduct his affairs.

Mr. JONES, in reply to Dr. THORNE THORNE, said he was prepared if the Council desired it to dissociate himself entirely from his father's practice. In reply to Sir DYCE DUCKWORTH, he said that his father had a private hospital and it might be that the advertisements of that institution were carried about the streets by sandwich men, who also gave away handbills.

The Council then deliberated in private, and, having passed the usual series of resolutions, readmitted the public, on which

The PRESIDENT informed Mr. Jones that the charge made against him had been found proved to the satisfaction of the Council, who therefore judged him to have been guilty of infamous conduct in a professional respect and had directed the Registrar to erase his name from the Medical Register.

The Case of John Hamilton Foley.

The Council next proceeded with the case of John Hamilton Foley of Westdene, Locks Heath, Titchfield, Hampshire (registered in Ireland on Sept. 24th, 1883, as Lic. R. Coll. Surg. Irel., 1883, and Lic. K. Q. Coll. Phys. Irel., 1885), who was summoned to appear to answer the following charge as formulated by the Council's solicitor—viz.:

"That, being a registered medical practitioner, he acts as cover to an unqualified person named Walter John Oliver, enabling and authorising the said Walter John Oliver, under cover of his presence and qualifications, to visit and administer medical treatment to patients and carry on a medical practice as though he had been duly qualified. The place where such medical practice is carried on is at Titchfield, Hampshire, and in the neighbourhood of that place."

Mr. Foley attended with his solicitors, Mr. Rodgers and Mr. Craig. Dr. Bateman, who was present, said that he did not appear for the Medical Defence Union as prosecutors, but simply to watch the case on behalf of Mr. Elliott, a practitioner who had formerly employed Mr. Oliver, but had severed the connexion with him so soon as attention was called to the fact that he was following a course of conduct condemned by the Council. It was explained by Mr. Farrar, the solicitor to the Council, and Mr. Muir Mackenzie, the legal assessor, that the inquiry was one instituted by the Council on the complaint of five general practitioners resident in the Titchfield district, whose memorial contained the evidence in support of the charge. Mr. Rodgers read documents bearing on the charge, and Mr. Foley submitted himself to answer questions by members of the Council. It appeared that accused's agreement with Mr. Oliver provided for the latter's employment as assistant, dispenser, and bookkeeper, with no interest in the profits of the practice. Mr. Oliver had been long resident in the district, he was a very popular man with many friends, and Mr. Foley in engaging him had in view his obtaining a companion in Mr. Oliver, who, he thought, would be useful to him in the establishment of a practice. Mr. Oliver had seen to some trifling cases, but no patients that Mr. Foley had not seen, and though he, perhaps, had attended cases of labour, which an unqualified man was allowed to do, these cases had been visited by Mr. Foley himself either the same evening or the following morning. Mr. Foley did not reside at the surgery, but as near to it as he could obtain suitable apartments until a house he was building at present could be completed. Mr. Oliver's name in no way appeared in connexion with the practice, and he had no door-plate showing that he professed to be a medical practitioner. Mr. Foley had never allowed Mr. Oliver to hold himself out as a qualified person. He had not been introduced to the practice by Mr. Oliver, but had obtained it through a medical agent in London, who had been applied to by some old residents in the district for a practitioner to settle amongst them. Mr. Rodgers having addressed the Council on behalf of Mr. Foley the Council deliberated in private. On the public being readmitted,

The PRESIDENT announced the decision that had been come to. He said it had not been proved to the satisfaction of the Council that Mr. Foley was guilty of the charge against him. Therefore Mr. Foley was acquitted, but the Council desired that he should caution Mr. Foley to be careful in what he did in future, for should that gentleman be again summoned to appear before them the Council would view most seriously his conduct.

The Council adjourned.

SATURDAY, JUNE 6TH.

The Council resumed to-day, Sir RICHARD QUAIN being in the chair.

The Apothecaries' Hall of Ireland.

Mr. TICHBORNE informed the Council that he had received a letter from Dr. James Byrne Coleman, one of the suggested examiners in medicine for the Apothecaries' Hall of Ireland, saying it was a mistake to describe him as Examiner in Medicine in the Royal University of Ireland, and asking that the description might be rectified in the memorial. Mr. Tichborne said he could not account for the mistake that had evidently been made.

The Case of Clement Henry Sanders.

The Council dealt with the case of Mr. Clement Henry Sanders (registered as in dental practice before July 22nd, 1878), who had been summoned to answer the following charge, as formulated by the Council's solicitor—viz.:

"That, being a duly registered dental practitioner, you act as cover of and by lending your name and assistance enable an unqualified and unregistered person named Müller to carry on a dental practice and to practise dentistry and dental surgery in all respects as if he were a duly qualified dental practitioner."

The REGISTRAR having read this charge, also read the following report from the Dental Committee:

"The case of Clement Henry Sanders having been referred to them by the Executive Committee to ascertain the facts in regard to such case, the Dental Committee find the facts to be as follows:—(*a*) That Clement Henry Sanders was registered in the Dentists' Register on Aug. 13th, 1884, as having been in practice before July 22nd, 1878, and his address in the Dentists' Register is 88, Queen-street, Exeter; (*b*) that a practice of dentistry for gain is carried on at 88, Queen-street, Exeter, in the name of the said Clement Henry Sanders; (*c*) that Clement Henry Sanders has a dental surgery at Okehampton; (*d*) that Clement Henry Sanders carries on a dental practice at Aldershot; (*e*) that Clement Henry Sanders visits Exeter once every ten days or a fortnight, where he sometimes remains for two or three days at a time, and that the practice at Exeter is carried on in his absence by an unqualified person named Müller; (*f*) Mr. Sanders gave an undertaking to place a qualified assistant in charge of the practice at Exeter and Okehampton at once."

Mr. Sanders did not appear, but was represented by Mr.

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Johnston Watson. Mr. R. W. Turner appeared for the British Dental Association.

In answer to an observation by the PRESIDENT,

Mr. WATSON stated that Mr. Sanders had carried out the undertaking made to the committee. "At once" was of course to be construed as meaning "a reasonable time," and since April 29th last he had had the services of a qualified assistant. He submitted that in these circumstances the Council would be properly advised if they took no steps against Mr. Sanders.

Mr. TURNER, who contended that "at once" should have meant an appointment of a qualified assistant much earlier than April 29th, mentioned that when the case first arose the British Dental Association had stated that their desire was rather to have it made clear that the resolutions of the Council in respect to "covering" were not to be treated as a dead letter than to unduly press the charge against the accused.

After the Council had considered the case in private,

The PRESIDENT announced that the charge made against Mr. Sanders had been proved to the satisfaction of the Council, but they had resolved, instead of proceeding to pass judgment, to postpone further consideration of the case until the session in November next. The Council would then expect Mr. Sanders himself to appear before them and give them an assurance that his conduct was satisfactory.

THE PENAL SECTIONS.

The Council spent the rest of the sitting *in camerâ* discussing documents from the Medical Defence Union with reference to the working of the penal sections of the Medical Acts.

The Council adjourned.

MONDAY, JUNE 8TH.

The Council resumed, Sir RICHARD QUAIN being in the chair.

Penal Sections of the Medical Acts.

The Council sat again *in camerâ* for some time discussing the letter of the Medical Defence Union with regard to the working of the penal sections of the Medical Acts.

In this letter the Council of the Medical Defence Union directed special attention to Section 40 of the Act of 1858, which ran as follows:—

"Any person who shall wilfully and falsely pretend to be or take or use the name or title of a physician, doctor of medicine, licentiate in medicine and surgery, bachelor of medicine, surgeon, general practitioner or apothecary, or any name, title, addition, or description implying that he is registered under this Act, or that he is recognised by law as a physician, or surgeon, or licentiate in medicine and surgery, or a practitioner in medicine, or an apothecary, shall, upon a summary conviction for any such offence, pay a sum not exceeding twenty pounds."

The Council of the Medical Defence Union recounted various circumstances connected with prosecutions under this section and concluded by saying:—

"We venture to submit that the facts and circumstances briefly herein enumerated are sufficient to indicate that the Medical Act does not, as framed and construed, fulfil the purpose for which it was enacted—viz., 'to enable persons requiring medical aid to distinguish qualified from unqualified practitioners,' and, further, that, owing to the ambiguous language in which Section 40 is framed, the result of each prosecution is dependent upon the interpretation placed upon such sections by each individual magistrate, and that no finality can be reached so long as the law is, as Mr. Justice Henn Collins stated, 'in a fog.' We, the Council of the Medical Defence Union, beg to urge most earnestly, in the interest alike of the public and the medical profession, that your Council will take such steps as may be necessary to obtain an amended Act which will prevent the possibility of such varied interpretations of the law in the future, so that prosecutions may be successfully conducted against unqualified practitioners, and that the proper value of qualification and registration shall be thereby legally established."

The PRESIDENT, when the Council re-admitted strangers, asked Mr. Muir Mackenzie to make a statement with reference to the letter.

Mr. MUIR MACKENZIE said: In answer to the question upon which my opinion is asked, which I understand to be whether it is desirable that this Council should submit to Parliament a Bill for the amending of the Medical Acts by altering the provisions of Section 40 of the Act of 1858, my opinion is that it would, at any rate at present, be premature to do so, especially as I think that any such proposed legislation would be involved in considerable difficulty. I have personally, on the instruction of other distinguished medical bodies, drawn or attempted to draw more than one clause for the amendment of the law as enacted in Section 40 of the Act of 1858, but I have found it a very difficult task. Any such clause would, I think, lead to very considerable discussion in Parliament of that and other provisions of the Medical Acts which might have the effect of ultimately weakening some extremely beneficial provisions of these statutes. I cannot agree that there are such difficulties in the way of securing a conviction under Section 40 as makes it necessary that there should be an attempt at further legislation. I think that in a case presented to the courts before a strong and competent tribunal there is no difficulty in securing a conviction. Speaking from my experience of the cases in which I have personally been engaged as counsel, no serious difficulty has been found in securing a conviction in a case in which the charge is carefully framed so as to bring it within the provisions of Section 40, and also in which the evidence is careful and abundant, and also, I am bound to add, in which one has a sufficiently strong tribunal. The tribunal to whom one has to go is a justice of the peace; and I am not wanting in respect to that body if I say that the quality of justice administered by justices of the peace all over the country varies considerably. Now, the misfortune of these two cases in my opinion is that they will afford a handle to weak magistrates to dismiss charges made under Section 40, and so far as one of the cases was a decision that a person might assume the title of M.D. with U.S.A. attached to it with impunity it was a very unfortunate decision. But, on the other hand, one may contrast with these decisions the decision in the case of Steele against Ormsby, where a person signed himself M.D. with Bc (signifying Botanic) attached to it, and no difficulty was experienced in obtaining a conviction. In Regina *v.* Baker, where a person with an American degree signed a certificate M.D., no difficulty was found in obtaining a conviction and the full penalty was imposed; and in the case of Ferdinand, where a man assumed the title of M.D. U.S.A., where there was abundant evidence that the persons to whom he assumed it believed that he was a duly qualified person and that the certificates which he gave were effective certificates of a qualified medical man, there again no difficulty was experienced in obtaining a conviction and the fullest possible penalty. In addition to those cases no difficulty was experienced in obtaining convictions in some cases in which the practitioners had been removed from the Register and had had their qualifications taken away by the bodies which had granted them, and who had yet continued to assume the titles granted by those bodies. In one of those cases it had been contended that it was not illegal for the practitioner to assume a title which had been originally granted to him, although it had been taken away, but that contention was dismissed by a very strong magistrate, and a conviction was secured. The one case which is doubtful and is left doubtful by these decisions, and upon which one of the judges expressed his opinion that a decision ought, if possible, to be obtained, was the case of a person who is struck off the Register, but whose registrable qualification is not taken away by the qualifying body which granted it, and who continues nevertheless to practise under that qualification. There is a strong dictum of Lord Coleridge in the case of the Queen *v.* Baker that a person who so practises is practising in circumstances which imply falsely that he is registered in respect of the qualification which he assumes. But suffice it to say that the cases of Frickhart and Bridgewater did not present that particular point of law in a form in which it could be conveniently decided by the High Court. I venture to think that the breakdown of these two cases was a breakdown mainly due to the way in which the magistrate dealt with it and is by no means such a serious matter as is thought. On the other hand, I venture to think that any proposition to amend legislation would be embarking upon a very troublesome and risky adventure, and my opinion is that there is no present necessity for it and that it is premature to invoke the assistance of Parliament. I think that any amendment to Section 40 should be considered with reference to rather larger questions and possibly with a view to including a larger number of false assumptions of titles than is included in that section, but merely to propose legislation for the purpose of more easily securing conviction under that section is, I venture to suggest to the Council, inexpedient.

The Apothecaries' Hall of Ireland: Decision of the Council.

The Council then resumed the consideration of the application of the Apothecaries' Hall of Ireland for the appointment by the Council of assistant examiners in medicine and surgery. On Wednesday Mr. Tichborne

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moved that the application be acceded to, but he withdrew the motion in favour of one by Sir William Turner to this effect—viz.:

"That the Council defers for the present the expression of an opinion on the application of the Apothecaries' Hall of Ireland for the appointment of assistant examiners in medicine and surgery, and directs communications to be made to the Apothecaries' Hall and to the Royal College of Surgeons in Ireland with the view to their reconsideration of their respective positions, so that such a combination may be effected between them as may ensure that an efficient standard of examination shall be maintained by the General Board of Examiners which will be satisfactory to the Medical Council."

Mr. MILLER (clerk) read a short statement on the legal aspect of the question which had been prepared by Mr. Muir Mackenzie. In this the Council were reminded that the Privy Council had expressed no opinion upon the appeal of the Apothecaries' Hall. During the argument their lordships intimated that in their view the case, so far as they had heard it, was one which might advantageously be reconsidered by the General Medical Council on a further application to be made by the Hall in terms different from those of the application which was refused, and the further hearing of the case was accordingly postponed to enable the Hall to submit an application in the form suggested by their lordships. The suggestion that the application of the Hall should be again made and considered came from members of the tribunal, which was not only the highest in the kingdom, but was also the tribunal of appeal from the decisions of the General Medical Council constituted by Act of Parliament. The suggestions which had been made by the Lords of the Council therefore not only deserve most earnest consideration, but in his opinion afforded ample ground for the General Medical Council to review and alter if they saw fit their formal decision. If the General Medical Council thought fit to take this course the necessity of obtaining a decision on the point of law which was raised by the appeal of the Privy Council and the danger of anything amounting to a difference between the General Medical Council and the Privy Council would be avoided. The General Medical Council could not reasonably be found fault with for carrying out the spirit of an instruction which came from authorities of the highest eminence all of them desirous that the authority of the General Medical Council's decisions should not be weakened.

Dr. CHURCH said he had given this matter some attention and he found that as long ago as 1868 their Visitors expressed dissatisfaction with this examination, and again in 1875, and again in 1882. Since 1886 they had reported the examination as insufficient each time they had visited it. No sooner had the Conjoint Board of the Apothecaries' Hall and the Royal College of Surgeons in Ireland been established than they began to accept men for examination who had not got certificates of attendance on all the subjects required. When the attention of this Council was drawn to the matter, the body said at once, "Oh, we will require certificates in them all, just as you wish." He heard Mr. Tichborne say that no Licentiate of the Apothecaries' Hall had ever been found guilty of unprofessional conduct or, as the phrase went, of infamous conduct in a professional respect. When he heard that he thought this body was warmly to be congratulated, but, unfortunately, the statement was not accurate. If Mr. Tichborne would look down the erasure list of this Council he would find that in 1880 a Licentiate of the Apothecaries' Hall of Ireland had his name erased from the Medical Register for infamous conduct in a professional respect.

Mr. MUIR MACKENZIE, replying to a question put to him by Dr. Church, said that if the Council were to refuse to entertain the further application, then the appeal of the Apothecaries' Hall from the prior refusal would come on again before the Privy Council for consideration, and that would involve a decision of the point of law whether the refusal of the Council in such circumstances was absolute. The Privy Council had suggested to the one side to apply again and to the other to consider that application.

Dr. MACALISTER moved as an amendment to Sir William Turner's motion:—

"That the President be requested to inform the Lord President of the Privy Council as follows:—(*a*) That the General Medical Council has received from the Apothecaries' Hall of Ireland an application for the appointment of Assistant Examiners in Medicine and Surgery for the purpose of enabling that body to hold an independent qualifying Examination in Medicine, Surgery, and Midwifery. (*b*) That it appears to the General Medical Council that the appointment of such Assistant Examiners would not enable the Council in this particular case to fulfil its statutory duty of maintaining the standard of efficiency required in examinations which qualify for registration in the Medical Register. (*c*) That the General Medical Council has accordingly felt it to be its duty to decline to accede to the application."

He asked the Council to consider carefully the latter part of Sir William Turner's motion. At the present moment the Conjoint Board of the Apothecaries' Hall and the Royal College of Surgeons in Ireland actually existed; it existed for some five or six years until the remanent candidates had all been examined. The Conjoint Board stood under the ban of this Council. It had been reported as insufficient, and this Council founded their opinion that it was insufficient not only upon the inspection of examinations but also upon the reports of the Examination Committee, saying that the constitution and status of the body in question were not such as to render it capable of maintaining a sufficiently high standard either in education or in examination. It was brought to the notice of the Council that this conjoint body was advertising that certain certificates which were required by all other bodies were not required by them, and that, therefore, students might find it convenient to come up for their examinations in preference to others.

Mr. TICHBORNE: I rise to order. Would Dr. MacAlister name the document to which he refers, because we emphatically deny that we ever issued such a document?

Dr. MACALISTER said he took full responsibility for what he said. The document would be found in sufficient fulness in the proceedings of this Council, and, as a matter of fact, he held in his hand at the present moment a copy of it and would be glad to show it to Mr. Tichborne. The Conjoint Board which they were asked to continue indefinitely was one which had been condemned in matters of education as well as in matters of examination. At the present moment they had reported it to the Privy Council as insufficient. The Privy Council had the discretion upon such a report to order that these examinations should cease to be qualifying. The Privy Council received the report of this Council and said, "Well, we understand this body is moribund, and in these circumstances we do not propose to do anything in the matter," so that the Conjoint Board was reported to the Privy Council and the latter body had given no decision as to whether it should continue to be a qualifying body solely upon the ground that it was moribund and would very soon come to an end. If it was established again then the one cause of the action of the Privy Council would cease, and it would be for the Privy Council to consider the report of this Council that the examination was insufficient. He wished this Council to understand the responsibility they were undertaking if the bodies agreed to reunite. It seemed to him an extremely grave one. Formerly the Examination Committee advised the severance of the two bodies, and now it was proposed that the Council advise their reunion. Whatever irregularities or blunders were made would come upon the back of this Council and not upon that of the Conjoint Board. Supposing they reported again that the Conjoint Board were not doing their duty, what would be the answer of the Privy Council? They would say that the matter was in the hands of this Council, that they were responsible for the Conjoint Board, and must see it through. In this way the Council would be paralysed in the discharge of their duty. A good deal had been made of the cry that they were disfranchising a body by a side wind, but such was not the case, and a little inquiry would show that no body could be disfranchised without a most elaborate process.

Dr. BATTY TUKE seconded the amendment.

Mr. TICHBORNE said he desired to correct an error made by Dr. MacAlister. That gentleman said that the licensing body had issued certain regulations to which he took great exception and he introduced a document. That document the licensing body had nothing at all to say about. It was the advertisement of the school belonging to the Royal College of Surgeons in Ireland. It was issued in 1893 and two or three days afterwards, at the next meeting of the Conjoint Committee of the two bodies, they drew the attention of the Council of the Royal College of Surgeons in Ireland to it and requested it to be withdrawn. But let the Council clearly understand that the advertisement did not emanate from the Conjoint Board and that they had nothing whatever to do with it.

Dr. ATTHILL said it was with great reluctance that he took part in this debate, but he could not remain silent, for he regarded Sir William Turner's motion as a retrograde movement which would have disastrous consequences, not only on the school of medicine in Ireland, but on the whole profession. He could understand members of the Council voting to give examiners to the Apothecaries' Hall for various reasons, but he could not understand them voting to go

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back upon a system and re-instate a body which had been so emphatically condemned. Such a course would, in his opinion, be discreditable to this Council. They were not a very popular body as it was. The medical public was disappointed with them, and he thought they should take care to do nothing to lower themselves in the respect of the profession. When the Act of 1886 was passed and the Apothecaries' Hall of Ireland was constituted a qualifying body he considered it his duty to test the feeling of the Royal College of Physicians of Ireland as to whether the Hall should be admitted as a third party into a combination. He used every effort to induce the College to favour the conjunction, but out of the forty Fellows he only got four to vote with him. At the time he thought a conjunction was possible; now he knew it to be impossible. He could not advocate it now for the simple reason that in the interval the status of the Apothecaries' Hall of Ireland instead of being heightened had been materially injured and lowered by the revelations of the last few years. In the recent election of a direct representative one of the candidates was an avowed advocate of the Apothecaries' Hall of Ireland and went forward entirely as such, and he received only about 400 votes out of 2000. That showed the opinion of the medical profession in Ireland on the subject. There had been a special meeting of the Royal College of Physicians of Ireland since he came to London, a meeting largely attended, at which the opinion was unanimously expressed that they could not comply with the request of the Royal College of Surgeons in Ireland to confer with them as to the expediency of creating a tripartite examination. The Council might take that as final, at any rate for this generation of the Royal College of Physicians. He could not help thinking that if the Council gave way in this matter they would be sacrificing their self-respect, and they certainly would not be improving their position in the estimation of the medical profession.

Dr. BATTY TUKE asked Sir Philip Smyly, the representative of the Royal College of Surgeons in Ireland, and Mr. William Thomson, its President, whether there was any chance of a combination being come to between their College and the Apothecaries' Hall of Ireland during the next six months.

Sir PHILIP SMYLY replied that the question had not been before the Council of the College, but personally he did not think they were likely to combine again with the Apothecaries' Hall of Ireland.

Mr. WILLIAM THOMSON said that from what he knew of the views of the Council of the College he had no doubt that nothing whatever would be done with regard to carrying out the suggestion for another combination with the Apothecaries' Hall of Ireland. It would be considered if it came before them, but that the Royal College of Surgeons in Ireland would join again with the Apothecaries' Hall of Ireland he did not believe to be in the least degree possible.

Dr. BATTY TUKE asked whether after these declarations it was worth while going on with Sir William Turner's motion.

Sir JOHN BANKS said he had no desire to follow Dr. Atthill into all his observations, but there was one point to which he desired to call attention. Dr. Atthill spoke of his regard for the honour of the profession in Ireland. He thought he (Sir John Banks) could claim that he had as lively an interest in the honour of the profession in Ireland as Dr. Atthill or anybody else, and he wished to say that he had known for many years members of the Apothecaries' Hall of Ireland, highly respectable gentlemen, general practitioners, men of the highest character, and he believed, as he said on Wednesday, that the Apothecaries' Hall of Ireland would carry out any promise they made. One of the arguments used for opposing the Apothecaries' Hall of Ireland was that they had neither a school nor a museum, but he should like to know whether all the other bodies represented on this Council had schools and museums. He had the greatest pleasure in supporting the motion of Sir William Turner, which he believed offered a way out of the difficulty.

Sir WILLIAM TURNER said the discussion had not been upon Dr. MacAlister's amendment. Nobody, so far as he was aware, had had a word to say in regard to it, and all the support the seconder had given it was by putting two questions. The discussion had really been on his (Sir William Turner's) motion. He could not withdraw the motion. It was impossible for him to withdraw it. Mr. Tichborne had withdrawn the original motion debated on the previous Wednesday on the understanding that his (Sir William Turner's) motion should go to the vote. He therefore as a man of honour, and in justice to Mr. Tichborne, must adhere to his motion. When the Council were voting he hoped they would bear that in mind, for the motion would be pressed to the vote even if Dr. MacAlister's amendment was not carried. He did not think Dr. MacAlister had quite fully represented the motion in his criticism of it. Dr. MacAlister had spoken of it merely as if it proposed a restoration of the Conjoint Board on the old basis. He had expressly pointed out that he had something more in his mind than a restoration on the old basis. What, in fact, he had contended for was that the restoration should be on the basis of both bodies taking the responsibility of the entire examinations and not that each body should regard itself as responsible only for that part of the examination which it more immediately represented. If a board were formed more on the basis of the London or the Scottish Conjoint Board there would be a much more effective control of the examinations than there had been up to this time. That was what he contended for when he proposed the motion and what he wished the Council to think was in his mind.

Sir WALTER FOSTER pointed out that when Mr. Tichborne withdrew the original motion in favour of Sir William Turner's proposal there was an honourable understanding that he did so without prejudice to his right to move an amendment afterwards. If the Council adopted Dr. MacAlister's amendment they would carry a motion in direct antagonism to Mr. Tichborne's motion. The highest tribunal in the land with the greatest consideration for this Council and with the kindest intentions had given the Council a very broad hint of what it should do, and he hoped the Council would hesitate before it voted against Sir William Turner's very judicious motion, which he thought would get the Council out of a difficulty which might otherwise become a difficulty that would hang about their necks for many succeeding sessions.

The PRESIDENT called attention to Section *b* of the amendment, which he characterised as the most self-condemnatory of the Council that had ever been put before it. He said the reply to it would be this: "If you cannot maintain efficiency we must do it for you."

Dr. MACALISTER thought the Privy Council placed it within their discretion to answer the question, Is it consistent with your duty or inconsistent to start a new examining board, and if you do, do you think it will work? Their answer to it, and he considered it was an answer that would be received by the Privy Council with respect, was that they did not consistent with their duty, and that if set up the board would not work. After the Privy Council had received their answer they might tell them to set up the board.

The Council divided on the amendment, which was rejected by 13 votes to 12, four members declining to vote. Sir William Turner's motion was then put, when it was found there was an equality of votes, 13 being for the motion and 13 against it, three members, including the President, declining to vote. The President being called upon to give a casting vote gave it in favour of the motion, which thereupon became the finding of the Council.

DIVISION LIST.

Vote on Dr. MacAlister's Amendment.

Against, 13.

The President.	Dr. Gairdner.	Sir Philip Smyly.
Mr. Wheelhouse.	Sir John Banks.	Sir Walter Foster.
Sir William Turner.	Dr. Glover.	Dr. Philipson.
Dr. Heron Watson.	Mr. Tichborne.	Dr. Bruce.
Dr. McVail.		

For, 12.

Mr. Bryant.	Dr. Thorne Thorne.	Dr. Leech.
Sir Dyce Duckworth.	Mr. Thomson.	Dr. MacAlister.
Dr. Church.	Dr. Fraser.	Dr. Tuke.
Dr. Atthill.	Dr. Cameron.	Dr. Wm. Moore.

Did not vote, 4.

Dr. Pettigrew.	Mr. Teale.	Mr. Carter.
Sir Wm. Roberts.		

Absent, 1.

Dr. Haughton.

Vote on Sir W. Turner's Motion.

For, 13.

Mr. Wheelhouse.	Sir John Banks.	Sir Philip C. Smyly.
Sir William Turner.	Mr. Teale.	Sir Walter Foster.
Dr. Heron Watson.	Dr. Glover.	Dr. Philipson.
Dr. McVail.	Mr. Tichborne.	Dr. Bruce.
Dr. Gairdner.		

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Against, 13.

Mr. Bryant.	Mr. Thomson.	Mr. Carter.
Sir Dyce Duckworth.	Dr. Fraser.	Dr. MacAlister.
Sir William Roberts.	Dr. Cameron.	Dr. Tuke.
Dr. Atthill.	Dr. Leech.	Dr. Wm. Moore.
Dr. Thorne Thorne.		

Did not vote, 3.

The President.	Dr. Pettigrew.	Dr. Church.

Absent, 1.

Dr. Haughton.

The number for and against the motion being equal, the PRESIDENT gave his casting vote in favour of the motion.

The Case of Mr. R. M. Theobald.

The REGISTRAR (Mr. Miller) read a letter from Mr. R. M. Theobald applying for a rehearing of his case.

Mr. BRYANT said that the Royal College of Surgeons of England had received repeated applications from Mr. Theobald for the restoration of his name to their Register, but up to the present time they had refused compliance, not so much in the way of punishment to the man as in that of warning to others against following such courses as had led to the expungement of Mr. Theobald's name. He hoped the Council would continue to refuse restoration so long as the Royal College of Surgeons continued to refuse.

Mr. FARRER, the solicitor, pointed out that Mr. Theobald wished to be re-heard.

Dr. MACALISTER said that the case had been fully gone into in Mr. Theobald's presence during last November session, and there should be a motion from the chair that there was no cause for re-opening the case.

Dr. GLOVER said he would like to know clearly whether their hands were or were not tied. Were they able to register Mr. Theobald before the Royal College of Surgeons of England had restored his diploma?

Mr. FARRER: You cannot put a man upon the Register who has not got a registrable qualification.

Mr. BRUDENELL CARTER mentioned that Mr. Theobald had lost his diploma before the Council took his name off the Medical Register.

The PRESIDENT moved: "That Mr. Theobald be informed that in the opinion of the Council no cause has been shown for the re-opening of his case."

This proposal was unanimously agreed to.

Withdrawal of Qualification.

A communication from Mr. R. A. Woods, secretary of the Council of the Royal College of Surgeons in Ireland, intimating that the name of Mr. Samuel Frederick Murphy, whose name was removed from the Medical Register by the General Medical Council in June last, had been removed from the list of Licentiates of the College, was, on the motion of Mr. WHEELHOUSE, received by the Council and entered on their minutes.

Registration Changes.

Dr. HERON WATSON moved that the Council receive from the Executive Committee and adopt the following suggested standing order for the carrying out of the Council's resolution of last session:—

"11. In accordance with the provisions of Section XXV. of the Medical Act (1858) the Branch Registrars shall, with all convenient speed, send to the General Registrar and such other Registrars a certified copy of all the changes so made in the Branch Register; and the General Registrar shall forthwith cause such changes in the Branch Registers to be made in the General Register, and he shall intimate all changes made in the General Register to each Branch Registrar, so as to secure that in the office of each Branch Registrar an authoritative copy of the General Register shall be available for consultation and reference."

Mr. WHEELHOUSE seconded, and the motion was agreed to.

Documents in Penal Cases.

Dr. CHURCH moved an amendment to the standing orders so as to secure that, along with the business programme for the session, which is sent to members three clear days before the session begins, there should also be sent to them copies of the documents and evidence in the penal cases to be brought up during the session.

After some discussion, in which Mr. MUIR MACKENZIE thought the course suggested could be adopted without inconvenience, the motion, which was seconded by Mr. WHEELHOUSE and supported by Dr. LEECH, was agreed to.

Society of Apothecaries of London.

On the motion of Mr. BRUDENELL CARTER, seconded by Mr. BRYANT, it was agreed—

"That Mr. C. P. Lockwood, F.R.C.S., L.S.A., assistant surgeon to St. Bartholomew's Hospital, be appointed an Assistant Examiner in Surgery to the Society of Apothecaries for a term of five years, in the room of Mr. Arbuthnot Lane, who is retiring from office by rotation."

Mr. BRYANT remarked that he knew Mr. Lockwood very well as a very excellent surgeon and a good examiner.

Penal Powers of Qualifying Authorities.

Mr. BRYANT, on behalf of the Executive Committee, presented a report on the disciplinary or penal powers of the qualifying medical authorities. He said he did not propose to read the whole report. The pith of it was contained in the following passages:—

"Information has been forwarded by all the bodies, and an analysis of the replies thus furnished shows that the following Universities have no, or only insufficient, disciplinary powers: The four Scottish Universities; the University of Durham has power only to remove a name from the University Calendar, but cannot take away the degree; the University of Cambridge; the Victoria University, which has no powers; and the Royal University of Ireland (formerly Queen's University), which has no powers. With regard to the several Colleges it is stated that they have sufficient disciplinary powers, that the Apothecaries' Society of London can strike off the list of Licentiates any name erased from the Medical Register, but cannot cancel the diploma, and that the Apothecaries' Hall, Dublin, can only recover fines in the superior courts. It would from this summary appear that there are six universities which do not possess any disciplinary powers, and that there are in addition two universities which possess only partial or limited disciplinary powers over their graduates. The result is this, that however gross the misconduct of a graduate may be, whether as a convicted felon or declared by the General Medical Council guilty of infamous conduct in a professional respect, for which his name has been removed from the Medical Register, he still retains the degree and the title conferred upon him by any one of these universities. Such a state or condition of matters must cause very considerable regret to the authorities of the university which has conferred the degree, and which it has no power to cancel. The association of their names with such black sheep amongst them must also cause much regret to be felt by the graduates and must lead them to feel how desirable it is that the authorities of the University should obtain powers to take away degrees which are thus discredited. Notwithstanding their removal from the Register graduates are now in practice under the title which they have obtained, greatly to the injury and perplexity of the public. On reference to the list of University graduates who have been declared guilty by the General Medical Council of infamous conduct it is found in regard to the Scottish universities that four such graduates held the degree of the University of Edinburgh, four that of the University of Glasgow, one that of the University of St. Andrews, and two that of the University of Aberdeen. The General Medical Council may entertain a well-founded conviction that when this state of matters is brought to the notice of the Scottish Universities they will use all the powers they possess or can acquire to remedy such a discreditable state of matters. The Committee recommend that the Scottish Universities Commission now sitting, which regulates the proceedings of Scottish universities, should be approached with the object of obtaining their assistance in strengthening the disciplinary powers of the Scottish universities in these respects. The Council may, therefore, think fit, in addition to bringing the subject before the several universities, to submit this report to the Statutory Commission direct. With reference to the English universities, two do not possess complete disciplinary powers, and one—the Victoria University—possesses none at all. One of the Irish universities—the Royal University of Ireland—likewise possesses no disciplinary powers. Of the graduates of those universities whose names have been erased from the Medical Register, one held the degree of the University of Cambridge; one held the degree of the University of Durham (his name has been erased from the list of graduates, but he cannot be deprived of his degree); and two held the degree of the Queen's University of Ireland. There can be but very little doubt that by proper representation to the Privy Council means would be afforded to these universities, by the insertion of a clause in their respective charters, for remedying this objectionable state of matters. With that view the Committee recommend that a copy of this report, if adopted by the Council, be forwarded to the Privy Council asking special attention to the remedying of this grievance."

Mr. BRYANT also read the following appendix to the report:—

"4, Temple-gardens, E.C., May 27th, 1896.

"DEAR SIR RICHARD QUAIN,—With reference to the report of the committee on the disciplinary or penal powers of the qualifying medical authorities and my letter of yesterday, the questions which it raises derive increased importance from the cases recently tried in the Courts of Justice, in which practitioners who have been struck off the Register have continued to practise under the titles of which the qualifying bodies had no power to deprive them; and the question has been raised whether such a practitioner can be successfully charged with falsely assuming a title which implies that he is registered.

"The judges, and particularly Mr. Justice Collins, have stated from the Bench that in their opinion the question is one of great public importance, on which the law, as laid down in the decisions of the Courts, is in an uncertain and unsatisfactory state.

"It will thus be of the greatest public benefit if the charters of the bodies which have insufficient penal powers can be amended as suggested in the report.

"It seems to me that in each case the formal procedure would be for the university or other body to petition her Majesty in Council for amendment of its charter.—Believe me, yours very truly,

"M. MUIR MACKENZIE."

On the motion for the adoption of the report, which was moved by Mr. BRYANT and seconded by Mr. WHEELHOUSE,

Dr. GLOVER, as the proposer of the resolution which referred the matter dealt with to the executive committee, expressed satisfaction at the admirable report which had

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been presented. He was sure all the qualifying authorities, and particularly the universities, would feel grateful for it. The universities had shown a creditable desire to have more power than they had at present and he hoped they would get it.

Sir JOHN BANKS knew that the two Irish universities wished to have more power of the kind in question.

Dr. MACALISTER said that it was only a short time since the Queen in Council had approved of the extension of penal powers to the University of Cambridge. They, however, had sought for more than had been granted.

Dr. LEECH expressed his intention to urge upon the authorities of the Victorian University to go in the direction the Council desired.

Dr. PHILIPSON felt certain that if the recommendations of the committee were given effect by any of the bodies every endeavour would be made on the part of the governing body of the University of Durham to obtain the necessary powers by an amendment of their charter.

Dr. HERON WATSON said there could be no objection to the Council approaching the Scottish Universities Commission in regard to this matter; but he begged to state that Sir William Turner had already made a long statement to them on the subject, with the only result that he was informed the Act gave them no powers to take up such a subject or put forth any document in regard to it.

After further remarks it was agreed: "That this report be adopted and the recommendations therein contained be carried into effect by forwarding copy of the report to (1) the universities and other boards concerned, (2) the Scottish universities, and (3) the Privy Council."

Dental Registration.

The Council considered the following communication from the Privy Council in regard to an application from Mr. Alfred Perkin Merrill, 52, Collins-street, Melbourne, Victoria, for registration by the General Medical Council as a dentist, viz.:—

"76,556. "Whitehall, Feb. 21st. 1896.

"SIR,—I am directed by the Lords of the Council to transmit to you the accompanying copy of a petition of Mr. Alfred Perkin Merrill, a dentist practising at Melbourne, in the colony of Victoria, appealing to the Privy Council against the decision of the General Council of Medical Education and Registration of the United Kingdom not to place his name on the Dentists' Register, together with a copy of an affidavit sworn by Mr. Merrill in regard to his qualifications as a dentist, and I am to request that, in laying the same before the General Medical Council, you will move that body to furnish their lordships with any observations they may desire to offer upon the appeal of Mr. Merrill. "I am, Sir, your obedient servant,

"C. L. PEEL.

"The Registrar of the General Medical Council."

The REGISTRAR read the following observations on the case by the Council's legal adviser:—

"1. The 8th Section of the Dentists Act, 1878, provides that a person who is not domiciled in the United Kingdom and shows that he holds some recognised certificate (as defined in the Act) granted in a British possession and that he is of good character is to be entitled without examination in the United Kingdom to be registered as a colonial dentist. 2. The 9th Section of the same Act provides that where a person who is not a British subject shows that he obtained some recognised certificate (as defined in the Act) granted in a foreign country, and that he is of good character and continues to hold such certificate, is to be entitled without examination in the United Kingdom to be registered as a foreign dentist in the Dentists' Register. 3. By Section 10 of the Act the certificate granted in a British possession or in a foreign country which is to be deemed such a recognised certificate as is required for the purposes of registration is to be such certificate, diploma, membership, degree, &c., or other title, status, or document as may be recognised for the time being by the General Council, as entitling the holder to practise dentistry or dental surgery. The following facts in relation to the application of Mr. Merrill for registration are material for the purposes of inquiring whether he satisfies the foregoing statutory conditions. 4. In the year 1862 and 1864 Mr. Merrill, being at the time an American citizen, practised dentistry in Canada and in Barbadoes. 5. In 1886 Mr. Merrill obtained from the Philadelphia Dental College his diploma of D.D.S., and subsequently for some years practised as a dentist in New York. 6. In the month of April, 1890, Mr. Merrill was registered in the Dentists' Register of the Colony of Victoria, and at the same date, which is not stated in the papers, Mr. Merrill became a naturalised British subject in Victoria. 7. As regards the American diploma held by Mr. Merrill in the year 1879, the General Council caused very full inquiries to be made in reference to the courses of study and examinations required by several of the foreign and colonial dental colleges and institutions with the view of ascertaining whether the certificates or diplomas of those institutions furnished sufficient guarantees of the possession of the requisite knowledge and skill for the efficient practice of dentistry; and amongst the diplomas or certificates which were the subject of inquiry were those granted by the Dental College of Philadelphia. The General Council ascertained that in this institution, as in several others, there was no preliminary examination, that two years only of professional study were required, and that the examination in each was conducted solely by the teachers and officers of the institution. The General Council, therefore, having regard to the requirements which are necessary for diplomas in dentistry in the United Kingdom, which comprise a preliminary examination and four years of professional study, felt unable to recognise the certificate of the Philadelphia Dental College as one which ought to entitle the holder to registration as a Foreign Dentist in the *Dentists' Register*. 8. As regards the registration of Mr. Merrill in the *Dentists' Register* of Victoria, the General Council have not hitherto been able to recognise that a person who is so registered, but who does not possess any colonial diploma or licence, is the holder of a certificate which furnishes sufficient guarantees of the possession of the requisite knowledge and skill for the efficient practice of dentistry or dental surgery. 9. Mr. Merrill apparently is applying for registration as a colonial dentist and not as a foreign dentist. The possession of the foreign diploma, even if it were recognised, would not entitle Mr. Merrill to be registered under Section 8 of the Act as a colonial dentist. 10. The only qualification therefore which Mr. Merrill possesses, on which he can found an application for registration as a colonial dentist, is the fact that he is registered in the *Register* of Victoria. But, as already stated, the General Council have not been able to and do not recognise registration in this Colonial Register as of itself entitling an applicant to be registered under Sections 8 and 10 of the Act."

Sir WILLIAM TURNER moved "That the observations prepared by the Council's legal adviser on the petition of Mr. Alfred Perkin Merrill be adopted by the Council and forwarded to H.M. Privy Council as the answer of the Medical Council to the appeal."

Mr. WHEELHOUSE seconded, and the motion was agreed to.

Practical Midwifery.

Dr. BATTY TUKE read a report by the Education Committee on the recommendations of the Council in respect of practical midwifery. This set forth in detail the regulations of the various licensing bodies on the subject, and went on to show that as these regulations afforded but meagre information bearing on the point at issue the committee had directed the Registrar to issue a circular in the following terms:—

"With reference to a subject now under investigation by the Medical Council in regard to the subject of practical midwifery and the Council's recommendation that every student should be required either to attend for three months the in-door practice of a lying-in hospital or to have been present at not less than twelve labours, at least three of which he should have conducted personally under the direct supervision of a registered practitioner, I am directed to request that you will state, for the information of the Council, what method is adopted by your body to ensure that the requisite number of labours are so personally conducted under the direct supervision of a registered practitioner and by whom the certificate of such attendance is signed."

The report went on:—

"At this point the question has to be determined what meaning is to be attached to the words 'direct supervision' contained in the recommendation. In the opinion of the committee they ought to imply that the labours had been conducted in the presence of the practitioner, who could accordingly give actual clinical instruction on the three cases referred to in the recommendation during all the stages, and who should further attend with the student during the whole puerperal period, and give instruction in the after-treatment of mother and child. If this interpretation of the recommendation be accepted it is evident from the general tenour of the replies of the bodies that little assurance is given that the recommendation is acted on in this sense. For the most part the certificate of any registered practitioner is accepted, and reliance is placed on the good faith of the certifier. But the practitioner has nothing to guide him as to the amount and kind of supervision he is expected to certify to. This may range between the mere introduction of the student to a case and full attendance throughout the whole puerperium. In order to secure attention to these special points and to ensure as far as possible uniformity of practice the committee recommend that the Council should issue to the licensing bodies a form of certificate to be presented by candidates setting forth the number of cases conducted under supervision, the number at which the practitioner has been present, and that the student attended the cases throughout the puerperal period. The concluding clause of the reference is general, asking the committee to report on any modification of the recommendation they may think to be desirable. Judging from previous motions which have been before the Council, and from the fact that the petition of the Council of the British Medical Association, advocating an increase of the number of cases to be attended by the student, was referred to the committee at the same time, it may be presumed that the Council desired a report as to whether, in the opinion of the committee, any extension of the existing recommendation as regards numbers of cases is called for. The questions involved in the consideration of this subject are complex. They have been debated in the Council on several occasions, and have given rise to the expression of very diverse opinions. The Council has no evidence before it that education in respect of midwifery is deficient in Great Britain and Ireland. In no single instance have the inspectors of examinations reported 'insufficiency' as regards midwifery; nor is the committee aware that any representation to that effect has come from the outside public. The petition of the Council of the British Medical Association assigns no reasons in support of its opinion that the existing recommendation is not satisfactory. The advocates of extension maintain that the standard of practical teaching in midwifery is inferior to that required by the licensing boards in the case of medicine and surgery; that the requirements of the Council fall short of those of other countries; and that it is impossible for the student to gain any adequate amount of experience from the observation of twelve cases. It has been argued, on the other hand, that as the main object of clinical midwifery is to illustrate the process of normal labour and the general management of lying-in women, which can be attained by the observation of a limited number of cases, the demand for more than now prescribed is unnecessary; that were

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ıe number increased to thirty, or even more, no certainty of the udent seeing abnormal cases could be ensured; that he must, as gards midwifery, gain experience after qualifying in the same manner he does in respect of medicine and surgery; and that too much of his me would be occupied by the study of midwifery to the prejudice of s work in other respects. The committee have taken all these guments into account. Without criticising them separately, but vertheless giving each due weight, they consider that a mean may arrived at. The committee hold that the alternative conditions, ther of three months' attendance on the practice of a maternity hosal or of being present at a given number of cases, a proportion of which all have been conducted under the supervision of a registered practiıner, are disproportionate. They think that systematic instruction is uch more likely to be obtained by the adoption of the former alternave, and that it ensures the actual presence of practitioners fitted to teach actical midwifery. In this connexion it will be observed that the ıncil takes no note of the number of cases under observation during ıe three months, but depends on the constant association of the udent with the general work of the hospital. The efficiency of inical teaching in any department of medicine or surgery is not aranteed so much by the number of cases submitted to the student by the assiduity of the teacher and the conditions under which struction is imparted. There is not, however, sufficient accommodaon in the lying-in and maternity hospitals of this country to provide r 3000 students. The licensing authorities, accordingly, are compelled utilise the opportunities afforded for practical midwifery teaching by ıe general practitioner. It may be difficult in general practice to ford the same continuity and thoroughness of teaching obtainle in maternity hospitals; but the committee think that ıe nearest approximation may be reached by the adoption the certificate suggested in the first part of the report. its conditions are enforced the student should be certain receiving adequate clinical instruction on five cases in the presence the practitioner before he proceeds to attend labours 'under supersion.' The question remains. How many cases should be attended nder supervision'?—which term implies that the practitioner's preıce is not required during the whole course of the labour, unless mplications arise. In coming to a decision on this matter the comittee are much influenced by the fact that the regulations of a large ajority of the licensing authorities are framed in excess of the ıncil's recommendation. Five demand production of evidence of tendance on thirty cases, six on twenty, and four on twelve. In any instances an increase of the number of cases was made when ıe five years' curriculum came into force. It is thus evidently the inion of the majority of the bodies that with an extra year of study, hich the Council desires should be mainly devoted to clinical work, fficient time is at the command of the student for a somewhat nger course of practical midwifery than that originally prescribed y the Council. Were it for this reason only the Committee is repared to recommend the Council to express a strong opinion that ıe minimum number of cases to be attended by candidates for licences ıould be raised to twenty. The Committee believe that if the conitions of the certificate they advise to be issued be faithfully complied ith—if each student attends five cases in the presence of an officer of maternity hospital or of a registered practitioner, conducts fifteen ıses, "under supervision," and observes all the cases during the whole uerperal period, the standard of practical teaching of Midwifery will ave been placed more nearly on an equal footing with that of Medine and Surgery. One circumstance stands in the way of the Comittee recommending the Council to at once pass a recommendation ıbodying this change in the requirement. The bodies whose regulaons provide for attendance on the smallest number of cases are the cottish Universities and the Conjoint Board in Scotland. The regulaons of the Universities now in force were framed by the Commission cting under the powers given by the Universities (Scotland) Act, 1889, ıd were issued in 1898. The Commissioners, in framing the Regulations ı respect of Practical Midwifery, adopted the recommendation of the ouncil, re-affirmed in 1893 and 1891. They further enacted that six ıses instead of three should be conducted personally by the student. he Ordinance containing the regulation has been approved by Her ajesty in Council, after having been laid before both Houses of arliament and has now the force of an Act. No machinery appears exist for its modification so long as the Commission is in existence. rovision, however, is made by which the senates may increase the umber of cases, with the sanction of the University Courts; but they annot assume this power until after the expiry of the Commission. t is manifest, therefore, that under existing circumstances it would e impracticable to give effect to a recommendation insisting on ıcreased attendance by students on practical midwifery in Scotınd. The Committee accordingly recommend the Council to xpress its opinion that twenty should be the minimum number f cases of labour to be attended by candidates for licences practise, five of them to be conducted under the direct supervision f a registered practitioner, and that this opinion should be forwarded the Scottish universities with a request that the senates should take into their serious consideration as soon as they acquire the power to lter or modify the existing ordinances. Moreover, the committee esire to state that in their opinion the instruction of the student in ractical midwifery should not end with the completion of labour, but hould be continued during the whole puerperal period, and that the ouncil should receive assurance that this important part of obstetric ractice is not neglected. The Committee do not deem it necessary that ll the cases should have been conducted in the presence of the certifyıg practitioner, but they think it essential that not less than five hould be certified as having been attended under direct supervision in his sense.

"The Committee recommend the Council to pass the following resoıtions:—1. That in the opinion of the Council each candidate for a cence to practise should produce evidence in the annexed form of aving attended twenty cases of labour, five of which have been conucted throughout under the direct supervision of a registered practiioner. 2. The Council direct that this resolution be forwarded to the uthorities of the Scottish universities, with a request that it be laid efore the various Senates as soon as they are in a position to assume he powers of modifying statutes conferred on them by the Universities Scotland) Act, 1889. 3. The Council direct that Resolution 1 shall be orwarded to the other licensing bodies. 4. That the certificate to be proluced by every candidate before admission to the Final Examination ıe to the following effect:

"....

"I hereby certify that ....
has personally attended [ ] cases of labour under my supervision, of which [ ] were conducted by him in my presence. Also that he attended under my supervision the women in question during the puerperal period.

"....
"Registered Medical Practitioner."

In conclusion Dr. BATTY TUKE said he had nothing to add to the terms of the report. The work had not been at all light. The remit involved a large amount of communications and correspondence, and he though every member of the committee would agree with him that they were very much indebted to one member of the committee, Dr. Glover, for the valuable suggestions and assistance he had given them. The report was a unanimous report, and if the Council would only regard the representative character of it, the statements were to be deemed so much more important. He moved the adoption of the first recommendation.

Dr. GLOVER, in seconding the motion, expressed satisfaction that the subject of practical midwifery had at length been investigated by the Education Committee. They might now make a considerable improvement on their old regulation, of which he had been ashamed and which he felt always to be quite inadequate to meet the circumstances of the case. A requirement of twenty cases would, in his opinion, prove a distinct improvement, as would also be the regulation that there should be instruction of the student during the whole puerperal period. It was quite as important that the young student should see a woman through her recovery as at the time of labour. He regretted the Scotch difficulty, but he hoped it would be within the power of the senates of the universities of Scotland to remedy the defect to which attention was called. While it was with pleasure he seconded the adoption of the recommendation, he wished also to say that he was sure his trouble in the matter had been nothing as compared with that which the chairman, Dr. Tuke, had been put to in getting the report prepared.

Sir WILLIAM TURNER thought that they ought to embody the alternative in the recommendation. If they did not they did not attach more importance to the systematised instruction of the hospital than to the instruction of the general practitioner. Hitherto more value had been attached to the former. Without the hospital alternative the Committee rather seemed to have fallen down and worshipped the idol "twenty cases."

Mr. BRUDENELL CARTER wished to point out what was the actual condition of things in London. He had two sons at St. George's Hospital. One of them got his twenty cases at the lying-in hospital in a week, and he doubted whether he had obtained much systematised instruction in connexion therewith. The other had to reside at St. George's Hospital, and it was five weeks before he got his twenty cases. The stipulation should be not twenty cases, but for a period of time.

Dr. MACALISTER pointed out that it was not the intention to abrogate the alternative.

Sir WILLIAM TURNER: You should set it up.

Dr. MACALISTER: Until the Scotch universities can act we can express an opinion but not make a definite recommendation.

Sir WILLIAM TURNER: Let your resolution embody the two things. Modify it to show that you do not resile from the position.

Dr. BATTY TUKE: We will bring up a modification.

The Council adjourned.

TUESDAY, JUNE 9TH.

The Council held its final meeting, Sir RICHARD QUAIN presiding.

Practical Midwifery.

The discussion on the recommendations of the Education Committee with reference to practical midwifery was at once resumed.

Dr. BATTY TUKE put forward the following motion as a substitute for that which he had moved on the previous day—viz.:

"That it is desirable that in regard to the midwifery practice to be required of candidates for a licence the alternative to three months' attendance on the indoor practice of a lying-in hospital be in future defined as follows:—

"'Or to have been present at not less than twenty labours, at least five of which shall have been conducted throughout under the direct supervision of a registered practitioner.'"

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This motion, after being seconded by Dr. GLOVER, was accepted by the Council.

Recommendations two and three were also accepted, and Recommendation four was amended to read thus: "That, excepting in the case of candidates presenting certificates of having attended for three months the practice of a lying-in hospital, the certificate to be produced, &c."

Preliminary Examinations.

Dr. BATTY TUKE presented a report by the Education Committee on the preliminary examinations held in the United Kingdom. In this report the committee said they had revised the test of these examinations in view of certain changes that had recently taken place and of certain questions of interpretation that had been raised, and they proposed, with the Council's approval, to issue it in the form they had prepared. The report went on to say:—

"Questions have been raised in reference to the Preliminary Examinations of the Scottish Universities as to the precise application to be given to the following notes appended to the Council's regulations—namely: '(a) The Council will not in future accept any certificate of pass in preliminary examination in general education unless the whole of the subjects included in the preliminary examination required by the Council for Registration of Students of Medicine have been passed at the same time. (b) Provided that a certificate of having passed a University examination required for graduation in arts, or a senior or higher local University examination, or a senior grade Examination of the Intermediate Education Board of Ireland, or the Leaving Certificate Examination (Honours and Higher Grade) of the Scottish Education Department, wherein the specified subjects of general education are included, may be recognised for the purpose of registration.' The committee have understood these notes to indicate that the Council requires, in the case of what may be termed the ordinary preliminary examinations, that the candidate's knowledge of the four prescribed subjects should be such as to enable him to pass in them all at one and the same time. In the case of the more advanced examinations, however, such as those conducted by the universities (or accepted by them as qualifying) for graduation in arts, the Council does not insist that all the subjects shall be taken simultaneously. These examinations being of wider range and higher standard than the others, the policy of the Council has been to encourage candidates for registration to prepare for them, and so to aspire to greater proficiency in the subjects of general education than is implied by the examinations of the ordinary or minimum standard. The committee have reason to think that the provision referred to [Note (b)] has in some measure had the effect contemplated by the Council, and that an increasing number of students qualify for registration by passing one or more of the higher examinations which are thus privileged. The Joint Board of Examiners for the Scottish Universities, who have the control and supervision of the preliminary examinations for admission to the Universities of Edinburgh, Glasgow, Aberdeen, and St. Andrew's, have framed regulations which, in the opinion of the committee, are quite in harmony with the spirit of the Council's requirements. They prescribe that in the case of the preliminary examination for graduation in medicine and surgery, the standard of which appears to be considerably above the minimum recognised by the Council, candidates may at their option take the papers set on the higher standard for the Arts Preliminary in any of the subjects. They further prescribe, by what the committee regard as a legitimate construction of the proviso in Note (b), that the requirement of passing in all the subjects at one time may be relaxed in the case of candidates who have already in one or more of the required subjects obtained the honours or higher grade leaving certificate of the Scotch Education Department. It has been represented to the committee that in view of the acknowledged severity of the preliminary examination the requirement might be further relaxed in favour of candidates who do not take any of the higher standard papers or possess honours or higher grade leaving certificates. In the case of the preliminary examination for graduation in arts conducted by the same board it is provided that all the required subjects (other than those taken on the higher standard) must be passed in at one or not more than two examinations, and this rule is found to work well. The committee are satisfied that, in view of the existing standard, as fixed by the Joint Board, this provision might safely, and also with general advantage, be extended so as to apply to the preliminary examination for graduation in medicine. They are aware that the rules for this examination are at present laid down by ordinance, and cannot be altered until the powers of the Scottish Universities' Commission have ceased. Should, however, the Privy Council hereafter be asked to approve an alteration of the rules in the direction above indicated the committee would take no objection to the change, provided the examination retained its present character and standard. It is accordingly proposed that in the list now issued the condition appended to the preliminary examination of the Scottish Universities shall simply prescribe that the certificate is to include the required subjects. It is assumed that the committee will have due notice of any proposal for an alteration of the existing ordinance which may be submitted to the Privy Council, and they will thus have an opportunity of considering whether or not the proposal is in accordance with the policy of the Council in regard to general education. The committee are, moreover, of opinion that instead of maintaining the proviso in Note (b) it would be clearer if, in the case of every recognised examination, the conditions on which it is accepted were stated in the list. The committee have accordingly adopted this course.

Dr. BATTY TUKE called attention to the fact that the Royal Colleges of Physicians and Surgeons in Ireland still continued their arts examination. The Council had reason to believe that there were ample means in Ireland by which purely educational bodies could conduct this examination, and he took this opportunity of drawing the attention of the representatives of the two bodies to the fact that they stood alone among medical licensing authorities in holding this preliminary examination. He moved that the form in which the Education Committee proposed to issue the revised list of recognised examinations be approved.

Dr. MACALISTER, in seconding the motion, said he hoped when the Royal Colleges of Physicians and Surgeons in Ireland had the matter brought to their notice that they would put an end to the examination. Formerly the Scottish Universities used each to hold their own preliminary examination. Now, however, owing to the action of the Universities Commission, loyally supported by the universities themselves, the whole matter of the preliminary examinations was put in the hands of a Joint Board upon which all the universities were represented. One result had been that the standard of the examination, which used to be somewhat uncertain and somewhat low in some cases, had been raised to a high pitch of excellence, and perhaps there was some ground for the complaint that it had been raised too high. At any rate, it was a significant fact that at a recent examination 60 per cent. of the candidates were plucked.

After some discussion about the College of Preceptors the motion was agreed to.

Dr. MACALISTER moved that the following portion of the report be presented to the Royal Colleges of Physicians and Surgeons in Ireland for their consideration, viz.:—

"Of the examinations in Division II. of the list conducted by medical licensing bodies, which the Council has recommended should be discontinued, all but one have ceased to be held. The recommendation of the Council has thus been carried into effect in England and Scotland. The exceptional examination is that held by the Royal Colleges of Physicians and Surgeons in Ireland. In view of the fact that in addition to those conducted by the Irish Universities three examinations held by the Intermediate Education Board of Ireland are recognised by the Council, the committee reiterate their conviction that it is desirable in the interests of general education that the Royal Colleges should cease to examine in arts. The examinations formerly held by the other licensing bodies have been removed from the list, but certificates granted prior to the date of discontinuance will, in the usual course, still be accepted for registration."

Mr. WILLIAM THOMSON said there were certain difficulties in Ireland with regard to this recommendation of the Council. There were certain university examinations in Dublin and the examinations of the Intermediate Education Board, and, besides, they had their preliminary examinations of the Royal Colleges of Physicians and Surgeons, which, it was true, was the only examination of the kind now surviving. He was not quite sure that this Council was aware of the way in which certain of these examinations were conducted. For instance, the three examinations which were approved, those of the two Universities and the Intermediate Education Board, were held at the same time and were held only once a year. Therefore, they were practically one, and the candidate could only choose one of them. If he should happen to be plucked he must wait for a year before he could make another attempt. So far as the Colleges were concerned, he did not know that they were particularly wedded to this particular examination, but they felt that for the safety and convenience and protection of the student it should exist for the present. For himself he was glad to hear members speaking in tones of dissatisfaction with the whole of this preliminary question. It had seemed to him for many years that this Council had occupied itself perhaps a little too much in elevating and elaborating the professional portions of the curriculum and examinations, and had left absolutely untouched what he regarded as the most important part of the whole educational course—the standard of entrance into the course of professional study. What he felt was that the standard was far too low and that it was subject to all kinds of variations, and he should like to see this question taken in hand by the Education Committee and by the Council and a very considerably higher standard set for the entrance to the profession. He should like very much to see in the great centres of population an entrance examination apart altogether from universities or licensing bodies of any kind—a kind of entrance examination which could be controlled by this Council.

Sir PHILIP SMYLY said he agreed with what Mr. Thomson had said as to leaving alone for the present the examination of the Colleges.

Dr. ATTHILL agreed that it was very desirable that the examination should be done away with. He had urged this upon his own College, but he was assured that in the present state of things it was impossible. The examination of the universities was not sufficient, while that of the Intermediate Education Board was totally unsuitable.

Sir WALTER FOSTER advised the Irish Colleges to make their preliminary examination more stringent and thorough

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than it was so as to bring it up to a standard that would encourage the General Medical Council to continue it.

Sir JOHN BANKS agreed with Mr. Thomson that the standard at the entrance examination should be raised. If it were raised he thought that would do something to prevent the flooding of the profession with unfit men.

Sir WILLIAM TURNER inquired of the representatives of the Colleges whether the examiners included Fellows of the College?

Dr. ATTHILL replied in the affirmative.

Sir WILLIAM TURNER said there should be no Fellows of the Colleges amongst the examiners, and the first step the two Colleges should take was the reform of their examining board.

The motion of Dr. MACALISTER was then agreed to.

Mr. BRYANT moved that the Education Committee be requested to consider whether the time had not come for erasing from the list of recognised preliminary examinations the examination for the second-class certificate of the College of Preceptors.

Mr. BRUDENELL CARTER seconded, and the proposal was adopted.

On the motion of Dr. BATTY TUKE, seconded by Dr. MACALISTER, the following report was also adopted:—

"The Education Committee reports to the Council that the Committee, having satisfied itself that the prescribed conditions have in each case been fulfilled, has resolved to insert in the list of recognised preliminary examinations held by Indian, Colonial, and Foreign Universities and Colleges the following—namely, University of Madras, First Examination in Arts; College of Physicians and Surgeons of New Brunswick, Matriculation Examination."

Professional Examinations.

Sir DYCE DUCKWORTH, on behalf of the Examination Committee, presented a report containing in a consolidated form the series of definitive recommendations suitable for transmission to the several licensing bodies throughout the Kingdom. He moved that the recommendations be approved and adopted.

Mr. BRYANT, who seconded the motion, said there was nothing new or fresh in the recommendations. All of them had been discussed over and over again.

At the instance of Dr. MACALISTER and Dr. GAIRDNER several verbal amendments were made, and Sir Dyce Duckworth's motion was then agree to.

An ex-President's Letter.

The PRESIDENT said he had received a short note from Sir Henry Acland, a former President of the Council, who had been present during part of the previous day's proceedings. In that Sir Henry Acland expressed what a great happiness it was to him to see the Council at work so wisely and so well and in such improved quarters. To him it was quite heart-lifting, and it made him thankful to and for the profession in many respects.

The Council greeted the reading of the letter with applause.

The Application of the Apothecaries' Hall of Ireland.

On the motion of Mr. WHEELHOUSE, seconded by Sir WM. TURNER, it was agreed: "That the President be requested to forward to the Lord President of the Privy Council a copy of the minutes of Wednesday, June 3rd, and Monday, June 8th, together with a letter to say that the General Medical Council had on these days, in accordance with a suggestion made by the Lords of the Privy Council, given their careful consideration to the application of the Apothecaries' Hall of Dublin for the appointment of examiners in medicine and surgery." It was further agreed that this resolution should be forwarded to the Lord-President and the licensing bodies interested.

Public Health.

Dr. THORNE THORNE, on behalf of the Public Health Committee, stated that owing to some deficiencies in the rules submitted to the Council last session the committee had by request considered the whole subject, and they had agreed upon the following as rules for diplomas in public health granted after January, 1897:—

"I. The Council, having regard to the terms of Section 18 of the Local Government Act (1888), and of Section 54 of the Local Government (Scotland) Act (1889), and observing that under those sections special privilege is to be accorded to the holders of the diplomas granted under Section 21 of the Medical Act (1886), and therein described as diplomas in Sanitary Science, Public Health, or State Medicine, thinks it essential to declare with regard to its own future action under Section 21 of the Medical Act (1886) that it will not consider diplomas to 'deserve recognition in the Medical Register' unless they have been granted under such conditions of education and examination as to ensure (in the judgment of the Council) the possession of a distinctively high proficiency, scientific and practical, in all the branches of study which concern the public health; and the Council, in forming its judgment on the conditions of education and examination, will expect the following rules to have been observed: 1. A period of not less than twelve months shall elapse between the attainment of a registrable qualification in medicine, surgery, and midwifery, and the admission of the candidate to any examination or any part thereof for a diploma in sanitary science, public health, or State Medicine. 2. Every candidate shall have produced evidence of having, after obtaining a registrable qualification, attended during six months practical instruction in a laboratory or laboratories, British or foreign, approved of by the body granting the diploma, in which chemistry, bacteriology, and the pathology of the diseases of animals transmissible to man are taught. 3. Every candidate shall have produced evidence that, during a period of six months after obtaining a registrable qualification, he has practically studied the duties of out-door sanitary work (*a*) in England and Wales either under the medical officer of health of a county or of a single sanitary district having at the date of the last census a population of not less than 50,000 or the medical officer of health of a combination of two or more sanitary districts having collectively at the date of the last census a population of not less than 35,000; or (*b*) in Scotland or Ireland under the medical officer of health of a county or of one or more sanitary districts having at the date of the last census a population of not less than 30,000; or (*c*) under a medical officer of health who is a teacher in the department of public health of a recognised medical school. The certificate of an assistant officer of health of a county or a large urban district may be accepted, provided the medical officer of health of the county or district consents to the assistant officer giving such instruction. Any candidate who shall produce evidence that he has himself held an appointment as medical officer of health under conditions not requiring the possession of a special sanitary diploma shall be exempt from this regulation. 4. Every candidate shall have produced evidence that he has attended the clinical practice of a hospital for infectious diseases recognised by one of the licensing bodies, provided that such a course of instruction may have been taken as part of the curriculum for his registrable qualification in medicine, surgery, and midwifery. 5. The examination shall have been conducted by examiners specially qualified; it shall have extended over not less than four days, one of which shall have been devoted to practical work in a laboratory, and one to practical examination in and reporting on subjects which fall within the special out-door duties of a medical officer of health. The rules as to study shall not apply to medical practitioners registered or entitled to be registered on or before Jan. 1st, 1890. II. The Council shall appoint an inspector or inspectors of examinations in public health with special instructions to report to the Council whether the examination of each body does or does not give evidence on the part of candidates passing such examination of a distinctively high proficiency, scientific and practical, in each and all of the branches of study which concern public health."

In presenting the report Dr. THORNE THORNE pointed out that it was requisite they should have a different regulation in regard to Scotland from that for England in connexion with the matter of population, and although Ireland had not as yet got a Local Government Act it had been deemed advisable to give Ireland the same position in regard to population. The provision (*c*) of Sub-section 3 was drawn to meet the case of officers who, though not in charge of districts with populations of 50,000, were teachers in recognised medical schools who had been most successful in their tuition. In regard to exemptions, it had been decided that all should go except the medical practitioner registered or entitled to be registered before January, 1890. He moved: "That the revised rules for diplomas in public health be approved and adopted and sent to the bodies granting the diplomas in question."

Mr. TEALE seconded, and the motion was carried unanimously.

Dr. THORNE THORNE next presented a report by the inspector, Dr. G. F. Duffey, appointed by the Council on the examination in preventive medicine for the diploma in public health of the University of Oxford. The report showed that the conclusion of the inspector was that both divisions of the examination "were satisfactory. They gave evidence that the candidates who obtained the diploma in public health of the University of Oxford possessed a distinctively high proficiency, scientific and practical, in all the branches of study that concern public health in which they were examined."

Dr. THORNE THORNE moved:—

"That copies of the first report of the Public Health Committee be forwarded to the proper authorities of the University of Oxford and that on this occasion no further action is required."

He explained that this was what had been done with the other bodies reported upon.

Dr. BRUCE seconded the motion, which also was unanimously adopted.

Midwifery Diplomas.

Mr. WHEELHOUSE submitted a report from the Midwifery Diplomas Committee with reference to allegations made in a memorial by Dr. Reid Rentoul in regard to the Rotunda Lying-in Hospital, Dublin, and the Coombe Lying-in Hospital, Dublin. The report stated:—

"On considering the allegations the committee finds that prior to

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1860 only one qualification was required by the Local Government Board of Ireland for a Poor-law appointment; that at about that date an order was issued requiring candidates to produce evidence of competency in medicine, surgery, and midwifery; that up to that date the certificates complained of—the so-called 'diplomas'—were accepted as evidence of having 'studied midwifery,' and are still considered to be evidence of 'special education' in that subject, but are not, and never have been, regarded nor accepted as a 'licence to practise.' The Committee finds that in issuing these certificates the two institutions complained of have acted under Royal Charters, and, after carefully reading the Charters and the bye-laws of each of the hospitals, it reports to the Council the following facts: With respect to the Rotunda Hospital, in accordance with the powers granted by its Charter, which bears date Dec. 2nd, 1756, and was enlarged by Act of Parliament of 25th George III.: "The Master is authorised to receive such students—men or women—as intend to practise midwifery." And by by-law (No. 16) sanctioned by the Privy Council in accordance with the above-named Act of Parliament: "To issue a printed certificate, signed by the Master and one of the assistants to each pupil, male or female, who shall have served and attended a regular course in the said hospital, and that a certain seal shall be affixed thereto by the Registrar." The Committee further reports that the Latin certificate of the Rotunda Hospital has been in use for a period of more than a hundred years, and that it is granted as evidence of 'special education' only to registered medical students or qualified practitioners; and that an altogether different form thereto (see appendix) is issued to midwives and nurse-tenders. The Committee considers that both documents are in accordance with the powers granted by the Charter and confirmed by the Act of Parliament and are in no way a 'licence to practise' or intended as a colourable imitation of a registrable qualification. With regard to the Coombe Hospital, the Committee finds that the Master is authorised and directed by Royal Charter, dated Oct. 31st, 1867, 'to instruct students, male or female, in practical midwifery and the diseases peculiar to women and children, and to issue to such as pass a subsequent examination a certificate to that effect under his sign-manual. The Committee having carefully considered this Charter reports that, in its opinion, the certificate issued does not exceed the powers granted by the Charter; does not purport to be a 'licence to practise'; and that in its phraseology it is not a 'colourable imitation' of a 'registrable qualification.' As regards its appearance, the Committee notes that the form of the certificate of the Rotunda Hospital has existed unchanged for the long space of a hundred and forty years, and can hardly, therefore, be regarded as a 'colourable imitation' of any existing diploma, and that neither is the certificate of the Coombe Hospital. But the Committee is of opinion that, in consideration of the action taken by the General Medical Council in May, 1894, the time has come when both certificates should assume a more simple character, and recommends that the form, loyally adopted on a recent occasion by the Obstetrical Society of London, should also be accepted by the authorities of the Rotunda and the Coombe Hospitals; and, as the present masters at each of these hospitals have expressed in writing, in letters which have been laid before the Committee, their desire to conform to the wishes of the General Medical Council, it feels sure that on representation being made to them by the President of the Council to that effect, these bodies will, with equal loyalty, accede to his request; and that while continuing to issue their ancient certificate only to such persons as already possess a registrable diploma, or are registered, they should use the modified form for such as have no qualification.

In conclusion it was moved that the report be received and adopted, and that copies be forwarded to the masters of the two hospitals concerned.

Dr. ATTHILL in seconding the proposal took occasion to strongly protest against the charges which Dr. Rentoul had included in his memorial.

The motion was agreed to, and it was also agreed to forward a copy of the report to Dr. Rentoul.

Finance.

Mr. BRYANT presented the Finance Committee's report for the year 1895 which showed that the income of the General and Branch Councils amounted to £9097, and the expenditure to £9403, or an excess of expenditure over income of £306. He mentioned that there had been increase of expenditure for the Pharmacopœia, miscellaneous expenses, and fees, and an apparent increase in mortgage charges. There had been decreased expenditure in regard to law expenses, printing, inspection and visitation of examinations, &c. Altogether he thought the report was a fairly satisfactory one and he moved that it be adopted.

Sir DYCE DUCKWORTH seconded the motion.

Sir WILLIAM TURNER expressed the hope that in their next report the Committee would give particulars of the cost of the Council's new hall, especially seeing that the General Council was indebted to the English Branch Council to the extent of £20,000.

Mr. BRYANT having promised a detailed statement the report was adopted.

Students' Registration.

Sir DYCE DUCKWORTH presented the Students' Registration Committee's report on exceptional cases, which was adopted by the Council.

Voluntary Surrender of a Qualification.

Dr. ATTHILL explained this curious case to the meeting. The Royal College of Physicians of Ireland had the misfortune of having two members of the College settled in the same city, Exeter, and they did not agree. One of these gentlemen, Dr. R. L. Rutherford, wrote to the College asking whether its members were allowed to hold appointments as medical officers to Medical Aid Associations. He gave the name of a gentleman as acting for what Dr. Rutherford believed was a medical aid association. The reply was:—

"The College has expressed its strong disapproval of any of its licentiates holding the office of medical officer to a medical aid association, and that the same has been communicated to Dr. ——."

The letter to the gentleman in question was as follows:—

"The College have been informed that you are at present acting as medical officer of a medical aid association in Exeter. I am consequently to direct your attention to a resolution of the College adopted on Nov. 3rd, 1893, viz.: 'That the College of Physicians of Ireland desire to express their disapproval of their licentiates accepting office in medical aid associations as at present conducted in England, as the independence of the physician is destroyed by the system, and the services of the physician are used so as to produce a profit for lay persons.'"

To this the following reply was received:—

"I beg to state that you have been misinformed, for the association I am connected with is not an aid association, but one formed purely of friendly societies.

"As to sweating, there is no such thing in it, as my daily visiting has averaged for the last month about 28 (112 visits), and January is about the hardest month of the year.

"There are no profits made. The stipend is guaranteed, confinements extra, also certificates outside the societies."

There was simply, Dr. Atthill went on to say, a charge and repudiation, and therefore the College could do nothing. Dr. Rutherford therefore returned his diploma of Membership of the College dated 1882, and his Licentiate diploma of 1878, and requested that his name should be removed from the College list. The College had power to accept the resignation of any qualification, but owing to a by-law not having received Royal sanction, they could not yet act upon it. As to Dr. Rutherford's request to the General Medical Council for the removal from the Register of the qualification in question, he was in the hands of the Council itself.

After some conversation on the subject, the Council passed the following motion, proposed by Sir WALTER FOSTER and seconded by Dr. GLOVER—viz., "That the consideration of the correspondence sent to the Council by Dr. Rutherford be deferred until the Royal College of Physicians of Ireland has informed the Council of its further action in the matter." The programme of the day bore an intimation that Dr. Rutherford is also registered as M.D. Q. Univ. Irel., 1881, and Mast. Surg. R. Univ. Irel., 1882.

Duties of the Penal Committee.

On the motion of Dr. LEECH, seconded by Dr. BRUCE, the Council agreed to request the Education Committee to revise the standing orders so as to include a sub-section defining the duties of the Committee for penal cases in connexion with all such cases referred to the Committee.

The Case of Mr. Joseph Stromier.

Mr. BRYANT presented a report by the Dental Education and Examination Committee with reference to a communication from the British Dental Association on the case of Mr. Joseph Stromier of Glasgow. The Committee said that they had considered the communication of the Association with the explanation offered by the Faculty of Physicians and Surgeons of Glasgow, and they reported that they did not find that there had been any irregularity in the action of the Faculty with respect to the candidate named, seeing that he was only admitted to examination for the L.D.S. on submitting evidence acceptable to that Faculty that he had duly attended the courses prescribed for the examination.

The Case of Mr. James Findlay.

The Council passed a resolution authorising the restoration to the Medical Register of the name and qualification of Mr. James Findlay, at present residing at Penpont, Dumfriesshire.

The Council then re-elected the Executive Council and re-arranged the other Committees, and adjourned till November.

HOME FOR THE DYING.—A concert was given at Stafford House on Tuesday afternoon in aid of the Free Home for the Dying at Clapham. A large audience was present, and a well-arranged programme was gone through under the management of Mr. William Nicholl.

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Medical News.

FOREIGN UNIVERSITY INTELLIGENCE.—*Copenhagen:* Dr. Knud Faber has been appointed to the Professorship of Clinical Medicine in succession to Dr. With, resigned.—*Leyden:* Dr. J. Veit of Berlin has been appointed Professor of Midwifery and Gynæcology.—*New York (Post-graduate School):* Dr. Eugène Fuller has been appointed Professor of Genito-urinary Surgery and Dr. J. M. Woodbury Professor of Orthopædic Surgery.—*Vienna:* Dr. C. Büdinger has been recognised as *privat-docent* in Surgery.

THE tourist steamer, *Midnight Sun*, sailed from the Tyne on Saturday evening with 200 passengers for the Norwegian Fjords. This is probably the largest number of tourists that any steamer has ever taken at the opening of the Norwegian tourist season.

FATAL ACCIDENT TO DR. EVANS OF SHAFTESBURY, DORSETSHIRE.—A shocking carriage accident occurred on June 5th, resulting in the death of Mr. Charles Silvester Evans, M.A., M.B. Cantab. The horse he was driving bolted and dashed into a shop window, and Dr. Evans sustained fatal injuries. Dr. Evans was educated at St. Thomas's Hospital and Cambridge, graduating with the M.A. and M.B. B.C. in 1887, having taken the qualifications of M.R.C.S. Eng. and L.S.A. in 1886. He was medical officer for the Fontmell District of the Shaftesbury Union and to the Cottage Hospital and the police, and had formerly held the appointments of house physician, assistant house physician, and assistant house surgeon at St. Thomas's Hospital.

PRESENTATIONS TO MEDICAL PRACTITIONERS.—Mr. Edward T. Carlyon, M.B. Durh., L.R.C.P. Lond., recently of Yarmouth, has been presented by the inhabitants, since his departure from that town, with a testimonial, which comprised a beautifully illuminated address, signed by 350 subscribers, and a purse of sovereigns.—Dr. John Watson of Newbury has been the recipient from the members of the Newbury ambulance classes of a silver-topped inkstand, suitably inscribed, in appreciation of his services as their lecturer on First Aid.—On leaving the Hospital for Sick Children, Great Ormond-street, after three years' tenure of office as medical superintendent, Mr. T. H. Kellock, F.R.C.S. Eng., &c., was presented by the matron and members of the nursing staff with two cases containing sets of tracheotomy and intubation instruments. He was also the recipient of a handsome marble clock presented by past and present residents and registrars.

MR. KENDAL FRANKS, F.R.C.S. IREL.—It having come to the knowledge of the Council of the Royal College of Surgeons in Ireland that, owing to Mrs. Franks' ill health, it is the intention of Mr. Kendal Franks, Vice-President of the College, to leave Dublin in August to settle in South Africa, they felt that his professional friends would wish to avail themselves of an opportunity of showing their respect and esteem for him prior to his departure. With this object the Council resolved itself into a committee to organise a farewell banquet to be held in the College, and elected the President, with Mr. R. L. Swan, Mr. Austin Meldon (hon. treasurer), and Mr. F. T. Heuston (hon. secretary) as a sub-committee to arrange details. The banquet is to be held on Thursday, June 25th. Members of the profession wishing to join should send their names to Mr. G. F. Blake, Registrar, Royal College of Surgeons, Dublin, before Monday, June 15th, as it is intended to engross the names of those joining on an address to be presented at the banquet.

THE DIFFUSION OF SMALL-POX.—There was no death registered from small-pox last week in any of the thirty-three great towns of the Registrar-General, but Gloucester finds place in the weekly return as having had 11 deaths registered, all of persons belonging to the city. As regards London, last Saturday saw only 21 patients suffering from small-pox still under treatment on board the hospital ships in Long Reach. There has been but little manifestation of the disease around the metropolis, and last month there were but half a dozen cases in West Ham. At Gloucester the week ended with Thursday of last week witnessed some rise in the number of notified cases of small-pox, the total reaching 56 fresh cases, as compared with 42 in the preceding week. However, 44 discharges took place, as against 12 admissions to hospital, but there were 3 deaths in hospital and 6 in the invaded households. The Education Department have been in correspondence with the Gloucester School Board on the subject of the exclusion of children not successfully vaccinated, as well as of children whose parents refuse information on the matter. The central education authority have assented to such procedure. The Gloucester School Board are about to petition the London authority to grant them special treatment in the way of grant now that, the schools being re-opened, the scholars are attending in such small numbers. The school board have our sympathy in their endeavours to curtail the epidemic, and we trust that the central authority will see their way clear to some exceptional treatment of the Gloucester board, so that no loss may be experienced in regard of the annual grant by reason of smallness of attendance at the present time. It appears that among the 2000 members of the Order of Foresters at Gloucester there has been expended for funerals of small-pox patients the sum of £120 and a like amount for sick pay. Some statistics of the hydropathic treatment committee at Gloucester show that of 177 patients treated by a Mr. Pickering on this method, 18 have died, or 10 per cent., and that the majority of those "cured" have been "cured" within a week. The point that arises in our mind is whether any "cure" of a small-pox patient effected within a week may not by its very speed be the means of further spread from the individual treated if he mix with his fellows immediately afterwards. We all know the danger arising from the intercommunication of sick and healthy in the case of mild attacks of small-pox, where the patients feel little or no inconvenience from the malady, and thus do not refrain from following their usual avocations. A second case of small-pox has occurred at Worcester in the person of the wife of the first patient who fell ill the day following his arrival from Hamburg. Both patients are in hospital. In view of small-pox of recent occurrence at the Mumbles, the Oystermouth district council have instructed their medical officer of health to proceed to offer special facilities for vaccination, and propose, if the Gower guardians offer any objection, to pay the costs themselves. Small-pox has broken out in two houses at Garston, near Liverpool, five cases having been recorded and removed to hospital. The houses, situated near the docks, have been thoroughly disinfected and placed under quarantine. A further death from small-pox took place in the Heywood Hospital on the last day of May, and two patients have been removed to hospital at Royton. In both places the guardians refuse to enforce the Vaccination Acts.

IMPROVEMENTS IN LIGHTING.—The question of lighting both in our streets and for ordinary domestic purposes is one of such importance from the hygienic point of view that the formation of an influential body to develop and "engineer" any new system which gives promise of advance should be welcomed. Such would appear to be the aim of the Lighting Corporation, Limited, the installation of which was signalised by a banquet given on the 2nd inst. We understand that this corporation has been formed with the view of acquiring any system of lighting which gives evidence of improvement upon existing systems in regard to lighting efficiency, economy, and its hygienic aspect. At present, however, their operations are confined to the development and improvement of the well-known Wenham regenerative burner. The principle of this burner consists in heating the gas before it is burnt, so that the gas is made more luminous by the so-called regenerative process. However that may be, the burner is so constructed as to effect a powerful ventilating action upon the air of the room, while at the same time the products of combustion are carried away. Experimental evidence of this ventilating action was shown on the occasion of the banquet referred to, when the underground room in which the banquet was held was illuminated by means of Wenham burners. In spite of the oppressive heat of the weather at the time the room was comparatively fresh and cool, and when smoking was commenced by some 200 persons present the air remained practically unclouded. Moreover, the products of combustion being carried away very little heating effect upon the air of the room takes place, while the deteriorating effects of the products of the combustion of coal gas are entirely avoided. The light serves well for street-lighting purposes since its strong sunlight colour is highly penetrative. In this way the Wenham burner plays an important part as a lighting appliance possessing hygienic advantages. The Lighting Corporation have established offices at 4, Bloomsbury-street, W.C., where an excellent installation of the Wenham system may be viewed.

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Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Midwives Registration Bill.

THIS Bill has not been withdrawn as seems to be supposed in some quarters. It still appears among the orders of the House of Commons, although, having regard to the period of the session and the pressure of Government business, there is practically no chance of its being discussed.

The Clothing of the Metropolitan Police.

In the course of the debates in Committee of Supply last week the old question was raised of providing lighter clothing for the Metropolitan Police to wear in very hot weather and the same official answer was given—namely, that the authorities, with every desire to contribute to the health and comfort of the force, have given the matter their attention and see no sufficient reason for altering the present arrangements.

HOUSE OF COMMONS.

THURSDAY, JUNE 4TH.

New Commission on Tuberculosis.

Mr. Chaplin, in answer to Dr. Farquharson, said that the proposed terms of reference to this Commission were to inquire and report as to what administrative procedures are available and would be desirable for controlling the danger to man through the use as food of the meat and milk (with its products) of tuberculous animals, and what are the considerations which should govern the action of the responsible authorities in condemning and not condemning, for the purposes of food supplies, animal carcasses or meat exhibiting any stage or stages of tuberculosis. He was not in a position at present to announce to the House the names of the members of the Commission.

Calf Lymph.

Sir William Priestley asked the President of the Local Government Board whether, in view of the increasing demand for vaccination with calf lymph, he would consider the expediency of at once taking such steps as might be necessary to facilitate the performance by public vaccinators of calf to arm vaccination, with the double object of meeting the objections of an increasing number of parents to the use of humanised lymph, and the protection of infants from the danger of attack and death by small-pox.—Mr. Chaplin replied that he was fully aware of the importance which was attached to the performance of vaccination direct from calf to arm when calf lymph was used. But his hon. friend must be aware that a system of calf to arm vaccination if practised generally would involve an entirely new organisation at a very large expenditure of public money; and since the desirability of introducing changes "for the purpose of removing objections to vaccination or making it more effective" was included in the reference to the Royal Commission on Vaccination, who were now engaged in compiling their report, he doubted the expediency of his making any proposal as to the alterations in the law and its administration which would be involved before he had had the advantage of considering their report.—Mr. Gibson Bowles asked the right hon. gentleman whether he could tell the House when they would have the report of the Commission.—Mr. Chaplin: No, sir, I wish I could.

FRIDAY, JUNE 5TH.

River Pollution.

Mr. Cohen, on behalf of Mr. Herbert Robertson, asked the President of the Local Government Board whether he was aware that the waters of the river Lea were polluted by the introduction of insufficiently disinfected sewage matter from the districts of Tottenham, Walthamstow, and Leyton, greatly to the detriment of the health of the inhabitants of South Hackney and other districts; and whether he could take any, and what, steps to prevent this infringement of the Rivers Pollution Acts.—Mr. Chaplin replied: As regards the pollution of the waters of the river Lea, I have been in communication with the district councils of the three districts referred to in the question. In the case of Tottenham, I am informed that the whole of the sewage of the district is pumped direct from the outfall works into the sewers of the London County Council. I do not find that the Local Government Board, during the last two years, have received any complaint in this matter as regards the Leyton district. With respect to Walthamstow, proceedings were instituted by the Leyton District Council for the purpose of obtaining an injunction to prohibit the pollution of the river by sewage from that district. An injunction was granted and the district council have submitted proposals for additional works with a view to preventing a continuance of the pollution. The Local Government Board have no authority to institute proceedings under the Rivers Pollution Acts; proceedings under those Acts may be instituted by the county council or the council of any district affected by the pollution. Moreover, any powers which the Lea Conservancy Board have as regards the pollution of the river have been reserved to them by the Rivers Pollution Prevention Act of 1876.—Mr. Bartley asked the President of the Local Government Board whether his attention had been called to the filthy condition of the river Brent after it received the sewage water from the sewage farm at Ealing, Middlesex; whether he was aware that this stream runs close to the large district schools with some thousand children and through the densely populated district of Brentford; and, whether he would cause a local inquiry to be made with a view of putting a stop to the serious danger to the health of the neighbourhood from this polluted stream.—Mr. Chaplin said in reply: The attention of the Local Government Board was directed last year to the condition of this river, and the Board, after obtaining a report from one of their inspectors on the subject, communicated with the Thames Conservancy Board and the County Council urging that action should be taken with the view of preventing the continuance of pollution of the river. In consequence of the reference in the question of the Ealing district, I have made inquiry of the council of that district, and am informed that there is no source of pollution within their district, and that, with the view of preventing pollution of the river by others, they have determined to take steps to obtain an injunction. With respect to the Willesde District Council, the effluent from whose works was regarded by th Thames Conservancy as unsatisfactory, the Local Government Boa have now before them an application from the council for sanction to loan for the improvement of their works of sewerage and sewage di posal. Powers of instituting proceedings for preventing pollution a vested in the Thames Conservancy and the County Council, and I wi again communicate with these authorities.

MONDAY, JUNE 8TH.

The Vaccination Question.

In reply to a question by Colonel Russell as to when the report of th Royal Commission on Vaccination might be expected, Mr. Chapl said that the reply which he had received to his inquiries on th subject was that it was impossible to say beforehand how much tim would be occupied by the discussion of a report and the modificatio consequent on such discussion. The Commission were approaching th completion of their labours and there would be no unnecessary delay.- Mr. Seton-Karr asked the right hon. gentleman whether he was awa that the Lynn guardians, by a vote of 15 to 5, had recently rejected resolution to enforce the compulsory clauses of the Vaccination Act whether it was a fact that there were 605 births in Lynn last year as only eleven vaccinations; and, whether, under these circumstance and in view of the recent prevalence of small-pox at Gloucester, th Government proposed to take any steps to secure the proper an general enforcement of the Vaccination Acts.—Mr. Chaplin replied: understand that the facts with regard to the resolution passed by th guardians of the King's Lynn Union and the number of vaccination are as stated in the question. I have addressed a communication t the guardians pointing out that by their acceptance of the office o guardians they have undertaken to discharge the duties which devolv on them, including those with regard to vaccination, and impressing o them that by failing to enforce the provisions of the Vaccination Ac they are incurring a very grave responsibility. They have at the sam time been reminded of the experience of Gloucester, where nearly 19 cases of small-pox have recently occurred as evidence of the serio consequences which may at any time befall a community in whic vaccination has been persistently neglected. I hope that on furth consideration the guardians will not fail to take the action which i necessary for the enforcement of vaccination in their union.

TUESDAY, JUNE, 9TH.

Army Medical Department.

In reply to Dr. Tanner Mr. Brodrick, Under Secretary of State fo War, said there was no intention to lower the standard of examinatio for admission to the medical staff. The only change made was tha more marks would be allocated to the practical subjects of medicin and surgery, with the view of obtaining the best practical medical me In February, 1895, there were seventeen candidates for twelve vacancie in August following twenty-three candidates for thirteen vacancie and in February last eighteen candidates for seventeen vacancies. A he stated recently the decrease in candidates was engaging Lor Lansdowne's serious attention.

Workhouse Administration in Ireland.

Mr. Gerald Balfour announced, in reply to a question, that the Bil with regard to workhouse administration in Ireland was nearly ready but in the condition of public business he was afraid that unless he wa allowed to introduce it after twelve o'clock it could not be introduce this session.

WEDNESDAY, JUNE 10TH.

Experiments on Living Animals.

On the motion of Mr. Jesse Collings, Under-Secretary of State fo Home Affairs, a return was ordered showing the number of experiment performed on living animals during 1895 under licence of the Hom Office, distinguishing painless from painful experiments.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institution and others possessing information suitable for this column, ar invited to forward it to THE LANCET Office, directed to the Sub Editor, not later than 9 o'clock on the Thursday morning of eac week for publication in the next number.

ADKINS, A. J., M.B. Lond., L.R.C.P., M.R.C.S., has been appointe Assistant Medical Officer and Dispenser for the Lambeth Work house.

ALLPORT, A., L.R.C.P. Lond., M.R.C.S., has been appointed Surgeo Lieutenant to the 1st London (City of London) Artillery.

BAIN, J. G., M.B., C.M. Glasg., has been appointed Medical Officer f the Second Sanitary District of the Wellington (Som.) Union.

BAKER, J. C., M.B. Lond., has been appointed Medical Officer to th Workhouse of the Hambledon Union, and Surgeon to the Forester Court "Pinewood."

BARTLETT, H. C., L.R.C.P. Lond., M.R.C.S., has been appoin Medical Officer for the Sixth Sanitary District of the Saff Walden Union.

BETTS, LEONARD BOWRING, M.R.C.S., L.R.C.P. Lond., has been appoin Assistant House Surgeon to the Westminster Hospital.

BELSON, G. DE V., L.R.C.P. Lond., M.R.C.S., has been appoin Medical Officer of Health by the Bampton Urban District Council

BLIGH, WM., M.D. Lond., L.R.C.P. Lond., M.R.C.S., has been appoin Medical Officer for the Caterham Sanitary District of the Godst Union.

BOWMAN, R. C., M.D. Lond., L.R.C.P. Lond., M.R.C.S., has been appoin Medical Officer of Health for the Ulverston Sanitary District the Ulverston Union.

CARTER, ROBERT J., M.D. Lond., D.P.H., has been appoin Assistant Physician to the Western Skin Hospital, W.

COLLIER, H. STANSFIELD, F.R.C.S., has been appointed Surgeon Out-patients at the Paddington-green Children's Hospital.

COLLINS, A. W., L.R.C.P. Lond., M.R.C.S., has been appointed Medi Officer for the Workhouse of the Ulverston Union.

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)WIE, G., M.B., M.S. Aberd., has been appointed Assistant Medical Officer for the Infirmary of the Whitechapel Union.
)VE, R. A., M.B., C.M., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been re-appointed District Medical Officer for the Brigg Union.
WENS, J., L.R.C.P. Lond., L.R.C.S. Edin., has been appointed Consulting Surgeon to the Bristol Hospital for Sick Children and Women.
ARDNER, R. J., M.B., C.M. Glasg., has been appointed Medical Officer for the Chase Farm Schools, Edmonton Union.
REEN, REGINALD, M.D., B.Hy. (Durh.), has been appointed Medical Officer of Health to the County Borough of Gateshead.
ILM, ROBERT DUNDAS, M.D., C.M. Edin., has been appointed Assistant Physician to the Cumberland Infirmary, Carlisle.
EBBERD, H. J., M.R.C.S., has been re-appointed Medical Officer for the Brockenhurst Sanitary District of the Lymington Union.
)ME, WALTER, M.B., C.M. Edin., has been appointed Senior Surgeon to the Scarborough Dispensary.
NDALL, H. W., L.R.C.P. Lond., M.R.C.S., has been appointed Surgeon (out-patients' department) to the Bristol Hospital for Sick Children and Women.
NG, A., M.B. Edin., D.P.H. Lond., has been appointed Medical Officer for the Workhouse, Watford.
:KEOWN, W. A., M.D. Irel., M.Ch., has been appointed Lecturer on Ophthalmology and Otology, Queen's College, Belfast.
LLER, C. B., L.R.C.P. Edin., M.R.C.S. Eng., has been appointed Medical Officer of Health for the Borough of Cowbridge.
)RISON, ALEXANDER, M.D. Edin., F.R.C.P. Edin., M.R.C.P. Lond., has been appointed Physician to Out-patients at the Children's Hospital, Paddington-green.
)RRIS, R. A., M.B. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for Bedlington.
)RTON, C. A., L.R.C.P. Lond., M.R.C.S., has been appointed Surgeon (out-patients' department) to the Bristol Hospital for Sick Children and Women.
RTON, T. C., M.R.C.S., has been appointed Consulting Surgeon to the Bristol Hospital for Sick Children and Women.
GET, PETER, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the High Halden Sanitary District of the Tenterden Union.
DBURY, G. J., M.B. Lond., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Membury Sanitary District of the Axminster Union.
NDOLPH, C., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer for the Fifth Sanitary District of the Wellington (Som.) Union.
E, H. H., M.R.C.S., has been appointed Medical Officer for the Ashford Sanitary District of the Staines Union.
LEGER, R. A., M.B., M.S. Edin., has been appointed Medical Officer for Watford, Herts.
EWART, W. A., M.B., M.S. Aberd., has been appointed Medical Officer for the No. 5 Sanitary District of the Oldham Union.
'ETE, H. L., L.R.C.P. Lond., has been appointed Medical Officer to the Fishguard and Rosslare Railway and Harbour Works at Fishguard.
OMAS, J. T., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer by the Camborne Urban District Council.
DERELL, A. S., M.D., T.C.D., M.R.C.S., D.P.H. Camb., has been re appointed Medical Officer of Health by the Tipton District and Parish Council.
)DHOUSE, THOMSON S., M.B., Ch.B. Vict., has been appointed House Surgeon to the Stockport Infirmary.

Vacancies.

further information regarding each vacancy reference should be made to the advertisement (see Index).

MINGHAM CITY ASYLUM.—Junior Assistant Medical Officer. Salary £80 a year, with board, lodging, and washing.
RTFORD UNION.—Medical Superintendent of Infirmary and Medical Officer of Workhouse and Schools. Salary £250 per annum, with furnished residence in the Infirmary, rations, washing, &c., or £300, with furnished residence, washing, &c. Also Assistant Medical Officer, unmarried. Salary £100 per annum, with furnished apartments in the infirmary, rations, washing, &c. Applications to the Clerk to the Guardians, Union Offices, Isleworth, W.
TRAL LONDON OPHTHALMIC HOSPITAL, 238, Gray's-Inn-road, W.C.—House Surgeon.
TRAL LONDON THROAT, NOSE, AND EAR HOSPITAL, Gray's-Inn-road, W.C.—Clinical Assistants. Fee three guineas.
STER GENERAL INFIRMARY.—Visiting Surgeon, for two years Salary to commence at £90 per annum, with residence and maintenance in the house.
LINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Honorary Anæsthetist.
LINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Four qualified Clinical Assistants and eight unqualified Clinical Clerks in the Out-patient Department.
SVENOR HOSTITAL FOR WOMEN AND CHILDREN, Vincent-square, Westminster.—Qualified Dispenser.
SS DISPENSARY AND INFIRMARY AND VICTORIA HOSPITAL.—Resident Medical Officer. Salary £110 per annum, furnished apartments, coal, gas, and attendance. Applications to Hon. Sec., High-street, Lewes.
ON TEMPERANCE HOSPITAL, Hampstead-road, N.—Assistant Resident Medical Officer, for six months. Residence, board, and washing provided.
MORE HOSPITAL FOR INCURABLES.—Assistant Medical Officer. Applications to the Secretary, 6, North-street, David-street, Edinburgh.
HOSPITAL FOR WOMEN, 144, Euston-road, London.—Qualified Woman, as Clinical Assistant for out-patient's department.
N'S ISLE OF MAN GENERAL HOSPITAL AND DISPENSARY, Douglas, Isle of Man.—Resident House Surgeon. Unmarried. Salary £90 per annum, with apartments, gas, coals, and washing free. The House Surgeon is usually appointed by the committee of the House of Industry as medical attendant at that institution at a salary of £10 per year. Applications to Hon. Sec., 25, Athol-street, Douglas, Isle of Man.
NORFOLK COUNTY ASYLUM, Thorpe, Norwich.—Temporary Assistant Medical Officer (Locum Tenens) during July and August. Board, lodging, and washing provided.
PADDINGTON-GREEN CHILDREN'S HOSPITAL, London, W.—Ophthalmic Surgeon.
ST. GEORGE'S AND ST. JAMES'S DISPENSARY, 60, King's-street Regent-street, London, W.—Surgeon.
SEAMAN'S HOSPITAL SOCIETY (*Dreadnought*).—House Surgeon for Branch Hospital, Royal Victoria and Albert Docks, E. Salary £75 per annum, with board and residence.—Applications to the Secretary, Greenwich, S.E.
STOCKPORT INFIRMARY.—Assistant House and Visiting Surgeon. Salary £70 a year, with board, washing, and residence.
WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, PARALYSIS, AND EPILEPSY, 73, Welbeck-street, London.—Physician.
WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—Resident Medical Assistant for six months. Board, lodging, and washing provided.

Births, Marriages, and Deaths.

BIRTHS.

ANDREWES.—On June 7th, at 35, Welbeck-street, W., the wife of F. W. Andrewes, M.D., of a son.
BURTON-FANNING.—On June 6th, at Norwich, the wife of F. W. Burton-Fanning, M.B. Camb., M.R.C.P. Lond., M.R.C.S., of a son.
COLLIER.—On June 4th, at Clarence Villa, Hartfield-road, Wimbledon, the wife of S. Ruddell Collier, M.D., of a daughter.
EHRHARDT.—On June 4th, at Portland House, Bridge-road, W. Battersea, the wife of J. M. Ehrhardt, L.R.C.P.I., of a daughter.
GRIFFITHS.—On June 5th, at 63, Trumpington-street, Cambridge, the wife of Joseph Griffiths, M.D., F.R.C.S., of a son.
HOWARD.—On May 30th, at Queen Ann-street, W., the wife of R. J. E. Howard, M.D., F.R.C.S. Eng., of a son.
KERR.—On May 27th, at Keelby, Brocklesby, Lincs., the wife of D. Oliver Kerr, M.B., C.M., D.P.H., of a daughter.

MARRIAGES.

ARCHER—WYNTER-BLYTH.—On June 4th, at St. Paul's Church, Avenue-road, N.W., Lewis Stafford Archer, M.R.C.S., Eng., L.R.C.P. Lond., of Upper Avenue-road, N.W., and Hillfield-road, West Hampstead, to Julia, elder daughter of A. Wynter-Blyth, M.R.C.S., Medical Officer of Health for Marylebone, and Barrister-at-law, of Norfolk-road, N.W.
CREASY—NEALE.—On June 6th, at Christ Church, Ealing, Lawrence Eliot Creasy, M.R.C.S., L.R.C.P., of Windsor-road, Ealing, to Maud Ann, eldest daughter of Frederick Neale, of Woodville, Ealing.
CREE—SMITH.—On June 3rd, at the Church of St. Philip and St. James, Cheltenham, Surgeon-Captain Gerald Cree, Army Medical Staff, son of E. H. Cree, M.D., Deputy Inspector-General, R.N. (retired), to Isabella Sophie Alice, only daughter of Philip Broke Smith, M.D., Surgeon-Major-General, late A.M.S.
COLLIER—BOWATER.—On June 6th, at St. John's Church, Lewisham, Kent, Henry William Collier, M.B., B.S. Lond., of Adderbury, Oxon, only son of Henry Collier, of Forest-hill, to Gyneth, daughter of Francis Bowater, of Apna Ghur, St. John's.
LEAF—GRIERSON.—On June 6th, at St. Barnabas Church, Addison-road, by the Rev. William Leaf, M.A., Curate of Holy Trinity, Southwark, assisted by the Rev. G. R. Thornton, Vicar of the Parish, Cecil Huntington Leaf, M.A., M.B., F.R.C.S., to Fanny, daughter of the late James Grierson, of 4, Holland Villas-road, Kensington.
STEVENS—FRANKLIN.—On June 1st., at St. Anthony of Padua, Lordship-lane, by Very Rev. Provincial of Discalced Carmelites, Francis Joseph Stevens, B.A., M.R.C.S., Medical Officer of Health of Camberwell, youngest son of Thos. Stevens, Barrister-at-Law, to Annie Evelina Whidborn, (Faggie), only daughter of the late Dr. Henry Franklin of Clerkenwell and Islington.
THOMPSON—COTTON.—On June 9th, at St. John's, Hampstead, Charles Sinclair Thompson, M.B., of Bideford, to Florence, eldest daughter of the late Francis J. Cotton, of The Knoll, West Hampstead.
WITHERS—SUMMERS.—On June 9th, at St. Peter's, Ashton-under-Lyne, Percy Withers, M.B., of Ashford, Hale, Cheshire, to Mary Woolley, youngest daughter of the late John Summers, of Sunnyside, Ashton-under-Lyne.

DEATHS.

COCKELL.—On June 3rd, at Widecombe-crescent, Bath, Philip Wyatt Cockell, Brigade-Surgeon-Lieutenant-Colonel, Bombay Medical Staff Corps, retired, aged 64.
EVANS.—On June 5th, at Shaftesbury, Charles Silvester Evans, M.A., M.B., B.C. Cantab., M.R.C.S., in his 36th year.
GRIFFITH.—On May 27th, at Huntworth, Bedford, David Charles Ballinger Griffith, M.R.C.P. Edin., eldest son of the Rev. T. C. Griffith, of Norman Hill, Gloucestershire, aged 50.
HUDSON.—On April 28th, 1896, at George, Cape Colony, F. J. Hudson, M.B. Aberd., District Surgeon, George, aged 34.
HUNTER.—On June 7th, at The Poplars, Pontypridd, after a few days' illness from pneumonia, Thomas Canning, Physician and Surgeon, son of Dr. Hunter, J.P., aged 28.
JOHNSON.—On June 3rd, at Savile-row, Sir George Johnson, M.D., F.R.S., Physician Extraordinary to H.M. the Queen, in his 78th year.
LANGSHAW.—On June 5th, at Elmside, Lancaster, James Pearson Langshaw, F.R.C.S., aged 82.
MORRIS.—On June 3rd, at The Grove, Camberwell, Isaac Morris, M.D., of Wallands-crescent, Lewes, aged 56 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (15th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.).

TUESDAY (16th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (17th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY (18th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Great Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (19th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.) Gt. Northern Central (2.30 P.M.).

SATURDAY (20th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

WEDNESDAY (17th).—ROYAL METEOROLOGICAL SOCIETY (22, Gt. George-st., Westminster).—7.30 P.M. Papers:—Mr. H. Harries: Arctic Hail and Thunderstorms.—Mr. J. E. Cullum: Climatology of Valencia Island, co. Kerry.—Dr. H. E. Leigh Canney: The Winter Climate of Egypt, based on results from Self-recording Instruments, 1893-6 (this paper will probably also be read).

ROYAL MICROSCOPICAL SOCIETY (20, Hanover-sq., W.).—8 P.M. Meeting.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY (Limmer's Hotel, Conduit-street, W.).—8.30 P.M. Dr. C. T. Williams: Seabathing and the Open-air Treatment of Disease. Followed by a Conversazione.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (15th).—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Mr. G. C. Wilkin: Syphilis of the Pharynx and Larynx.

WEDNESDAY (17th).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Dr. Beevor: Peripheral Neuritis.

HOSPITAL FOR CONSUMPTION, &c. (Brompton).—4 P.M. Dr. S. Martin: The Early Diagnosis of Pulmonary Tuberculosis.

LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Payne: Eruptions produced by Drugs.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. Keetley: Surgical Cases.

THURSDAY (18th).—LONDON POST-GRADUATE COURSE.—Brit. Inst. of Preventive Medicine, Gt. Russell-st., W.C., 3.30 P.M., Dr. Allan Macfadyen and Mr. A. G. Foulerton: Detection of Pathogentic Micro-organisms in Urine.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Dr. R. Harrison: Clinical Lecture.

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-st., W.C.).—4 P.M. Lecture by Dr. Barlow.

VICTORIA HOSPITAL FOR CHILDREN (Tite-street, S.W.).—4 P.M. Dr. W. Carr: Pneumonias in Children and their Sequels.

FRIDAY (19th).—LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Erysipelas and Suppuration.

ROYAL INSTITUTION.—9 P.M. Mr. T. C. Martin (New York): The Utilisation of Niagara (with Illustrations).

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 11th, 1896.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks 8.30 A.M.
June 5	29·81	W.	67	57	122	74	59	0·17	Cloudy
,, 6	29·80	S.W.	65	62	124	74	56	...	Cloudy
,, 7	29·64	S.E.	59	55	110	66	55	0·05	Cloudy
,, 8	29·57	S.W.	62	58	122	75	55	0·20	Cloudy
,, 9	29·47	E.	63	61	111	73	57	...	Overcast
,, 10	29·50	N.W.	59	58	73	63	58	0·28	Raining
,, 11	29·78	N.W.	61	59	111	68	57	0·58	Cloudy

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

A POINT OF CONDUCT.

To the Editors of THE LANCET.

SIRS,—Will you kindly give your opinion on the following point of medical etiquette? A. and B. are general practitioners in the same town. B. sees a patient in consultation with A. After a little time A. is told by the family that they do not wish him to attend them any longer and intend to place themselves in B.'s hands. B. expresses great regret to A., but takes the patient on the ground that if he did not someone else would. Was B.'s conduct right?—I am, Sirs, yours faithfully,

June 2nd, 1896. X. Y. Z.

*** It is to be regretted that B. considered it his duty to attend the case in the place of A., who introduced him to the house; but in the absence of further information B. must be credited with perceiving circumstances which compelled him to act in this manner. It is always a pity when the particular situation arises that has been laid before us, and the mischief recoils on the heads of the public, who may thereby lose the security that lies in consultation. A medical man cannot be expected to disinterestedly call in a brother practitioner if he feels that the course may lead to his being at once supplanted. But it must not be forgotten that every patient has a right to employ any medical man he chooses.—ED. L.

PIG *v.* OX BILE TABLOIDS IN JAUNDICE.

MESSRS. BURROUGHS, WELLCOME, AND CO. write us that, acting on Dr. George Harley's suggestion in THE LANCET of May 30th that the bile of the omnivorous pig is more likely to contain "exactly the ingredients necessary to supply the place of those that are absent from the digestive canal in cases of jaundice" than that of the herbivorous ox, they have prepared tabloids of compressed pig-bile, each tabloid containing four grains. Messrs. Burroughs, Wellcome and Co. have certainly lost no time in affording the profession an opportunity of practically testing Dr. Harley's suggestions.

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THE ADMINISTRATION OF GUAIACOL.

To the Editors of THE LANCET.

SIRS,—Permit me to ask the favour, in your correspondence pages, of me of your contributors or readers detailing the methods of administering guaiacol or guaiacol carbonate, by vapour and by external application, to the skin of the thigh. I am, Sirs, yours faithfully,

June 10th, 1896. SURGEON.

AB UNO DISCE OMNES?

he *Pall Mall Gazette* of May 28th is responsible for the following paragraph under the heading "Silk and Stuff":—

> "A case which ought to become a leading one on the fallibility of doctors in distinguishing between a drunken and epileptic fit was heard at the Lambeth Police-court on Tuesday. A highly respectable young woman from Brentford was charged with being drunk and lying insensible in a tram-car. The medical gentleman called in by the police 'formed the opinion that she was suffering from the effects of drink.' Yet it turned out that she was well known to be subject to epilepsy, was a total abstainer, and had never tasted a drop of alcohol in her life. Moreover, the conductor had not noticed any trace of insobriety in her demeanour on entering the car, and it is to be presumed that drink is not to be obtained there during the transit. Thus the doctor was hopelessly wrong. The moral seems to be that while a doctor should be called in to every such 'charge' without exception, his uncorroborated testimony should never be sufficient."

The *Pall Mall Gazette's* logic is surely somewhat amiss. Because a certain "medical gentleman" formed an erroneous opinion that a respectable woman was suffering from the effects of drink, therefore the moral remains that no medical man's uncorroborated testimony should ever be sufficient,—to us this seems to be a flagrant example of an argument from the particular to the universal. It has ere now arrived to most papers, morning and evening alike, to disseminate inaccurate intelligence. Should the public on that account invariably decline to believe in any utterances whatsoever of the journal once caught tripping? We venture to think that the two propositions are parallel.

WANTED, AN EXACT DIAGNOSIS.

To the Editors of THE LANCET.

SIRS,—I was called in on Sunday morning to visit Mrs. ——, nd found her to be suffering from a very acute diarrhœa and ollapsed; the temperature was 95° F. and the pulse 50. I at once rdered stimulating and other appropriate treatment, but despite all fforts she died on Sunday evening about 6.30 P.M., conscious to the st. This patient had been ill from the Thursday night. I could trace o irritant poison or any unwholesome food, and turned my attention o the milk and water supplies. The former I found good; the latter on xamination I found contained a large quantity of animal matter, itrites, and nitrates, the sources of the spring receiving all the rainage from the adjoining cemetery not more than 100 yards away nd the percolation from a huge heap of manure and stable refuse. A eek later I was called in to see Mr. ——, sen., the father-in-law of the eceased woman, and found him suffering from the same complaint (he ll ill about four days after the death of his daughter-in-law); a day fter his daughter and son were also taken with the same complaint. hey, too, all showed signs of collapse, and notwithstanding my tmost endeavours he passed away after a week's illness, the other wo patients recovering. An examination of the water showed marked ollution. The strange part I now relate. A Mrs. ——, who acted as urse and whom I warned against drinking the water, and who denied aving touched a single drop of food (fluid or solid) in that house, also ell ill with the same complaint, and after a more or less protracted onvalescence made a fair recovery. The brother of the patients and all heir relatives suffered from this choleraic diarrhœa, and I could ccount for the diarrhœa by nothing except the water after the closest nd most minute investigation. Yet it appears that it must have been ontagious, since all the relatives who came to the house or who ttended the first patient's funeral were in turn attacked, and even he families who did not come, as being too young, of those who ttended the funeral suffered more or less acutely. Microscopical xamination of the stools revealed nothing except what I took to be the acillus coli communis. The first death was certified as acute intestinal atarrh and the second as choleraic diarrhœa, but some light on these ases would be of great benefit to me.

I am, Sirs, yours truly,

Ilminster, June 1st, 1896. CHARLES A. FRANCOIS.

Ethics has not made his questions very clear. Are we to understand that the person represented as a tout is a medical man or only the agent of a medical man? There can be no doubt that the conduct described is unprofessional, but the local medical society could hardly take notice of it unless the examples were several and well authenticated.

Warwick.—We regret that we cannot advise medical treatment or recommend individual practitioners, but the family medical man will be able to say whether the process of electrolysis would be of use and to make arrangements for a trial thereof. Skin-grafting has also proved successful.

"THE TREATMENT OF PLEURITIC EFFUSION."

To the Editors of THE LANCET.

SIRS,—In answer to the letter on the above subject by "Ubique" in THE LANCET of May 30th I should suggest the following line of treatment:—First of all re-aspirate and then inject into the pleural cavity from 15 to 30 minims of a solution of corrosive sublimate of the strength of 1 grain to the ounce of distilled water = $\frac{1}{437}$ to $\frac{1}{875}$ gr. hydrargyri bichloridum. Then close the wound with a collodion pad, and finally apply a piece of lint sprinkled with linimentum belladonnæ and then bandage. This treatment is on the lines of the article "Curative Treatment of Vaginal Hydrocele by Corrosive Sublimate" written by my father, Dr. James Miller, in THE LANCET, 1886, who would, I have no doubt, forward a copy of the article to "Ubique" upon his applying to him for same.

I am, Sirs, yours faithfully,

J. T. ROGER MILLER, L.R.C.P. & S.I., &c.,

Malton, June 1st, 1896. Hon. Surgeon to Malton Public Dispensary.

ARMY MEDICAL SERVICE.

A COMBATANT officer writes to us advocating the introduction of a short-service system into the army medical service. He suggests that appointments should be for six years, say, or for some definite period, with a bonus instead of pension at the end of it, and that the Government should have the option of selecting such medical officers as had shown ability and military aptitude, and were willing to remain, as were required to fill the more permanent and administrative ranks of the medical staff, placing the latter upon exactly the same footing as to rank and position as the officers of the Royal Engineers. He points out that in this way the State and the medical profession would equally get what they want and a large medical reserve would be formed. But neither our correspondent nor the advocates of such an organisation seem to be aware of the fact that an essentially similar measure was put forward and adopted many years ago, and had to be abandoned for the simple reason that it proved a failure.

IODISM.

To the Editors of THE LANCET.

SIRS,—In the issue of THE LANCET of May 30th Dr. S. West mentioned one or two apparently doubtful preventives of iodism during the administration of iodide of potassium. Some years ago I had a patient suffering from acute pain in the head, obviously rheumatic in character, for whom I prescribed the iodide. So serious, however, were the effects of the drug that he absolutely refused to continue it after the first few days. The pain speedily subsided, but recurred some months afterwards, and so severely that he only found relief from repeated hypodermic injections of morphia. As, however, the morphia was simply allaying the pain without in the least affecting its cause I with much persuasion induced him to resume the iodide. To my surprise I found that he could take it then with perfect impunity. Afterwards I got into the habit of prescribing it with small doses of morphia and was rarely if ever troubled with iodism. But it is not always desirable to administer morphia, and lately, where that drug has been contra-indicated, I have used atropia sulphate instead with very gratifying results. I am, Sirs, yours truly,

Gourock, June 2nd, 1896. A. VEITCH.

IMPROVED ADHESIVE PASTE.

WE have received from the Morgan's Hungarian Paste Co., 153, Colegrave-road, Stratford, E., a specimen of their commodity, which is said to possess certain advantages over others in use. Foremost among these are evidently its good white colour, its uniformity of composition, and its keeping properties, while it is powerfully adhesive. It contains an agreeable and effective preservative. Its basis is starch, as shown by the iodine test.

Anxious should consult her medical attendant.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Eastern Morning News, Bradford Observer, Manchester Courier, Philadelphia Inquirer, Times of India, Cape Times, Pioneer Mail, Brisbane Courier, Glasgow Herald, Sussex Daily News, Newcastle Journal, South Wales Daily News, Liverpool Daily Post, Chatham News, Western Mail, Midland Free Press, Leicester Post, Northern Echo, Birmingham Post, Worcester Herald, Southampton Times, Yorkshire Post, Rochester Journal, Rangoon Times, Manchester Evening Mail, Bristol Mercury, Scotsman, Builder, Liverpool Courier, Worcestershire Chronicle, Leeds Mercury, Horncastle News, Cheshire City News, Donegal Independent, Hemel Hempstead Gazette, Hertfordshire Mercury, West Middlesex Standard, Weekly Free Press and Aberdeen Herald, Public Health, Reading Mercury, Gazette and News (Blackpool), Local Government Chronicle, City Press, Guy's Hospital Gazette, Macclesfield Courier, Surrey Advertiser, Gloucestershire Chronicle, Local Government Journal, Mining Journal, Kent Messenger, Record, Financial News, Bradford Evening Telegraph, Darwen News, Barnsby Chronicle, South Eastern Gazette, Shanghai Mercury, Melbourne Argus, Lyttelton Times (Christchurch, N.Z.), Middlesex and Surrey Express, &c., &c.*

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The Croonian Lectures:

A CONTRIBUTION TO THE STUDY OF THE BLOOD AND THE CIRCULATION.

Delivered before the Royal College of Physicians of London,

BY GEORGE OLIVER, M.D., F.R.C.P. LOND.

LECTURE III.[1]

Delivered on June 9th.

THE BLOOD.

MR. PRESIDENT AND GENTLEMEN,—In this and the following lecture I propose to submit the results of some observations made with the view of inquiring into the physiology of the red blood corpuscle.

Notwithstanding recent advances in our knowledge of the chemical, histological, physiological, and pathological aspects of the blood there still remains much to be learnt in regard to the definite influence of the leading physiological conditions and processes upon the life history of the red corpuscle. There are certain views entertained as to its birthplace and as to how it terminates its little cycle of life, and we know well enough the all-important rôle it plays in the organism which it serves; but our present knowledge of the physiology of the corpuscle fails to furnish definite answers to such questions respecting it as the following. What is the influence of the different physiological conditions that obtain from hour to hour, and indeed from day to day and from week to week, on the relationship which subsists between the corpuscle and the plasma on the one hand and the hæmoglobin on the other? What are the ordinary limits of the variations thus induced in health and, furthermore, in disease? Does such a physiological process as that of digestion, which has a far-reaching influence throughout the organism, affect the red corpuscle either in regard to its development and growth or to its dissolution, or in regard to its relations to the plasma and to the hæmoglobin? In other words, what is the physiological history of the corpuscle from the inception of food to the absorption of the products of digestion? What is the influence of water? Is the red disc in its twofold relations to the plasma and to the hæmoglobin affected by rest and exercise? Under what physiological conditions does the hæmoglobin value of the corpuscle rise and fall? The solution of such questions as these is highly desirable from a purely physiological standpoint, and it is, moreover, an absolutely necessary preliminary to any satisfactory clinical hæmometric observation.[2] The present inquiry was undertaken in the hope that it might elicit some facts which may form a contribution, meagre though it be, towards this end. It was, however, soon apparent at the very outset of it that though it was comparatively limited in scope it was, nevertheless, one that would claim the labour of some years before it yielded a full answer; therefore, the few results which have been gleaned during the past twelve months can only be regarded as preliminary.

APPARATUS AND METHODS OF OBSERVATION.

The adoption of accurate hæmometric methods was of course the first requisite in embarking on this inquiry, and the determination of the relative value of the methods in use and of the new ones which it was found necessary to devise for this investigation involved the expenditure of much time and observation in the preparatory stage. I will submit first the results of this preliminary work because they led to the adoption of new modes of observation which should be fully described, but before doing so I will rapidly review some of the methods in present use.

The methods hitherto employed for determining oxy-hæmoglobin are founded on the following principles: (1) the estimation of iron in the ash; (2) the use of the spectrophotometer; and (3) the indication of quantity afforded by depth of colour. The method of determining the iron in the ash and that of the spectro-photometer are wanting in that important quality of practicality which, in the collection of a large body of data, as is demanded by this inquiry, is an absolute necessity. A time-saving yet accurate method was required. The hæmometer of von Fleischl and the hæmoglobinometer of Gowers, both founded on the colorimetric principle, having been most widely accepted in the laboratory and in clinical work, seemed to afford the most promise. But observation led me to doubt whether they afforded readings of sufficient definiteness, reliability, and accuracy for this physiological inquiry. It was therefore determined to ascertain if the colorimetric principle could be employed more advantageously than obtains in these instruments, and the results observed induced me to adopt a new mode of applying that principle.

The methods at present employed for determining the blood corpuscles are (1) examination by the microscope, and (2) percentage estimation by the centrifugal machine. The enumeration method is perhaps on some grounds preferable to centrifugal determination, especially for clinical work, for it enables any alteration in the corpuscles to be observed at the same time. But repeated observation has shown that the method as ordinarily applied by enumerating ten or even thirty squares does not possess that degree of accuracy with which it is usually credited. Though all the necessary precautions have been taken, a series of trials derived from the same mixture of a sample of blood may yield the wide variation of 10 per cent. The possibility of such a large margin of difference as this must render the method totally unreliable for any physiological inquiry, however immaterial it may be for clinical purposes. Extended enumeration—e.g., to 120 squares—will of course average the discrepancies; but it necessarily involves the expenditure of more time and labour than are at the disposal of most observers—especially, too, as physiological work demands the largest possible collection of data and much repetition. It was therefore found necessary to search for a simple time-saving method of hæmocytometric observation which, founded on extended enumeration in the first instance and attaining to the accuracy of it, might be substituted for it. I was fortunate enough to find such a method, which will be described in the next section of this lecture. These preliminary observations demonstrated that the methods in present use for the estimation of the hæmoglobin and the corpuscles are not sufficiently precise for an inquiry into the physiology of the red corpuscle.

THE APPARATUS EMPLOYED IN THIS INQUIRY.[3]

I.—The Hæmoglobinometer.

Before describing the apparatus it is advisable, first of all, to explain the principle that underlies the arrangement adopted, to point out some of the difficulties that have been met with and to describe the steps that have led to the present form of the instrument. A review of all these preliminary matters is essential to a clear conception of the reasons that have determined the adoption of the several details of construction.

The principle followed.—As already stated, the method is founded on the colorimetric principle. But I have modified the applications of that principle as hitherto adopted in the following ways: (1) double transmission of light (or reflected light) is used instead of single transmission; (2) a pure white background is selected on which the solution of the blood and the standard colours rest; (3) the standard is presented as a series of definite gradations; and (4) the colour of the blood solution is compared with that of the standard in camera.

1. *Reflected (or doubly transmitted) light preferred.*—It seems to me that certain advantages are secured by comparing the sample of blood and the standard by means of reflected rather than by transmitted light. These advantages may not at first sight be very obvious, but in this particular mode of observation they nevertheless exist. In the first place, the depth of colour when observed by double transmission of light is nearly twice as much as it is when viewed by single transmission, for the blood solution is seen through a medium of the same colour induced by the incident rays and consequently the colour of the reflected

[1] Lectures I. and II. were delivered on June 2nd and 4th and published in THE LANCET of June 6th and 13th respectively, and Lecture IV. as delivered on June 11th.

[2] Much has already been achieved in this field by the labours of a number of workers, such as Hayem and his pupils Dupérie and Cadet, Grawitz, Schiff, Tietze, Egger, Schüller, Hedin, Cohnstein and Zuntz, Gierlin, Miescher, and Lloyd Jones, among many others too numerous to name individually.

[3] These hæmometric methods were described at the meeting of the Physiological Society held at University College last March.—Proceedings of the Physiological Society, Journal of Physiology, 1886.

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rays is proportionately increased. Hence a much smaller measure of blood is required under reflected light to produce the degree of colour made apparent by transmitted light, and it is obvious that in a clinical work such a reduction may sometimes prove a distinct advantage, as when 5 c.mm. of blood amply suffice in place of 10 or 20 c.mm. Then, again, light reflected lends itself much more satisfactorily than light only once transmitted to the attainment of uniform physical conditions in the strata of the blood solution and of the standards; and in consequence of the exactly equal adjustments which thus become possible the finest differences in depth of colour become recognisable, and the readings can be made with an exactitude which cannot otherwise be obtained. This outcome of the improved definition has tended to greatly reduce that unavoidable variable element in all observation, the equation of the observer.

2. *The uniform white background.*—The use of reflected light introduces a difficulty in regard to the reflecting background, for this must be uniform, not only in the same instrument, but in other instruments that may be made. The slightest variation in shade or tone of colour must produce discordant readings. In the earlier observations opal glass was selected for this purpose; it was soon discovered that different samples of it were far from invariable in colour. It, therefore, became necessary to select some white substance that could be relied on for uniformity and purity of colour; and dry, finely powdered precipitated lime sulphate was chosen. This substance forms a most delicate reflecting surface and along with the invariable position of it immediately under the blood solution and the standard colours contributes considerably to the exactitude of the readings.

3. *The standard.*—It is a matter of great practical importance in constructing a hæmoglobinometer to determine how the standard should be presented so as to obtain the most definite readings. In von Fleischl's hæmometer the whole scale is formed by a wedge of coloured glass, the depth of colour gradually merging off to the lowest reading; and as the field of view always embraces no less than twenty degrees—i.e., twenty degrees heavier on the right than it is on the left—it is easy to understand, even when the colour of the glass matches that of the blood-solution, that very often considerable uncertainty is apt to exist before an estimation can be made. This mode of presenting and using the standard is obviously faulty. It has been found, however, that all doubt as to the position of any particular sample of blood on the scale is entirely obviated when the latter is split up into a number of definite gradations; and this mode of disposing the standard has therefore been adopted. Each grade becomes a subordinate standard, definitely recognisable from its neighbours, and by means of a simple method, to be subsequently explained, the intervening units are read. Moreover, there exists another reason why each stage ought to be separately standardised and why a mere gradation of the same colour is not only indefinite but is misleading, and that is the specific colour curve of the blood, which will be presently described.

On setting up the standard.—To any one who has not made an attempt of this kind it may seem an easy matter to prepare an imitation of the exact colour of a given percentage of normal blood in water, and thus to accomplish the first step towards the setting up of a hæmoglobin standard. But a few trials will dispel such an illusion and will demonstrate the existence of a number of unforeseen difficulties which are inseparable from the task. The standardising involves two steps: (*a*) the adjustment of colour, and (*b*) the determination of the scale.

A. The adjustment of colour.—In the first instance, following others in the same line of work, experiments were made with carmine or carmine and picro-carmine in a glycero-gelatin basis. After much observation it was finally settled that the closest approximation to the colour of the blood solution was obtained by a combination of carmine, picro-carmine, and hæmatoxylin, the blood and the standard solutions being observed by candlelight in cells having a background of opal glass. The gradations, of course, necessitated that the cells should be quite uniform in depth. After the lapse of some few weeks it was obvious that the colour of the standard was undergoing a change, especially in the lower grades, which were becoming darker and brownish. That led to some experiments on the effect of light on the constituent pigments, and it was found that all of them were unstable when exposed to daylight, and especially to direct sunlight. Of the three constituents, having found that hæmatoxylin was the most fugitive it was excluded. Still the carmines became slowly affected by the exposure incidental to work and observations had to be made in camera. Furthermore, at an early stage of the observations another difficulty was encountered, the explanation of which was not at that time forthcoming. The gradations of the standard were made by diluting the carmine solution of the highest grade to the required degrees. When, however, the blood solution which exactly matched the topmost gradation of the scale was diluted in exactly the same manner, marked discrepancies were apparent between these dilutions and the standard gradations; especially was this the case in the lower half of the scale. They should have agreed, but they did not. Since then a satisfactory explanation of this discrepancy has been afforded by Mr. Lovibond, whose valuable and practical work on colour measurement will presently be referred to. This observer has shown that every coloured substance when progressively varied in concentration or in strata thickness furnishes a colour-curve peculiar to itself—a curve of colour composition which he designates "the absorption colour-curve" or "specific colour-curve."[4] According to this explanation the specific colour-curves of the solutions of the carmines and of the hæmoglobin, though coinciding at a certain degree of concentration diverged below that point, and thus the disparities between them became more and more apparent as the dilution increased. This view of specific colour-curves derives some support from the spectroscope, for it is known that the position and the amount of absorption correspond with the percentage solution of the coloured substance under examination. It therefore follows that no one substance or combination of substances can correctly furnish a percentage series of gradations of hæmoglobin. The uniform tone of colour of the glass wedge of von Fleischl's hæmometer, for example, cannot properly represent the colour of the blood solution throughout the scale. In corroboration of this conclusion we have the observations of Osler, Neubert, and Letzins as quoted by Busch and Kerr.[5] "Osler says that the error in the Fleischl instrument may not be more than 2 per cent. in blood which is nearly normal, but he cites Neubert and Letzins as having shown that in a much impoverished blood the error may be as high as 20 per cent." In order to avoid the difficulties presented by the instability of pigments when exposed to light and moisture, and by the specific colour-curve of the blood it may occur to some, Why not standardise with oxy-hæmoglobin itself? Unfortunately, here again gradual change of colour arises as a bar to its adoption; even though the solution of it is sealed up it becomes reduced and no longer retains the colour of freshly drawn blood. Fortunately, however, all the difficulties which have been encountered in attempting to standardise the colour of the blood have now been resolved, and there no longer exists a necessity to continue the search after a standard which is permanent and which is in accord with the specific colour-curve of the blood, for Mr. Lovibond's practical and accurate method of colour-measurement supplies this desideratum.

In as few words as possible I will endeavour to convey an outline—the merest outline—of Mr. Lovibond's mode of determining colour, and for the necessary details I must refer you to his work on the subject[6] and to various contributions he has made to the societies on the application of his method. This observer has devoted at least twenty-five years to the practical study of light and colour and the outcome of his work is the construction of a system of measuring colour, which is now being adopted in various trades in which colour is a leading indicator of the quality of produce or material and also in some forms of analytical work, such as in the estimation of lead in potable water,[7] of carbon in steel, &c., and in the testing of colour-blindness.[8]

[4] Colorimetric Analysis, or Colour as a Means of Quantitative Estimation, by J. W. Lovibond; Journal of the Society of Chemical Industry, 1894, and the Absorptive Method of Colour Analysis, by J. W. Lovibond; Journal of the Society of Dyers and Colourists, 1894-95.

[5] The Relation of the Specific Gravity of the Blood and its Hæmoglobin Percentage. By F. C. Busch and A. L. Kerr. Philadelphia Medical News, Dec. 21st, 1895.

[6] Measurement of Light and Colour Sensation, by Joseph W. Lovibond, F.R.M.S., the Colour Laboratories, Salisbury.

[7] It is claimed that so minute a quantity of lead as one-millionth of 1 per cent. may be detected by Mr. Lovibond's method.

[8] When I set up my standards with Mr. Lovibond's standard colour-glasses I was not aware of any practical hæmometric work having been done with Mr. Lovibond's tintometer. I have since ascertained that Dr. Copeman has been using it for this purpose during the past few years with much satisfaction.

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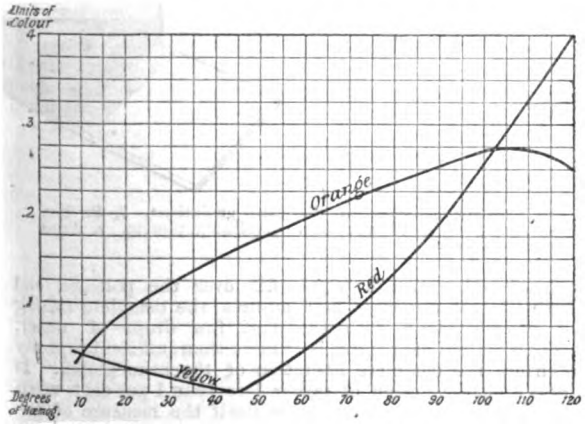
The matching and the measurement of colour are effected in a camera apparatus (the tintometer) by the aid of three sets of definitely graded glasses, one for each of the dominant colours, red, yellow, and blue. The graduations are of equivalent value in all the sets, the test of equivalency being the destruction of all colour and the production of grades of neutral tint by combining the equivalent glass of each set, the observation being made with white light. When the equivalent glasses of two of the dominant colours are combined the three subordinate colours are produced—namely, green, blue, and violet. All other shades and degrees of colour are obtained by combining the glasses of the dominant colours in non-equivalent proportions, so that any colour can be accurately matched by them. The colour scales are made up of units and decimal parts of a unit down to 0·01, which is the lowest fraction of a unit that can be differentiated by the vision. The fixing of the unit has necessarily been arbitrary, as has, indeed, been that of any standard measure, such as the mass of distilled water which has been chosen to represent a gramme, &c. Inasmuch as the unit chosen complies with the requisites of a standard—being uniform, recoverable, and arbitrary—it should be accepted as such; the actual dimensions of it, so long as they serve the practical ends in view, are of no importance. Of course, the correct grading of the glasses from the original standards is essential to the success of the method, and this is, I believe, effectually attained by an elaborate system of cross-checking by a series of trained matchers. These graded glasses of determined value provide a numerical quantitative measure of any colour to be gauged, and they enable the measurements made by them to be recorded, so that the colour thus measured may be reproduced at will or may be preserved indefinitely.

With the view of fixing the blood standards I had the advantage of working in the colour laboratories at Salisbury and of obtaining the valuable assistance of Mr. Lovibond and of his well-trained staff. Samples of blood taken at different times of the day were diluted with distilled water and standardised by my carmine standard of the highest grade. The colour of the different percentage dilutions placed in the blood-cell was then carefully matched and determined by the graded glasses, finely powdered precipitated lime sulphate forming the background of the cell and of the glasses, and the estimations were made by aid of the camera tube presently to be described. The standard gradations of the apparatus were thus settled and they form the two specific colour-curves of the blood—one determined by uniform candle-light and the other by white daylight. Here are the two sets of standards, and you will observe that the difference between them is so remarkable that it is obvious that hæmoglobin cannot be estimated by the same standard used indifferently in the two kinds of light. The colour-curves (Figs. 14 and 15) are made by entering the colour units on the side of the diagram to form abscissæ with the standard gradations which appear at the foot. In daylight (Fig. 14) it will be observed that the

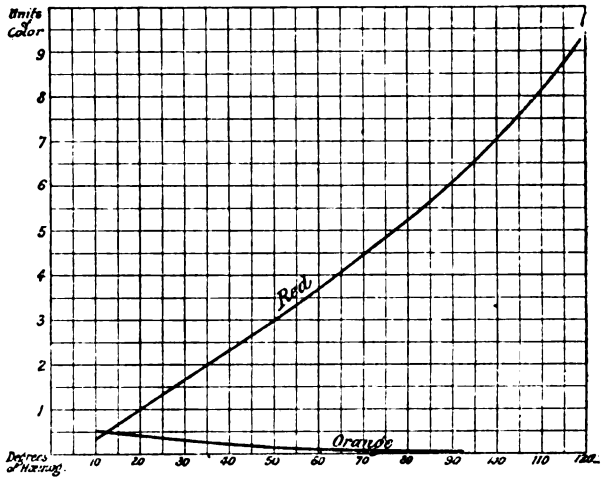
FIG. 14.



Specific colour-curve of blood. Daylight.

specific colour-curves of the blood are madeup of varying proportions of red, orange, and yellow. In the lower percentages (10, 20, 30, and 40) red as a separate colour does not exist; it is only present in combination with yellow as orange, which is made up of equivalent proportions of each. In these lower gradations the place of red is taken by yellow. Between gradations 40 and 50 yellow dies out, and then red appears and progressively increases until at the highest grade it is the dominant colour. In these daylight gradations the curve of orange is the predominant one, though it begins to die out in the higher part of the scale. In candle light (Fig. 15) the colour-curves are quite different and are less

FIG. 15.



Specific colour-curve of blood. Candlelight.

complicated. Red is predominant throughout except at the lowest grade, where it is subordinated to orange. From this point upwards orange gradually diminishes and vanishes entirely at 90, and then pure red distinguishes the highest grades. The remarkable difference between the colour-curves furnished by the two kinds of light is doubtless due to the preponderance of yellow emitted by the candle flame.

The standard colours and the gradations having been duly measured and determined there still remains a further adjustment to be made. It is found that the solution of blood possesses in a remarkable degree the quality of colour-purity or brilliancy—a quality which is distinct from colour-depth and colour composition, for it remains after these have been duly matched.[9] Inasmuch as this property of the blood may prove a distracting element with some observers, and may possibly lead to errors in observation, it is important that it should be eliminated from the views, especially as Mr. Lovibond's system of graded glasses supplies the remedy. It is met by using one of the lower grades of the blue glasses as a cover-glass to the blood cell; and it has been found that this adjustment does not disturb the correct reading of the hæmoglobin.

B. The determination of the scale.—The hæmoglobinometers hitherto used merely furnish estimations of hæmoglobin which are relative to a certain quantity believed to represent the proportion present in the blood of man in health—a quantity which is, moreover, undetermined and therefore unknown. Inasmuch as it will be shown presently that the blood of healthy subjects is not quite so definite and invariable as it is usually believed to be, it would seem to be more satisfactory to be able to quantitatively determine the amount of oxy-hæmoglobin present in each sample of blood tested than to rely entirely on an indefinite arbitrary standard. The quantitative equivalence of the scale in oxy-hæmoglobin has therefore been determined. The blood of the dog was preferred to that of man for this purpose, because the process of separation is comparatively easy, while in the latter it is in many respects unsatisfactory. Great difficulty was, however, encountered in obtaining a pure product, which retained the exact colour of freshly-drawn blood, so that accurate estimations of it could be made. Ultimately this result was attained by determining certain percentages of the moist crystals

[9] Mr. Lovibond tells me that this fact is occasionally observed in the matching of other substances, notably some of the aniline dyes.

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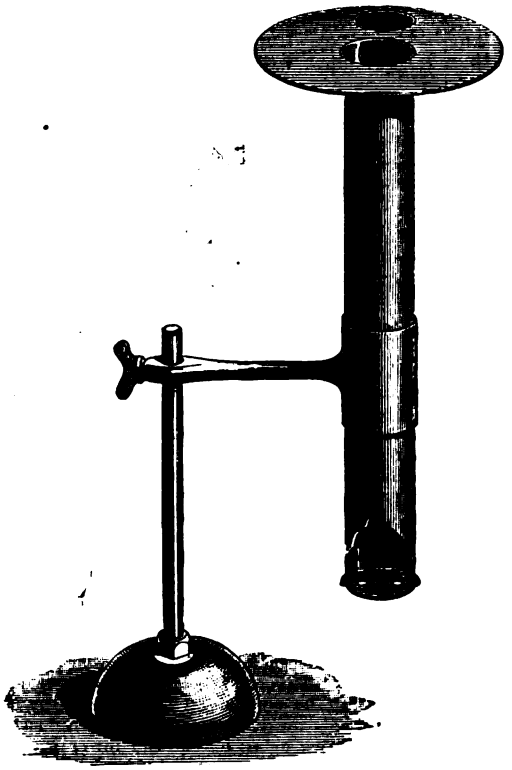
and afterwards correcting for the water.[10] Each degree of the scale is equivalent to 0·155 per cent. oxy-hæmoglobin in the sample of blood tested, therefore 100 degrees represent 15·5 per cent; and determinations above or below that point will require the addition or subtraction of 0·155 per cent. for each degree. It may be mentioned that Preyer[11] gives the average percentage of hæmoglobin for women as nearly 13 and for men 14. Dr. Augustus Waller[12] has found 17 per cent. in the blood of the dog. Observation has shown that the mean percentage of hæmoglobin present in the blood of man in health containing 5,000,000 corpuscles per c.mm. (or 100 per cent. of corpuscles) is represented by 100 degrees.

4. *Observation to be made in camera.*—From the first it was found that a reliable judgment between the two colours of the blood solution and of the standard when closely approximated could not be formed unless the colours were observed through a tube so arranged as to shut off all side lights and other causes of distraction. The best results were obtained by using a long tube (Fig. 16) resembling a microscope tube,

FIG. 16.



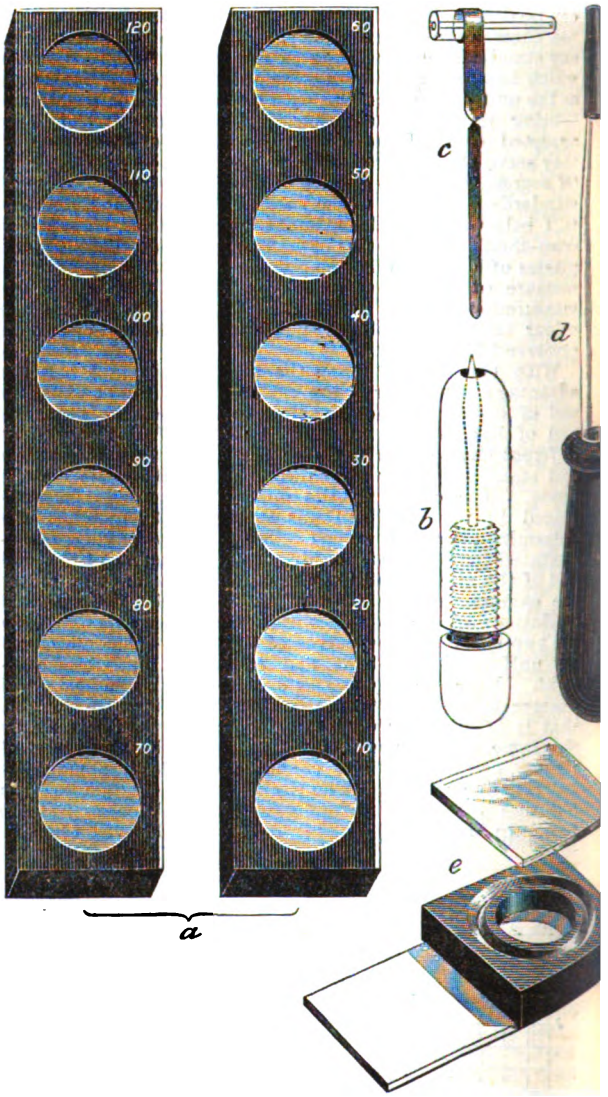
The Camera Tube.

blackened inside, and presenting below two circular holes of 5 mm. in diameter, so as to include only a small but equal area of each of the colours to be compared, and encircled above by a diaphragm or collar which shields the eyes from the direct rays of the candle flame. The tube is held in a vertical position over the colours by means of a side-stand, and it may be adjusted to the required height so as just to avoid any shadow which may be cast by the rays of the candle flame impinging on the lower end of it. A piece of green glass is let into the collar, for it was found that when the sense of colour appreciation was impaired from any cause, such as long and frequent observation, it was restored or was even intensified after looking at the candle for a few seconds through the green glass (Fig. 16).

The apparatus.—A few words remain to be said on the parts of the apparatus and how to use them. These are: (1) an automatic blood measurer; (2) a mixing pipette; (3) the blood cell and cover glass; (4) the sets of standard gradations; (5) the riders; (6) the camera tube; (7) the light; and (8) a bottle of antiseptic fluid, the prickers, needles, and thread.

1. *The automatic blood measurer* (Fig. 17 *c*) has a capacity of 5 c.mm. and fills readily by capillary attraction. It differs from the fragile capillary measurer hitherto used in being made of stout glass and therefore serviceable, in being larger and more manipulable, and in having the end which is presented to the blood well polished, so that all traces of blood can be entirely removed from it by the finger. The bore is dried out before an observation by passing a needle threaded with darning cotton through it. The handle is useful for stirring together the blood and water in the blood-cell. 2. *The mixing pipette* (Fig. 17 *d*) is provided

FIG. 17.



The hæmoglobinometer. *a*, Standard gradations. *b*, Pricker. *c*, Automatic blood measurer. *d*, Mixing pipette. *e*, Blood cell and cover.

with a rubber nozzle which fits over the polished end of the blood measurer and ensures the complete rinsing out of the blood with the first few drops of water. 3. *The blood-cell* (Fig. 17 *e*) is of more than sufficient capacity to ensure the complete liberation of the hæmoglobin. It yields a blood-solution of rather less than 1 per cent. when filled level with the rim. It is itself the measure of the amount of water to be added and it is quite easy to fill it accurately. 4. *The standard gradations* (Fig. 17 *a*) are arranged as circular discs in two slabs—six in each—and they represent the divisions of 10 degrees of the scale, from 10 to 120 inclusive. 5. *The riders* provide for the reading of the

[10] In carrying out this part of the work I must express my indebtedness to Mr. Moore of the Physiological Laboratory of University College for his valuable aid.

[11] Die Blutkrystalle.

[12] An Introduction to Human Physiology, 1893, p. 35.

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degrees intervening between each of the standard gradations. When they are used the slip of colourless glass is placed over the cover of the blood-cell so as to balance the effect of the mere layer of glass of the rider which is laid over the standard. Two sets of riders have been arranged — one suitable for physiological observation, to ensure the finer readings—e.g., of one degree; and the other, sufficient for ordinary clinical observation, to enable the observer to determine differences of 2½ degrees. For the reading of the units nine riders are required which are grouped into three slides. It should be premised that the value of the riders is neither the same in the two standards required for candle-light and daylight nor in the upper and lower halves of either standard. This want of uniformity arises from the differences of the specific colour-curves in the two standards and in the two portions of each. In the six lower grades of both standards the value of each rider is double that in the upper six gradations. In the transition grades—the lowermost of the upper half and the uppermost of the lower half—this rule does not quite accurately apply, but inasmuch as the departure is constant in all observations, and is, moreover, slight, it may be disregarded for the sake of simplicity in using the riders. The daylight standard is less adapted to the finer readings than the candle-light one, because the value of each rider when used with it is doubled—i.e., number one rider becoming equal to 2 degrees in the upper half of the scale and 4 degrees in the lower half. Therefore, the candle-light standard is preferable for such readings, and when it is used each rider has an equivalent value in the six stronger grades—1=1 degree, and a double value in the six weaker grades 1 = 2 degrees. For ordinary reading one rider only is used—namely, that which is equivalent to 5 degrees in each slab of the standards. Therefore, each set of six standard gradations, whether for candle-light or daylight, has its own rider. When the blood solution is deeper in colour than any particular standard gradation, but is overstepped by the rider, the mean between the two may be taken as the reading, and the same rule will apply when the colour of the blood is higher than the rider, but is not so high as that of the next standard grade above. Hence this single rider may be made to provide readings of 2·5, 5, and 7·5. 6. *The camera tube.* It had already been pointed out that observation should only be made through a camera tube, and the one which has been employed throughout this inquiry has been described. It is, however, perhaps somewhat elaborate for the ordinary course of clinical observation; therefore, one of simpler construction is provided which may serve this purpose and, being collapsable, will pack into a small compass with the other parts of the apparatus. 7. *The light.* For observation by artificial light it has been found that the small-sized wax candles known as Christmas candles are the most satisfactory in affording the most suitable intensity of light, and one, moreover, which is sufficiently uniform. The position of the candle is important; it should be such as to shed an equal light on the blood-cell and the standard, and also such as to furnish a high light, so that the flame should be three or four inches above the cells. The distance must be regulated by the observer, who will soon learn how to adjust it to the best advantage, so that he may match the colours with greatest certainty and accuracy. The actual distance does not affect the reading; but when the candle is placed too near the points of observation the illumination becomes too strong and is somewhat distracting, especially when the lower grades are under observation, which require less degrees of light than the higher. In daylight all colorimetric modes of estimating hæmoglobin are less or more unsatisfactory, for they require a uniform degree and kind of light which cannot always be obtained when daylight is resorted to. The colour of the blood solution varies in a marked degree, according as the light is blue or white, or is feeble or waning, or is strong. Therefore, the candle-light standards are to be preferred as being always available with a uniform light. 8. *The antiseptic fluid and pricker.* Before every observation the pricker should be dipped into an antiseptic solution that will not corrode the metal, and a little of the solution should be smeared over the part to be pricked. I prefer a mixture of equal parts of carbolic acid and spirits of wine.

How to make an observation.—The bore of the blood-measurer is first of all dried out by passing through it a needle threaded with darning cotton, and then the polished point is presented to the drop of blood which flows, under the least possible amount of pressure, on pricking the inner side of the pad of the finger or near the root of the nail. Care must be taken to see that the pipette is really quite filled, and if it has been necessary to re-apply it to the drop it should be observed whether there is a break in the column of blood. Any blood adhering to either end must be carefully wiped away with the finger. The rubber nozzle of the mixing pipette, charged with water, is adjusted over the polished end of the pipette, and the blood is washed into the blood-cell by pressing through the water drop by drop. The handle of the pipette is then used as a stirrer, and the further additions of water are made to impinge on it, for it serves to graduate the size of the drops required to accurately fill the cell. It is in this way quite easy to do this when the observer catches the reflection of the light on the surface of the fluid. A final thorough mixing with the handle will be required, and perhaps another slight addition of water may be necessary to secure a level filling. The cover-glass is then adjusted, when a small bubble is sure to form, a sure sign that the cell has not been overfilled. The blood cell is then placed by the side of the standard gradations and the eye quickly recognises its approximate position on the scale. Then the camera tube will more accurately define it. If it is found that the blood solution is matched in depth of colour by one of the standard grades the observation is of course at an end, but if it is observed to be higher than one gradation, but lower than that above it, the blood-cell is placed opposite to the former and the riders are added to complete the estimation.

II.—The Hæmocytometer.

The principle followed.—The method is based on the following facts:—*a.* When a candle-flame is viewed through a glass tube containing water a transverse line of bright illumination is seen, consisting of closely packed, minute images of the flame produced by the longitudinal fibrillation of the glass. In the process of drawing out the tube becomes minutely corrugated or fibrillated in the direction of its axis. The corrugations are extremely small, but they are easily observed when a tube is held before a flame and the structure of the glass is examined by a pocket lens, when the corrugations are seen to produce alternate bright and shaded lines disposed in the vertical direction. Each corrugation acts as a lens, hence the horizontal line made up of a congeries of images of the flame. *b.* When some fixing fluid (such as Hayem's, or a solution of potassium ferrocyanide, sodium chloride, &c.) is added to blood the mixture presents a certain degree of opacity according to the amount of blood or of the fixing fluid. *c.* The opacity thus produced completely shuts out of view the illuminated line, until, on diluting further, a definite point is reached, when it can just be detected as a delicate streak of light across the tube—the dawn, as it were, of the bright minute images of the flame seen when the opacity is absent or is further reduced. Repeated observation has shown that the development of this delicate horizontal line by dilution with the fixing fluid selected is a very sensitive indicator of the percentage of the blood corpuscles. This was shown in various ways; for example, by the measure of the fixing fluid required to bring the line into view being always in proportion to the different quantities of the same blood experimented with, and therefore in proportion to the number of the blood corpuscles present at each observation.

The apparatus.—The principle just described has been made available for determining the percentage of the cellular elements of the blood by mixing a definite measure of the blood with Hayem's solution in a graduated flattened tube. The apparatus consists of (1) a graduated flattened tube; (2) an automatic blood measurer; (3) a mixing pipette; (4) a candle; and (5) a bottle of Hayem's solution.

1. *A flattened tube* (Fig. 18 *c*) has been adopted because it was found that a round tube of such a diameter as to furnish the required degree of opacity will only provide a sufficiently wide scale when a much larger quantity of blood is taken than is generally used for observation of the blood; whereas when the observation is made through the long diameter of a flattened tube it is not necessary to use more than 10 c.mm., and the scale is lengthened in proportion to the reduction of the lateral area. A tube of 15 mm. in the long diameter and 5 mm. in the short diameter provides a good workable scale of 12 centimetres for the determination of 125 per cent. of corpuscles. The divisions of the scale

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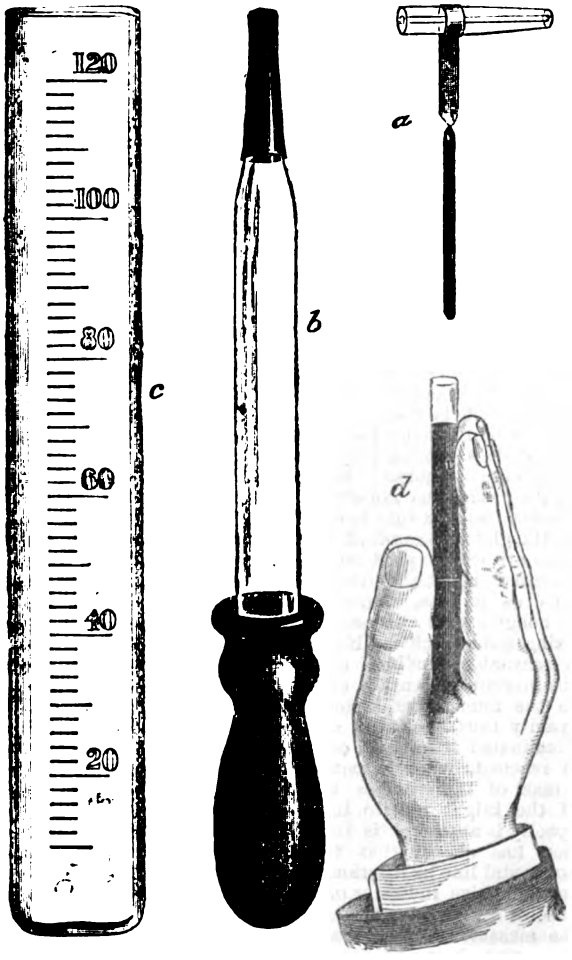
represent 2 per cent. and they are sufficiently apart to allow the eye to read 1 per cent. or even less. 2. *The automatic blood measurer* (Fig. 18 *a*) is the same in construction as that used in the estimation of hæmoglobin, only its capacity is greater. 3. *The mixing pipette* (Fig. 18 *b*) is provided with a rubber nozzle which fits over the polished end of the blood measurer. 4. *The candle* should give a small flame, for that furnishes a more defined line than is obtained from a large flame. The small-sized wax candles known as Christmas candles are the best. A reduced gas-flame also answers perfectly well. 5. *Hayem's Solution.* It was found that each kind of fixing fluid furnishes its own scale—Hayem's[13] was selected as the most satisfactory. The chief

FIG. 18.



Hæmocytometer. *a*, Blood-measurer. *b*, Mixing pipette. *c*, Flattened tube. *d*, Mode of holding the tube for observation.

advantages of it are that it is cleanly to use, that the corpuscles are less affected by it than by other fixing fluids and may be examined under the microscope after the observation has been made without fear of material changes, and that the reading undergoes no variation after the lapse of many hours—e.g., twelve—so that the blood may be washed into a tube and the observation may be made later if more convenient. It may be suspected, however, that the proteids of the plasma may be precipitated by the mercuric chloride present in Hayem's solution, and thus a variable addition may be made to the opacity caused by the corpuscles. This point has been carefully tested with the result that it does not present a source of fallacy. 50 c.mm. of the plasma separated from a blood containing 100 per cent. of corpuscles were washed into the tube with Hayem's solution, but only as far as the 20 per cent. mark, so that the solution contained twenty-five times as much of the proteids as would be contained in 10 c.mm. of the blood diluted to the 100 per cent. mark; and there was apparent the merest haze, so small, indeed, that it could not possibly be determined. It is therefore obvious that the proteids of the plasma do not increase the opacity induced by the fixing of the corpuscles by means of Hayem's solution. The determination of the scale was made by the enumeration method extended to 120 squares applied to the blood of normal man. 100 per cent. presents the generally accepted standard of 5,000,000 per mm.; therefore, 80 per cent. is equivalent to 4,000,000, &c.

The method from the physiological standpoint.—The white corpuscles in a state of health do not affect the readings. The proportion of 1 white to 500 red, or one-fifth per cent., is equivalent only to one-tenth of one of the smallest divisions on the scale, and this is unreadable. So that were the white corpuscles to increase to 1 in 250, such a rise would not appreciably affect the reading of the red corpuscles. The normal variation of the white corpuscles therefore may be safely neglected.

The method from the clinical standpoint.—I have employed this method in clinical observation and found it not merely simple and time-saving, but useful. Apart from the leucocythæmic condition the white corpuscle is not a source of interference. A distinction should be made between the method of enumeration and a volumetric method like this or like that of centrifugal separation, for the aim of the former is to determine the individual corpuscle irrespectively of size, whereas that of the latter is to refer the collective volume of the corpuscles to that of the normal standard. Pathologically it is important to ascertain the size of the red discs, and, therefore, the microscopical inspection of the fluid is a useful addendum to the observation. So long as the average size of the corpuscles is unaltered the method is comparable with that of enumeration, on which it is founded. But inasmuch as that in certain cases may vary—e.g., the microcytes of chlorosis[14] and the macrocytes of pernicious anæmia—the method should, strictly speaking, be regarded as a volumetric one like that of centrifugal separation. It is highly probable that it is clinically advantageous to be able to estimate the corpuscles in any case by comparing them with the normal percentage volume employed as a standard. Such an estimation will probably afford a true gauge of the aggregate corpuscular value of the blood; for it is the collective capacity of all the corpuscles, whatever their size, that is measured by the physiological standard.

The mode of observation.—The pipette, previously dried out by passing through it a needle threaded with darning cotton, having been accurately filled, the slightest traces of blood on the outside of the glass either at the ends or on the side are very carefully wiped away with the finger. The rubber nozzle of the mixer filled with Hayem's solution is then applied over the bevelled end of the pipette and the blood is thoroughly washed into the flattened tube. The amount of the fixing fluid to be used in the first instance will be roughly suggested by the previously made hæmoglobin estimation; if this afforded from 90 to 100 per cent. or more the dilution may at once proceed to the 80 per cent. mark, but if it yielded a lower figure the preliminary dilution should be smaller. The contents of the tube are then uniformly mixed by inverting the tube a few times with the thumb over its mouth, care being taken on removing the thumb to draw it over the lip of the tube so as to restore as much as possible the fluid adhering to it. This procedure should of course be repeated after every addition of the diluting fluid. The observation is made in a dark room or in a darkened room free from cross lights. The observer stands 10 ft. from the flame. In making the observation it is important to shut out as much as possible the diffused light of the candle. The most satisfactory way to do this is to place the lower end of the tube, with its long diameter in a line with the candle, in the concavity between thumb and forefinger, so as to make as it were a frame for it, and then to bring this part of the tube quite close to the eye (Fig. 16*d*). The observer must look out sharply for the first appearance of the transverse line of light which dilution brings into view, and the earliest indications are obtained by turning the tube on its axis when the

[13] The formula is as follows: hydrargyri perchloridum, gramme 0·5; sodii chloras, gramme 1·0; sodæ sulphas, grammes 5·0; aqua destillata, 200 c.c.

[14] So far the only discrepancy which has been met with between this method and that of enumeration has been observed in chlorosis, in which when heavy microcytes exist the readings of the tube are somewhat reduced.

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line will be caught first of all on the side. The fluid is then added point by point until the line is just apparent, when the long diameter of the tube is directed to the flame. This indication is a very delicate one, and requires a little pains at first in order to clearly recognise it without overstepping the necessary dilution, which of course brings it more definitely into view. The first difficulty is the only one, for when the earliest appearance of the line has been once observed it cannot fail to be afterwards recognised.

There is, as a rule, a rather rapid transition between the total absence of the line quite across the tube and the presence of it. Most observers will find no difficulty in defining their readings by stages of half a division—i.e., 1 per cent. It is not necessary to hurry over each observation after adding more fluid and mixing up, for the opacity remains uniform for several minutes.[15]

The method followed in collecting data.[16]—The blood of a large number of healthy subjects belonging to the average well-nourished class has been observed by these new methods with the view of ascertaining the influence of age, sex, and other general physiological conditions on the percentages of the corpuscles and hæmoglobin; but I regret that the limited time at my disposal does not permit me to use this material just now. These rapid hæmometric methods have also been applied pretty widely to clinical work in order to determine the value of such observation in the general run of cases, whether these presented the ordinary signs of anæmia or not. The data thus obtained have shown that an extension of direct observation of the blood is likely to yield useful results, for ofttimes it has demonstrated the existence of moderate degrees of anæmia which had escaped ordinary clinical observation and which was sufficient to maintain a condition of low resistance and of instability of health apt to be referred to denutrition of the nerve centres rather than to that of the blood; and it has, moreover, often shown that anæmia was not present when the general symptoms suggested it. Furthermore, it has afforded evidence of the not uncommon occurrence of an apoplasmic state of the blood which is worthy of further observation and study. I again regret that the shortness of the hour admits not of more than mere passing references to the clinical side of this enquiry. A large portion of the physiological data has been derived from a long series of observations on the blood of two subjects, A. and B., the former twenty-seven and the latter fifty-four years of age. In both cases the corpuscles and hæmoglobin have been determined night and morning for over seven months. Besides this long series of consecutive observations innumerable others have been made in order to determine the effects of exercise, of digestion, and of various other physiological conditions on the percentages of the corpuscles and hæmoglobin. The most important part of the physiological data was collected under the conjoint observation of my co-worker and myself while the subjects were placed in exactly the same physiological conditions. The results were not recorded until cross-checked by each of us. There was rarely any discrepancy between us as to the readings; and when any did arise it was trifling and was adjusted to our mutual satisfaction. This fact shows two things: first, the advantage of two observers working together in making such observations as these, and, secondly, the smallness of the personal equation to be attached to the methods employed. Besides the special experiments referred to, a series of consecutive hourly observations was made during nearly three weeks in which the ingestion of food and liquid and the output of urine were noted. Observations have also been made on animals. In the first instance, dogs were used; but it was found that the thick hide renders these animals much less suitable for this kind of observation than man. Some satisfactory and reliable observations were, however, made on the blood derived from the veins on the outer surface of the rabbit's ear showing the range of daily variation and the effects of oxygen and ether.

The normal reading of the corpuscles and hæmoglobin and of the worth of the corpuscles.—One hundred per cent. normal corpuscles should contain hæmoglobin which reads as near as possible 100 per cent., so that when the latter is divided by the former the unit obtained will represent the normal mean value of the corpuscles in hæmoglobin. The attempt, however, to bring the two percentages into accord has not been by any means an easy task because of the wide physiological variation which is continually taking place in both. The present readings cannot claim to be more than an approximation derived from a large number of observations in healthy subjects. The quotient obtained has been aptly denominated by Dr. Archibald Garrod "the worth,"[17] and by Dr. Haig "the blood decimal."[18] In health the average variation extends from 0·95 to 1·05. It will be found that the actual readings of the corpuscles and hæmoglobin in health, whether in the same subject at different times or in different individuals, is a pretty wide one. In men the average normal range embraces from 95 to 105 per cent. and in women from 90 to 100 per cent. In either sex, and particularly in men, a reading below 85 per cent., especially when the hæmoglobin percentage is still lower, is as a rule distinctly subnormal. The determination of the corpuscles or of the hæmoglobin alone is of but little physiological or pathological value.

Normal variations in the proportions of the chromocytes and hæmoglobin.—Six hundred and forty-nine consecutive night and morning observations[19] in subjects A. and B. have furnished some interesting results in regard to the variations of the red corpuscles in their relations to the hæmoglobin and the plasma which occur in the course of twenty-four hours, from day to day, from week to week, and from month to month. The data derived from each subject corroborate those furnished by the other.

Night and morning variations in the percentage of the hæmoglobin.—The most striking fact is the rise during the night and the fall during the day. Taking the figures furnished by both subjects the rise took place in 90·5 per cent. of all the morning and the fall in 88·4 per cent. of the total evening observations. 5·1 per cent. of the morning and 4·4 per cent. of the evening observations were equal. In 100 observations the night rise of hæmoglobin was observed 90½ times and the night fall only 4½ times; and the day fall occurred 88½ times, while the day-rise took place only 7 times. In both subjects the average night rise was 7·2 per cent., and the average day fall was 7·4 per cent., and the maximum rise was 20 per cent. and the maximum fall 21 per cent. It was observed that when the hæmoglobin fell in the night and rose in the day the average rise and fall were much less than when it followed the rule of rising in the night and falling in the day, for then the average night fall was 2.1 per cent. as against 7·2 per cent. night rise, and the average day rise 2·7 per cent. against 7.4 per cent. day fall.

The night and morning variations in the percentage of the corpuscles was observed to be similar to those of the hæmoglobin, only they were not quite so decisive, in both subjects the morning rise and the evening fall being less frequent. The day fall was much more frequently observed than the night rise, the frequency of the former being 74·9, while that of the latter was 68·5 per cent. Probably this difference indicates the influence of fluids taken during the waking hours. Moreover, the observations show that the corpuscles vary less than the hæmoglobin; for the difference between the night and morning and between the morning and evening observations is much smaller and the number of the observations in which they do not vary at all is greater. Whereas the average variation of the hæmoglobin in twenty-four hours is 7·3 per cent. that of the corpuscles is not more than 4·3 per cent., and whereas the hæmoglobin was without variation in 4·8 per cent. the corpuscles were constant in 8·7 per cent. of the total observations in twenty-hours. If it be accepted that the actual number of corpuscles in the same healthy subject remains pretty constant throughout twenty-four hours, it follows from these facts, that though the plasma is distinctly variable at different times during this short period, it is less variable than the hæmoglobin. These night and morning

[15] The corpuscles themselves and the uniform distribution of them may be observed as separate particles when, on turning the short diameter of the tube towards the flame, the contents are examined by means of a pocket lens. As some may wish to use this apparatus, I hope that the Tintometer Company, 6, Farringdon-avenue, E.C., after settling certain technical details to secure uniformity of production, will supply it.

[16] In the collection of the physiological data I have had the able coöperation of Dr. Edgecombe of Harrogate. Our conjoint results have not yet appeared.

[17] Transactions of the Royal Medical and Chirurgical Society, vol. lxxv., p. 191.

[18] Uric Acid, third edition, 1896.

[19] Over 400 observations have been excluded because they were made before the methods of observation were quite settled; they, however, afford the same conclusions as those yielded by the observations which were accepted. Therefore these conclusions as to normal variations of the corpuscles and hæmoglobin may be said to be derived from over 1000 observations. [Since this was written 150 further night and morning observations have been made which afford the same results.]

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variations of the corpuscles and hæmoglobin are in keeping with Lloyd Jones's observations on the specific gravity of the blood, for this observer found that, as a rule, it was higher in the morning and lower at night.[20]

Night and morning variations of "the worth" of the chromocytes.—The data furnished by the night and morning observations show that in 74 per cent. of the morning observations "the worth" rises in the night, and in 73 per cent. of the evening observations it falls in the day; the average rise and fall (0·061 and 0·057 respectively) being nearly equal, but with a slight preponderance in the former. This average gain over loss of hæmoglobin probably provides a reserve for variable calls upon it, when at times it is found to be above or below the mean. The subjects A. and B. have furnished data which entirely coincide in the inferences to be drawn from them in regard to the formation and disappearance of hæmoglobin. The influence of sleep apart from that of mere rest on the formation of hæmoglobin has not been ascertained. Inasmuch, however, as observation has not shown that the sleepless are particularly low in their "blood decimal," though perhaps further observations are required on this point, it is probable that the nocturnal rise of hæmoglobin is mainly due to rest—to the abeyance of functional activity and work. Opportunities have been afforded of observing the effects of residing in town and country on "the worth." During the period of observation A., who lives in the country, spent three weeks in London, and B., who lives in town, was in the country throughout September, October, November, and May. In neither case did the blood decimal fall in London, and B.'s was actually higher during the five months he lived in town than it was in the four months he spent away from it. From these, and from other similar facts which have been observed, it is concluded that town life is not quite so unfavourable to "the worth" among the well-fed class as is usually supposed.

Inasmuch as the recent investigations of Neuski, Sieber, Schunck, and Marchlewski have drawn attention to the remarkable similarity between the chemical and spectroscopic properties of some of the derivatives of hæmoglobin and chlorophyll,[21] it may be worthy of remark that though these organic pigments produced by animal and vegetable life very closely approximate at certain points, they seem to be developed under widely different physiological conditions, hæmoglobin being generated during systemic rest and chlorophyll being the product of chemical activity having a complicated dependence on light.

The day curve of variation is marked by subsidiary curves of fall and rise due to the digestion and absorption of food and by a steep decline which marks the last third of the waking hours. The data obtained before breakfast and lunch are, as a rule, of nearly equal value.

Periodical variations.—The morning (fasting) observations, taken at a time when the blood is least influenced by food, fluids, and work, show that variations are apparent from day to day, from week to week, and from month to month. The average daily, weekly, and monthly variations in corpuscles and hæmoglobin are close upon 3, 2, and 2 per cent. respectively. The weekly and monthly corpuscle value during the past three months has in both subjects steadily risen, especially in subject A.; but it is doubted if the data furnished by him in regard to variations in periods extending beyond one day are to be relied upon, for before his remarkable rise in corpuscle value took place a trace of lead was detected in the drinking-water, although he afforded no signs whatever of lead poisoning. This leads me to remark that the extended use of hæmometric observation during last summer enabled me to detect several cases of lead poisoning which had escaped ordinary recognition; and in every one of these cases the source of the poisoning was discovered. The consecutive observations extending over seven months do not provide data sufficiently extended to enable any reliable conclusion to be formed as to the occurrence of cyclical or seasonal changes in the blood. In A.'s weekly chart of hæmoglobin there are apparent six very regular and pronounced rises and falls, which point to periodicity in the formation and destruction of hæmoglobin. This may, however, be merely accidental; and no such cyclical variation appears in the chart of the older subject, B. Menstruation has not yet been sufficiently observed from this standpoint to warrant any definite statement of results.

Variations in the corpuscles, hæmoglobin, and corpuscular value in animals.—120 daily observations in dogs and rabbits have shown that the daily variations of the blood in them are quite as great as in man; even though these animals were leading the quiet and unvaried life of laboratory confinement. This fact derived from the rabbit is instructive; for the blood in this animal being taken direct from a vein (of the ear) shows that the observed variations are due to actual changes in the blood itself and cannot be ascribed to differences in the amount of lymph which may be stored in the tissues.

[20] Journal of Physiology, vol. viii.

[21] According to Schunck and Marchlewski the anhydride of hæmatoporphyrin, a derivative of hæmoglobin, differs from phylloporphydrin, a derivative of chlorophyll, simply in having three atoms more of oxygen; and, moreover, both these derivatives present the same coloured solution and practically identical absorption spectra. "That the two series of derivatives, that of chlorophyll and that of hæmoglobin, each playing an important part in the vegetable and animal organism respectively, should so closely touch at one point is certainly a remarkable circumstance. In another respect the two series seem to be related. It is well known that the colouring matter of the blood is a derivative of pyrrol. This appears to be the case with chlorophyll also."—Contribution to the Chemistry of Chlorophyll, No. 7, Proceedings of the Royal Society, January, 1896.

The Ingleby Lectures

ON THE

MECHANISM OF BINOCULAR VISION AND THE CAUSES OF STRABISMUS.

Delivered at Mason College, Birmingham, on June 10th and 17th, 1896,

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LECTURE I.

GENTLEMEN,—The term "strabismus"—or, in plain English, "squint"—denotes that condition in which a person looks straight with one eye at the object at which he wishes to look, while the other eye turns in some other direction. Used broadly it covers deviations of the eye of many kinds arising from many causes. In studying the causes we have to look beyond the mechanism of the orbit to the subtler mechanism of the brain; to take into account the influence of hereditary and congenital peculiarities as well as that of accident and disease of many kinds, and especially to regard the process of natural education by which the rudimentary faculties of the newborn child are gradually brought to perfection. The subject, therefore, though belonging specially to ophthalmology, has many points of contact with other branches of medicine and particularly with the diseases of children, and its discussion will not be entirely foreign, I think, to the purpose which the generous founder of the Ingleby Lectureship had in view.

Strabismus involves two disadvantages—disfigurement and disability. Facial expression depends much upon the action of the eyes. We establish a complete sense of mutual understanding and sympathy with another person only when our eyes are met by his or hers; when one eye only meets our own, while the other wanders off elsewhere, the sense of reciprocity is imperfect. But there is no need to insist on this; caricaturists and writers of fiction have done so too much already and have often associated obliquity of the eye with obliquity of the morals, for which there is no justification whatever. Still, it is right to say that those who through indifference allow a child to grow up with a squint which might have been avoided are handicapping him heavily in the race of life. I have heard of one case only, related to me by Mr. Bickerton, in which a squint was an advantage. A low comedian with an extreme divergent strabismus applied to him for treatment and was cured by operation. Not long afterwards he came back to say that the loss of his squint had proved a great misfortune, for whereas formerly his mere appearance on the stage would always provoke a laugh he had now to work hard even to raise a smile. But strabismus is not merely a matter of appearance. Every deviation of the eye, however slight, involves a loss of true binocular vision, and it is in this complex disturbance of function that the chief interest of

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the subject lies. To-day I shall ask you to consider the mechanism on which normal binocular vision depends—not its details, but its general arrangement and purpose. In my second lecture I shall attempt to point out the various ways in which this mechanism may be disturbed.

Speaking broadly, and disregarding for the moment the functions of the cerebellum, we may say that the organs through which we deal with external objects are controlled on each side of the body by the opposite side of the brain. For example, the right hand moves and feels, and the right ear hears, by virtue of its connexion with the left half of the brain. How is it with the visual apparatus? Let us

FIG. 1.

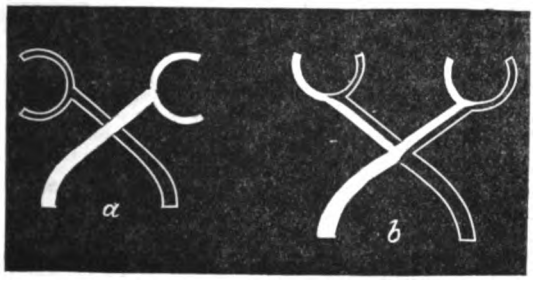


Diagram showing arrangement of retinæ and optic nerves in (*a*) fish and (*b*) man. The solid white portion is the visual organ for the right side.

look for a moment lower down in the animal scale. In the cod-fish the eyes look directly outwards to the right and to the left. (Fig. 1, *a*.) The right eye is the visual organ for the right side, the left for the left, and the optic nerve from each passes across entire to the opposite side of the brain—a complete analogy with the hand and ear in man. As we ascend the animal scale we find the eyes coming round more

FIG. 2.

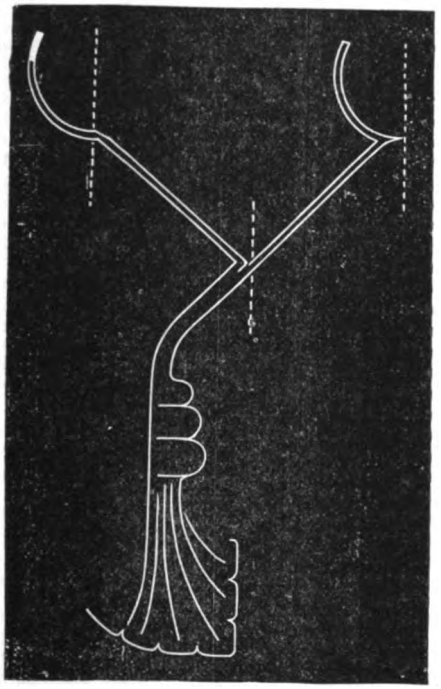
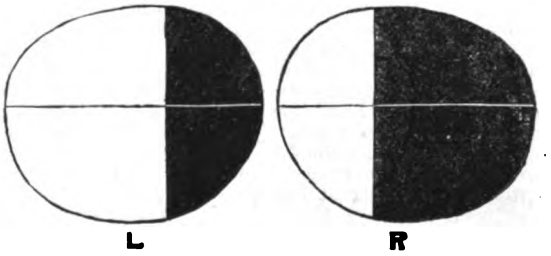


Diagram showing connexion of left half of each retina with lower (basal) and higher (cortical) visual centres.

and more to the front, till in man they look nearly straight forwards. (Fig. 1, *b*.) Each eye sees both to the right and to the left, the left half of each retina receiving the pictures of objects standing to the right and *vice versa*. In man, therefore, the visual organ for the right side is not the right eye but the pair of half eyes which see in that direction, and this compound organ is connected like the right hand and ear with the left side of the brain. This is true not of the retina only, but of the eye muscles as well, as we shall shortly see. The connexion of the eyes with the brain is peculiar, then, if we regard the anatomical arrangement, but considered in relation to function it is similar to that of the other peripheral organs. Bearing this similarity in mind, let us look at the arrangement of the visual apparatus a little more in detail, first the sensory, then the motor portion.

The optic fibres from the left half of each retina join company at the chiasma, constitute the left optic tract, and form various connexions in the left half of the brain. These latter have been studied with infinite pains, but are not yet completely known. This much may be said with certainty: the optic fibres are connected, firstly, with certain lower centres in the basal ganglia (chiefly the external geniculate body, the pulvinar, and the anterior quadrigeminate body) and, secondly, with higher centres in the apex of the occipital lobe. (Fig. 2.) Clinical observations have amply proved that the chief centres for conscious visual perceptions lie in the occipital cortex and that a lesion situated in this region or at any point in the course of the optic fibres between it and the chiasma, causes blindness in the corresponding halves of the two retinæ—i.e., homonymous hemianopia (Fig. 3). I must

FIG. 3.



Fields of vision in complete right hemianopia indicating lesion behind commissure on left side.

remind you, however, that according to some authorities certain lesions and disturbances of the brain cause not hemianopia but "crossed amblyopia"—i.e., not half-blindness of each retina but whole blindness of the opposite retina, and in order to explain this they assume that there is on each side of the brain another visual centre which is connected with the entire retina of the opposite eye. Let us glance at the evidence on which this doctrine of crossed amblyopia is based. It is of two kinds relating to lesions of the brain and to functional disturbances respectively. The clinical observations which have been cited to show that a brain lesion has caused blindness in the opposite eye with none in the near eye appear to be inconclusive. Nothing short of an accurate map of both visual fields can be accepted as valid evidence on this point, and this is not forthcoming. Patients suffering from hemianopia are often not aware that both eyes are affected; if they have blindness towards the right they tell us that the right eye is blind, and there can be little doubt that crossed amblyopia has sometimes been registered on a mere statement of this kind when hemianopia was really present. The experimental evidence is mainly that put forward by Professor Ferrier. He found that destruction of the angular gyrus in the monkey caused transient loss of vision in the opposite eye and convinced himself that this was not of hemianopic type. But in judging of this experiment we must remember that even in man the field of vision cannot be accurately mapped without help from the patient, and that in the monkey it can hardly be easier. Moreover, even in man hemianopia blinds a larger area in the opposite eye than in the near eye, for what we call the halves of the retina are not equal halves (Fig. 3), and in the monkey the inequality is presumably somewhat greater still. More important still, other experimenters have failed to produce discoverable blindness by destroying the angular gyrus unless the injury went deep enough to damage the fibres of the optic radiation which lie beneath it, and in that case the resulting blindness appeared to be of hemianopic type.

On the other hand, certain functional disturbances of the hysterical and reflex types are associated in some cases with a loss of vision which is not hemianopic. The field is not divided vertically, but is contracted concentrically all round.

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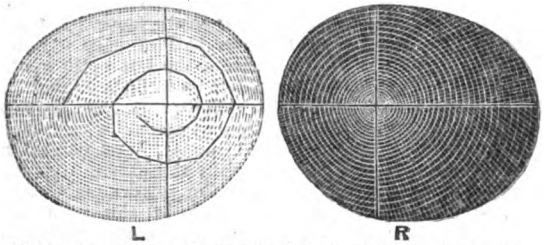
The line which limits it is not sharply defined but uncertain and shifting, sometimes closing in while the patient is under examination, so that as we go round the field twice or more with the perimeter we get a spiral line which constantly approaches the centre. (Fig. 4 L.) This form of amblyopia is

FIG. 4.

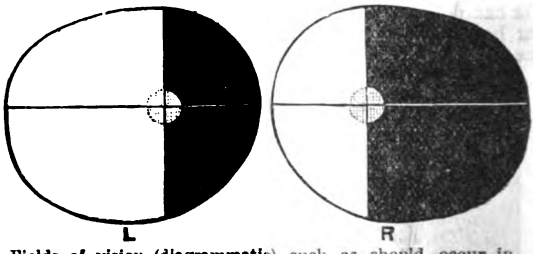


Fields of vision (diagrammatic) in so-called "crossed amblyopia." Variable concentric contraction, unequal in the two eyes. The spiral line (L) shows closing in during examination with the perimeter.

usually attributed to a disturbance in the cortical centres for vision. Now, when the two eyes are equally affected, as they usually are, this explanation involves no difficulty, for it is quite compatible with a semi-decussation of the optic fibres; but when, as happens in certain cases of hysterical hemianæsthesia, one eye is nearly blind while the other shows only a slight peripheral contraction of the field (Fig. 4), it involves the assumption that the whole of each retina is represented in the opposite hemisphere. Hence Charcot's hypothesis of a completed decussation, and the doctrine of crossed amblyopia. But is this amblyopia a direct result of cortical disturbance pure and simple? Is it not perhaps an indirect symptom, a retinal anæsthesia due to vaso-motor disturbance? Looking at the question from the ophthalmic standpoint there are, I think, some grounds for this view. The retina is constructed and nourished in such fashion that a general lowering of its nutrition necessarily leads to contraction of the field of vision. To demonstrate this we have only to press the eyeball moderately with the finger so as to retard, without arresting, the internal circulation; we get a lowered vision and a contracted field which much resemble hysterical amblyopia. Clinically we sometimes see cases in which similar symptoms are clearly due to a reflex disturbance of the circulation in the eye; the blindness usually passes off, leaving the vision normal, but occasionally, after several transient attacks, it remains permanent and we then find the signs of arrested circulation in the retinal artery. I have published a series of such cases; allow me to refer to one. A young married woman suffered many attacks of transient blindness, sometimes with fainting, always with a tendency to faint. They were brought on sometimes by hurry and agitation, as in catching a train, but most distinctly by the use of a vaginal syringe. There was, she thought, a tender spot which the syringe sometimes touched, and whenever this happened she felt faint and the sight failed. From one of these attacks of transient blindness the left eye did not recover; it remained permanently dark except just at the macula, and presented the usual signs of arrested circulation in the retinal artery. Here was certainly a reflex disturbance of the intra-ocular circulation, combined probably with a condition of depraved blood. The other eye remained amblyopic and sometimes went dark for an hour together; it was obviously in peril. The patient was placed under the care of Dr. Malins, who found double pyo-salpinx and removed the ovaries and tubes. The remaining eye then quickly and permanently recovered. This was in 1883, and I heard not many months ago that the good result is still maintained.[1] Taking all these facts into consideration, it seems possible that the so-called crossed amblyopia may prove to be a reflex retinal phenomenon rather than a sign of disturbance in the cerebral centres for vision.

I will venture to carry this heresy a step further. In hemianopia the line which divides the blind from the seeing area sometimes passes to one side of the fixation point instead of through it, so that the patient, to his great advantage, retains his sight in the whole of the macular region instead of in one-half only. To explain this imperfect bisection it has been assumed that the whole of the macula is represented in each hemisphere, so that its activity is maintained by either in spite of a lesion in the other. This is the doctrine of crossed amblyopia in a different and less complete form; but surely if the whole of the macular region in each eye, as distinguished from the rest of the retina, is represented in each hemisphere, it ought in hemianopia to be spared in a symmetrical form and it ought to be lowered in sensibility throughout by a lesion of either hemisphere (Fig. 5); but

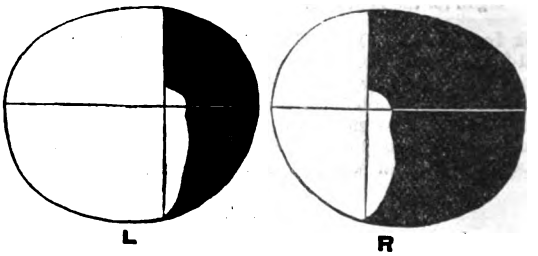
FIG. 5.



Fields of vision (diagrammatic) such as should occur in hemianopia if the hypothesis of double representation of the macula were true.

such fields are not found. The dividing line, when it spares the macula, usually takes an irregular direction and spares a portion of the periphery as well (Fig. 6.) An incomplete hemianopia like this would seem rather to indicate that the lesion has fortunately spared some portion of the visual fibres or cortex on its own side of the brain, and it is by no

FIG. 6.



Fields of vision such as actually occur, presumably when certain fibres on the same side as the lesion are spared.

means unlikely that the macular fibres have some advantage in this respect—that they escape when other less important fibres suffer. They are very numerous in proportion to the area which they supply, they are functionally the most active, and they are the best protected by their central position in the tracts as well as in the optic nerves.

At present, then, we may, I think, regard the doctrine of crossed amblyopia as unproved, and we may hope that those bewildering diagrams in the text-books which show the fibres from one retina, first making a semi-decussation at the chiasma and then changing their minds and re-uniting in a common centre in the opposite hemisphere, will turn out to superfluous.

The motor mechanism of the eyes consists essentially of three parts: the muscles, the nerves which convey impulses to them, and the brain centres which issue the impulses. Every movement, except inward and outward movements in the horizontal plane, requires the combined action of two or more muscles for each eye, and every impulse to one eye is accompanied by a simultaneous impulse to the other; it is evident, therefore, that the guidance of the two eyes from one point to another in the field of vision is a highly complex act. The simple sideways turning of the eyes has been likened to the driving of a pair of horses, and if we imagine the coachman to be supplied with certain extra reins so coupled together that he can at pleasure turn his horses' heads not merely to right or left, but upwards, downwards, towards each other, or away from each other, and if we imagine him to have hands enough and skill enough to make every possible combination of these movements with hairbreadth precision, we can picture the way in which the brain centres control the eyes through the three pairs of nerves which actuate the muscles. As regards movements in the horizontal plane their action may be illustrated by this model (Fig. 7). Please observe that it does not pretend to represent anatomical structure—that is an extremely intricate matter; it is

[1] Ophthalmic Review, 1884, pp. 2 and 144.

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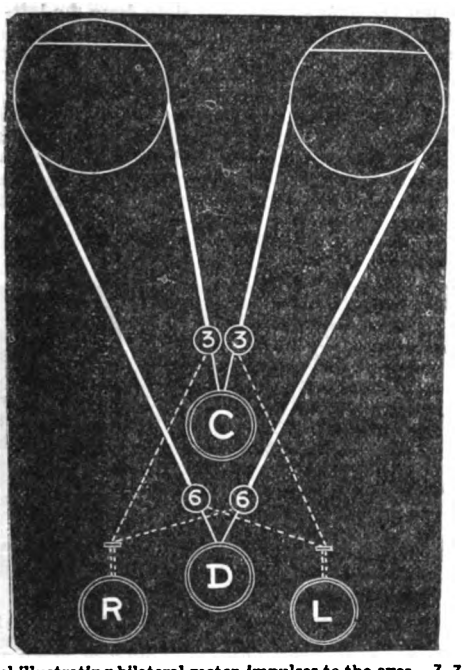
merely a working diagram to demonstrate the principle of bilateral coördination. The centre for convergence (C) turns both eyes towards the median line; that for divergence (D) away from the median line; the conjugate centre on the left side (R) turns both eyes to the right, that on the right (L) both eyes to the left. For different purposes the same muscles are actuated by different centres, and are differently associated one with another. In every case the impulse is bilateral—i.e., is issued to the two eyes simultaneously. Moreover, the impulses here illustrated are associated more or less closely with others not shown in the model; convergence is associated with accommodation and contraction of the pupils, and to some extent with movement of both eyes downwards; divergence with upward movements of the eyes and lids; conjugate lateral movements to some extent with lateral rotation of the head. That these coördinated impulses

FIG. 7.



Model illustrating bilateral motor impulses to the eyes. 3, 3, and 6, 6, primary nuclei of the third and sixth nerves; C, centre for convergence; D, for divergence; R, for conjugate movement to the right; and L, to the left.

spring from distinct foci or centres in the brain-substance is no longer open to question, for a lesion at a certain spot will abolish one form of bilateral movement and leave another intact, so that a given muscle, required in both, is at one moment paralysed, at another active, according to the nature of the attempted movement. Moreover, the experimental physiologist can call forth one or other of these compound movements by placing his electrode on one or other spot in the brain.

As regards the exact positions of the various centres I will not attempt to speak. I will only remind you that the motor centres like the visual centres are of two or more grades, the lower being in the neighbourhood of the corpora quadrigemina, and chiefly in the grey matter which forms the floor of the third and fourth ventricles, the higher in the cortex of the frontal lobe. The lower appear chiefly to supply the motive force, the higher to exercise conscious control.[2] The sensory and the motor portions of the visual apparatus interact upon each other. No mechanism however delicate could turn the eyes swiftly and surely from one point to another without precise information as to the position of the point at which it is to aim. Here, as elsewhere, throughout the body, sensation guides movement through channels connecting the sensory with the motor centres. Experiments have proved the existence of such channels. The electrode applied to a certain point in the visual area of the cortex induces eye-movements in a certain direction: it excites, presumably, a visual impression, which, when conveyed to the motor centres, causes them to turn the eyes toward the point in space from which that impression would normally be received. In this way the actual position in which the retinal picture is reproduced in the occipital cortex has been to some extent determined.

Such, very roughly sketched, is the mechanism by means of which we enjoy the faculty of binocular vision. Do we bring it with us into the world ready made, or do we make it each one for himself? The question has been much debated and has an intimate bearing on the causation of strabismus. Unquestionably, the infant is born with the visual machinery, including its chief coördinations ready made, but only in the rough; if he is to enjoy the use of it he must complete it and make the fine adjustments for himself, and he must do this while the structure is still plastic and in the act of growth. Any interference with the education of the eyes in very early life is apt to leave a permanent disability. Let me put before you a few well-observed facts as to the development of vision in infancy. The newborn child[3] is sensitive to light at once, or at latest within a few hours; the pupils respond to light, and both respond when it falls on one eye only; the reflex closure of the lids under the sudden afflux of light is present also. The conscious perception of objects and the response thereto, e.g., the closure of the lids when an object suddenly approaches the eye, is absent during the first few weeks. The first movements of the eyes, like those of the limbs, are purposeless; they occur sleeping as well as waking and have no relation to external objects. They are often clearly of the bilateral associated kind: both eyes turn to one side, or both turn inwards, assuming a position of excessive convergence which is indistinguishable from squint. They are often asymmetrical, one eye making larger excursions than the other, or remaining at rest while the other moves. Observe, however, that this asymmetry does not prove absence or abeyance of bilateral coördination. Such movements may be, and frequently are, produced in ourselves by the combined action of two bilateral impulses. For example, I am now looking with both eyes at a distant point. I place a finger in line between this point and the right eye and then look at it with both. What happens? The right eye remains directed as before, the left turns inwards, the movement is asymmetrical, but it is due to the simultaneous action of the centre for convergence, and the conjugate centre for movement towards the right. Such movements in the infant show not want of coördinating mechanism but want of purpose; the lower centres are acting uncontrolled by conscious perception in the higher. The movements in which absolute coördination is certainly wanting are just those in which it remains incomplete throughout life—viz., the vertical movements of the eyes and eyelids. We can most of us even in adult life contrive on occasion to wink with one eye only, and many can turn one eye upwards or downwards a little more than the other in order to neutralise the effect of a weak prism. Soon the infant begins to perceive the pictures on his retina, and may as early as the fourth week begin to follow the movement of a bright object before his face. Purposive movements in search of objects lying to one side begin a little later. Horizontal movements, which are stronger throughout life than the vertical, are learned first: a child of fourteen weeks has been seen to follow the oscillations of a clock pendulum, but not till near the end of his first year does he follow the objects which he drops from his hand to the floor. Voluntary convergence, as in watching the approach of an object towards the face, appears about the third month accompanied by first experiments in the art of accommodating. A knowledge of distance is learned gradually after countless experiments in grasping at things which are out of reach. Recognition of objects also is gradually learned; of faces about the sixth month; of bottles, cups, spoons, and so forth about the ninth; by the twelfth month the child watches all that goes on in his neighbourhood. These observations show that we owe the faculty of binocular vision, as we owe some still higher faculties, partly to inheritance and partly to our own diligent use of what we inherit.

For what purpose are the peripheral organs of vision duplicated in the remarkable manner we have been considering? Why not one eye for the right side and one for the left, as in the fish? or, granting that an intelligent being does well to look forwards rather than sideways, why not one

[2] See chapter on Automatism and Control, in Lloyd Morgan's Introduction to Comparative Psychology. 1894.

[3] See Die Seele des Kindes, by W. Preyer, Jena, 1884.

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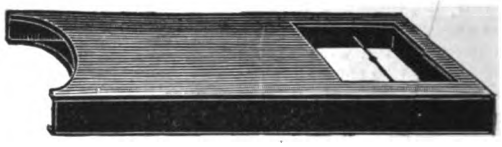
large eye in the middle of the forehead like the Cyclops? The purpose is that we may look at every object from two points of view and thereby comprehend it better; in other words, that the brain shall receive two different pictures of the object and yet shall receive them in the same place, so that it may easily blend and yet compare them—fuse and yet differentiate them. This process is learned in early infancy, and when learned is performed almost unconsciously; we hardly know that the mental picture is a blend of two retinal pictures, or that the latter differ from each other. The fusion of the two pictures is promoted by the special sensitiveness of the macula. The infant soon learns that he sees an object best when it is pictured simultaneously on the two maculæ and he directs his eyes accordingly, bringing an identical point in each picture precisely to the central point of each macula. So precise does this fixation become that a good observer has little difficulty in consciously directing his eyes to either of two adjacent points, even where these are so small and so close together as to be only just distinguishable. The fusion of the two pictures as regards their outlying parts is a less simple matter. If they were exactly similar, like two prints from one negative, they would, of course, coincide throughout, but they are not so; they are two photographs taken from different points of view, and it is precisely their difference which gives the compound mental picture its special value. This is well known to those who are familiar with the use of the stereoscope. Here is a very simple illustration. I look at this pencil while holding it a little to the right of the middle line and pointing towards me. The left eye sees it more sideways, the right more endways, than its fellow. The two retinal pictures may therefore be represented by two lines of unequal length (Fig. 8). How can two pictures so

FIG. 8.

Dissimilar retinal pictures of a rod held before the eyes to the right of the middle line and pointing forwards.

different be fused, and what sort of mental picture can they produce? Place them in the stereoscope so that the right eye receives the one, the left eye the other, and the question is answered. For a moment both are seen in confusion; then suddenly they spring together, as it were, and the confusion ceases; experience tells us that their discrepancy could only be produced by an object placed as the pencil was placed, and we see, not a long line or a short line on the flat paper, but a single line in perspective. In forming our judgment as to the position of the pencil, the motor apparatus of the eyes assists the sensory; our eyes travel from one end to the other, and in so doing the left makes a greater excursion than the right; this difference in the movements of the two eyes confirms the knowledge derived from the difference between the two retinal pictures.[4] In blending the constantly varying pictures which the two eyes receive we habitually disregard those portions whose discrepancy would otherwise confuse us. For example, I hold a finger at twelve inches from my face and another at half that distance; now, while I look at the further one, the nearer, if noticed carefully, is seen double, and *vice versâ*. Physiological double images of this kind are constantly before our eyes, they are the discrepant portions of the two retinal pictures; usually they are unnoticed, but they are not unseen and they are not unused. They largely subserve our perceptions of distance and perspective. Here is a beautiful illustration of the value of unrecognised double images. The box (Fig. 9) represents Hering's drop test in a slightly altered shape. Across it, near the far end, is stretched a white thread with a knot at its middle point. I look into the box with both eyes open and fix my attention on the knot. My assistant drops a white bean through the box, either in front of, or behind, the thread. I can say with certainty every time whether it passes in front or behind. Now, if I shut one eye I see the bean pass as before, but I have no idea whether it passes in front or behind. When both eyes are used, the bean, being nearer or further away than the point at which I am looking, is seen double; if it is nearer the image belonging to the right eye stands to the left, and *vice versâ*—in other words, the images are crossed; if it is further they are not crossed. Now please observe that in this experiment one is not conscious of seeing double, yet the two images are not only received by the percipient

FIG. 9.

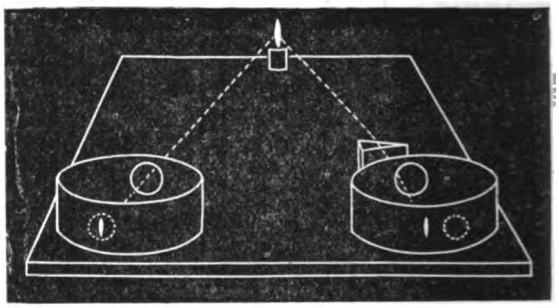


A convenient form of Hering's drop test for the presence of binocular vision.

centres but are differentiated the right from the left, and on the information thus obtained one judges correctly as to the position of the bean during its momentary transit through the box. This is a very delicate test for the presence or absence of true binocular vision.

And now, lest it should be supposed that these phenomena of single and double vision, though interesting as questions of physiological optics, have no bearing on practical work, I will conclude with an application and an actual case. The model (Fig. 10) represents the two eyes and the object at

FIG. 10.



Model showing displacement of retinal image by means of a prism.

which they look—a lighted candle. Both eyes being properly directed the candle is pictured on the macula in each. If either eye were to deviate the picture in it would be displaced from the macula and the patient would see double. This he habitually avoids. Now we can displace the image and produce double vision artificially by placing a prism before one eye. What happens then? The patient instinctively moves his eye in order to bring the macula to the image and get rid of the double vision. He does this involuntarily or even against his will; he cannot help doing it. This is a useful test for sham blindness. If the eye moves behind the prism and again when the prism is removed it is no use his telling us that it is blind. A few months ago a prisoner awaiting trial for burglary with violence awoke one morning blind in both eyes—so he said. The prison surgeon had no doubt that he was shamming, but wanted positive evidence one way or the other, and we examined him together. The man declared himself to be quite dark in both eyes and acted the part of a blind man fairly well, overdoing it a little. The pupils were already under atropine and could therefore give no evidence as to the light reflex. A lighted candle was placed before him in a dark room. He was not required to "look" at the candle, being nominally blind, but the candle was placed about where he appeared to be looking. A prism was then placed before one eye, its base inwards; instantly the eye moved outwards. The prism was removed and the eye moved inwards. The man was told that his blindness would certainly disappear as quickly as it came, and he probably understood that the fraud would get him into more trouble if persevered in. His sight was soon restored. Now, if this man could have carried his blindness into the dock a merciful judge and jury would not improbably have felt that a higher tribunal had already visited him with a heavy punishment, or at least that he was

[4] See Javal, Binocular Vision in its relation to Strabismus. Helmholtz's Festschrift, abstract in Ophthalmic Review, vol. xi., October, 1892.

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incapacitated for further crime, and have dealt leniently with him. As a matter of fact, he was a particularly daring and dangerous criminal, and had attempted, during a former imprisonment, the life of the prison surgeon. He received a long sentence. This case, of course, was somewhat exceptional, but the question whether the two retinal pictures are properly blended in the brain arises not only in connexion with feigned blindness but in many common conditions. In my next lecture I shall have to point out its importance in relation to the causes of strabismus.

rmingham.

ABSTRACT OF

A Clinical Lecture

ON

TWO UNUSUAL CASES OF HERNIA.

Delivered at King's College Hospital on Jan. 13th, 1896,

BY WILLIAM ROSE, M.B., B.S. LOND., F.R.C.S. ENG.,

SENIOR SURGEON TO KING'S COLLEGE HOSPITAL AND PROFESSOR OF CLINICAL SURGERY IN KING'S COLLEGE, LONDON.

GENTLEMEN,—There are at present in the hospital in my wards two unusual cases of hernia which are worthy of special mention from a clinical standpoint in that they both illustrate the fact that nature is occasionally able to effect a cure without the intervention of surgery. They are exceptional cases and not typical either in their clinical history or in the line of treatment adopted. Although the results have been satisfactory, yet I shall conclusively prove to you that these patients have not attained their present favourable conditions without considerable risk to their lives. In the former of these an irreducible femoral epiplocele became strangulated, and when seen and admitted to hospital gangrene of the hernial contents and adjacent skin was present with marked toxæmic symptoms, whilst in the latter a more chronic process of inflammation had been going on for years between the sac wall and an irreducible portion of omentum surrounding a prolapsed and elongated vermiform appendix, leading finally to the shutting off of these structures from the general peritoneal cavity. In one, then, the process has been acute and the danger great, and in the other chronic, but the risk, though less, has still been considerable.

CASE 1.—A woman aged fifty years was admitted to the Wigram Ward of King's College Hospital on Jan. 3rd, 1896. Three weeks before admission she first noticed a lump in the groin on the right side as the result of a severe attack of vomiting brought on by excessive drinking. She continued to work, however, till two days before admission, when the swelling became larger, much more painful, and the skin over it was red and tender. On the following day it burst, and gave exit to a quantity of foul-smelling fluid, which the patient described as like stinking onions. On admission she presented symptoms of toxæmia, an anxious countenance, a dry and furred tongue, and a small, rather hard pulse. The temperature was normal. There was nausea, but no vomiting, and, indeed, she stated that she had not vomited since the swelling burst. Absolute constipation had been present for some days. In the right groin a little above the saphenous opening there was a large black slough protruding through an oval aperture in the skin about two inches in diameter. It had the characteristic appearance of dead omental tissue, and from its interstices a quantity of offensive sero-pus could be squeezed out. There was no appearance of fæcal escape and no general abdominal tension or tenderness. The soft parts in the neighbourhood of the wound were red and œdematous. From the absence of any of the graver symptoms a diagnosis of strangulated omental hernia was made. The wound was dusted over with iodoform and charcoal poultices applied. Fluid diet in small quantities was ordered, and the bowels were not opened until the third day, and then by an enema. The patient made steady progress, the sloughs separating, and the wound gradually healing.

The chief points of importance to be noted in this case are: (*a*) the modified symptoms which are exhibited when omentum alone is strangulated and the bowel not involved; (*b*) the localisation of the destructive and inflammatory process to the hernial protrusion and parts immediately around; (*c*) the source and nature of the septic process in the omentum; and (*d*) the treatment of the case.

Unquestionably, the occurrence of a pure strangulated epiplocele is rare, and your text-books give but little information on the subject, the symptoms ascribed to this condition being mainly those which arise when the gut is also involved. Vomiting commencing with the contents of the stomach and gradually becoming fæcal, abdominal distension, pain radiating from the umbilicus, a quick and so-called wiry pulse, an anxious countenance, a dorsal decubitus with the thighs and legs flexed are the cardinal features of such a case. Constipation may or may not exist. Such conditions are considerably modified, however, and some of them absent when omentum alone is involved. The vomiting may be slight in amount and is seldom persistent, rarely fæcal. Peristalsis, although somewhat hampered, is not arrested, consequently constipation need not be present. In short, all the symptoms are of a milder type, and hence it frequently happens that the existence of strangulated omentum is not recognised for some days after its incidence, particularly in women where there is a natural disinclination to mention anything that would necessitate an examination of the groins. It is, therefore, very important to put the question very decidedly as to the existence of any unusual or recently formed swelling in this region or at the umbilicus. Again, it must not be forgotten that an irreducible omental hernia may at any moment become complicated by the intrusion into the sac of a knuckle of intestine, which not only becomes itself strangled, but also determines the occurrence of similar changes in the omentum, giving rise then to all the characteristic signs of acute obstruction. Moreover, it not infrequently happens that a similar train of symptoms may be induced when a large amount of omentum becomes protruded and adherent or strangled, causing at the same time excessive traction and angular kinking of the large bowel, probably at the most fixed portion—viz., the splenic flexure.

The local signs of a strangled epiplocele differ in character from those which obtain when bowel is involved. In the latter a rounded, tense, tender swelling can usually be felt, devoid of impulse and irreducible. On the other hand, the omental swelling is soft and doughy, but painful and irreducible. The amount of fluid in the sac varies considerably, being usually scanty. Such a swelling in the femoral region has frequently been mistaken for an inflamed lymphatic gland or an accumulation of fat, but the fixed base and the inability to define the margins of the saphenous opening should prevent a mistake in diagnosis, and taken with the other symptoms should suffice to induce the surgeon to make an exploratory incision. When the patient whose case we are now reviewing first came to the hospital these earlier and more typical phenomena had been superseded by those of local inflammation and gangrene, the result of bacterial infection. It was abundantly evident from an examination of the surrounding parts how virulent was the local action which was here at work, and yet it is instructive to note how rapidly and efficiently nature had succeeded in sealing off the general peritoneal cavity by a plastic effusion, which was of sufficient vitality to become rapidly vascularised and so withstand the extension of the destructive process.

As to the source of this infection there is room for speculation. It is certain that the putrefactive changes commenced from within and spread outwards; but the mere fact of omentum being strangled does not in itself determine a putrefactive change, as is often exemplified in the operation for the radical cure of hernia, where we are in the habit of returning large masses of ligatured omentum without risk. One is, therefore, driven to the conclusion that an autoinfection of some kind or other must have occurred in this case, probably due to the migration of bacilli from the neighbouring coils of gut, either kinked or restricted in movement by the traction of the incarcerated omentum.

In deciding as to the immediate treatment to be adopted one naturally asked the question whether or not any strangulation of the intestine was present. The local and general conditions of the woman gave a decided negative to this query. Granted that no portion of gut was implicated, it

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was obviously undesirable to interfere with the process of nature beyond assisting in the removal of the necrotic tissue, for any incision made with a view of relieving the constriction would necessarily open up the barrier existing between the healthy and infected regions, thereby exposing the patient to the risk of general peritonitis, whereas, if the necrotic tissue was allowed to separate or was scraped away, every care being taken to disinfect and purify the locality, one might reasonably anticipate a favourable issue, even if it involved the fixation of the omental stump to the abdominal parietes. If after the wound has healed the patient should complain of pain and threatening obstruction from restricted peristalsis, an operation for the relief of the deep adhesions can be resorted to under more favourable auspices.

CASE 2.—A woman aged sixty-two years was admitted to the Wigram Ward on Jan. 2nd, 1896, suffering from a large irreducible femoral hernia on the right side extending upwards and outwards over Poupart's ligament. The origin of this protrusion dated back to a confinement thirty-eight years ago. She has occasionally worn a truss, but at variable intervals has had severe attacks of pain localised to the hernial sac and evidently due to a limited peritonitis. The tumour has increased in size considerably during the last seven or eight months. On admission it was hard and irreducible, but not tender to the touch. She has also suffered much from general dyspepsia and attacks of vomiting. On operation I found adherent to the sac a large mass of omental tissue which had undergone a sclerotic change as the result of the repeated attacks of inflammation; it was completely shut off from the general peritoneal cavity. Running through the centre was a tubular body, which proved on dissection to be a long vermiform appendix. This and the dense mass of omentum were removed on a level with the femoral opening and the wound healed in a few days.

In comparing this case with the other I would again remind you of what I stated at the beginning of the lecture—viz., that nature had here effected a cure before I interfered, and that the operation merely consisted in removing a superfluous mass of changed omentum and the appendix, which had long since been isolated from the abdominal cavity. Indeed, so firm was the plugging of the femoral canal that it was not necessary to disturb it in any way. At the same time it must be evident to you all that this woman was for a long time in very considerable danger with a prolapsed vermiform appendix in addition to the omental protrusion. At any moment a coil of gut might have passed into the sac and led to strangulation, or a similar condition of acute obstruction might have been induced by kinking of the gut from dragging or twisting of the omental connexions. Again, the prolapsed appendix might have become acutely inflamed, although this condition is extremely rare.

The presence of the vermiform appendix in a hernial sac is not a common occurrence, although not a few cases have been recorded. Personally, although I have operated on hundreds of cases of hernia I have not met with this condition more than half a dozen times. Some years ago I was called in by Mr. Alfred J. Bell of St. John's Wood to operate on an old lady over eighty years of age who was suffering from acute strangulated femoral hernia, and I there found the appendix in the sac in addition to a coil of intestine. The removal of the former and the usual operation of radical cure were followed by an uneventful recovery. No doubt in this latter case the appendix had been the first tenant of the hernial sac and had paved the way for a prolapse of the bowel, which had subsequently become strangulated. In the former case no coil of bowel happened to become involved.

In conclusion, I must repeat that these two cases are of a very exceptional character and must not be looked upon as in any way typical of the ordinary run of cases of incarcerated or strangulated hernia with which you will have to deal in your practice.

WIGAN MEDICAL SOCIETY.—The ordinary meeting of this society was held on June 4th, Mr. C. R. Graham, President, being in the chair.—Dr. Judson S. Bury, assistant physician to the Manchester Royal Infirmary, read a paper on the Diagnosis of Functional from Organic Disease of the Nervous System.—A discussion followed, in which Mr. Hugh E. Jones, Mr. Cowan, Dr. R. P. White, Mr. Benson, and the President took part.—A cordial vote of thanks was passed to Dr. Bury for his able paper.—Dr. Bury replied.

A CASE OF CONFLUENT SMALL-POX IN A LASCAR.

BY ALEXANDER MACPHAIL, M.B., C.M. GLASG.,
DEMONSTRATOR OF ANATOMY, GLASGOW UNIVERSITY.

THE following notes, chart, and drawings form the record of a case of confluent small-pox which ran its course to a fatal issue on the high seas between the ports of Colombo and Suez, and are mainly interesting from the fact that a complete record of such a case is not often obtainable, the patient having been one of a Lascar crew. A secondary interest attaches to the record in that I was at the time surgeon on board the ss. *Clan Mackenzie*, and had not previously seen a case of small-pox, so that the diagnosis had to be made and the case conducted without such aid as anyone familiar with the disease might derive from early signs; and it was only determined after a careful study of the notes taken from day to day, which are given below, together with some remarks on the chief points of interest.

On Sept. 18th, 1894, a man aged thirty-five years first complained of headache and pains in the back and limbs. The skin was hot and dry. The temperature was scarcely febrile in the morning, but reached 101°F. by the evening. He was given quinine in ten-grain doses. On the 19th the temperature was steadily rising; there was profuse sweating. The pains were general and more severe. The patient was also suffering from depression and sleeplessness. On the 20th the fever was more marked and the pain less. There was severe vomiting shortly after a dose of quinine in the morning, and phenacetin was substituted. The vomiting reappeared several times in the course of a few hours. On the 21st, although there were symptoms of greater ease, the morning temperature rose still higher, with a fall of 2° after exhibition of phenacetin again at midday, when the patient drew attention to a few spots on his forehead, like ordinary pimples, but hard, while a few similar spots were felt on the right cheek. These were not regarded as of much importance, and no rash could be seen; but on the evidence of continued pyrexia and inexplicable fits of vomiting the patient was isolated, disinfectant measures were adopted, and the temperature was taken more frequently. On the 22nd distinct papules appeared all over the body, with very slight signs of congestion, but in almost all cases giving a "shotty" feeling to the touch. The temperature reached a crisis at 104·4° in the afternoon and fell again towards evening. Isolation and disinfectant measures were more strictly enforced on the first suspicion of small-pox. On the 23rd there was a decided lysis of the temperature almost to normal, with slight exacerbation in the afternoon. The symptoms were much relieved, and the pulse, though not notably accelerated previously, became almost normal in number and fulness of beat. The eruption was still nondescript, some of the spots showing an advance towards breaking and scabbing and others to surface blackening. On the 24th the temperature was still oscillating at the lowest febrile degree. The individual spots were more prominent, broader, and flat, and dull chocolate in colour. (See Fig. 1.) Sleeplessness was also present for which bromide of potassium was exhibited. On the 25th the morning temperature was normal, but febrile again at night. Delirium was very marked during the night, the eruption assuming the above-mentioned characters all over. Acupuncture of the flat elevations revealed serous fluid contents. There was slight confluence on the forehead and cheeks, the lips and tongue were swollen and marked by distinct papules, and one or two clear vesicles were seen on the sides of the tongue. On the 26th the temperature was oscillating. There were a few distinct pustules on the face and in the fold of the groin. The whole face was much swollen and the pulse became rapid and thin. On the 27th the temperature was increasingly febrile and the pulse was 112, weak, and dicrotic. Noisy and incessant delirium was present, the spots all over the body becoming pustular (Fig. 2). The eyelids were matted with purulent matter and there was a discharge from the nose. The patient showed great thirst. The urine was very concentrated. Zinc powder and perchloride of mercury lotion were applied externally, while digitalis and stimulant were given internally. On the 28th all the symptoms were less severe in the morning and throughout the day; the pulse, although weak, was less

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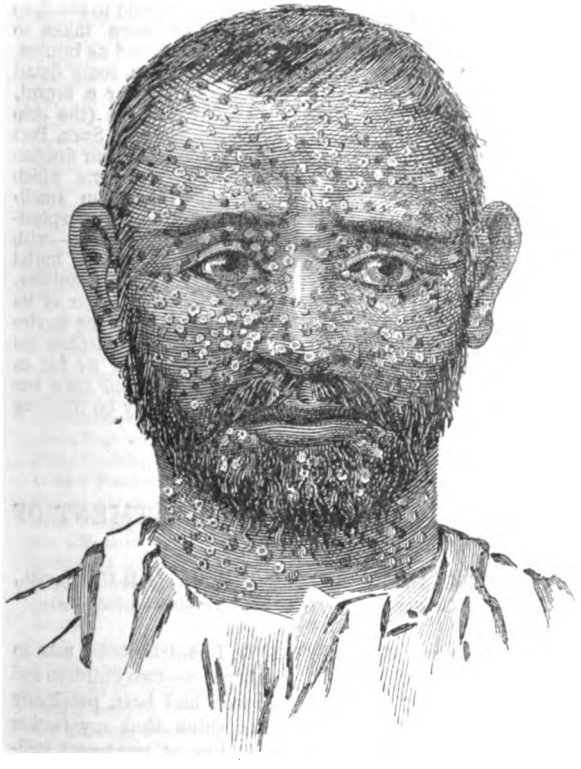
rapid; the temperature was 99·8° in the morning, rising again during the afternoon; the delirium was gone. Death took place unexpectedly at night, the patient having spoken cheerily to his comrades through the partitions a few minutes previously.

Remarks.—The duration of the period of incubation can be very definitely fixed, as the patient had been, on his own information, in direct contact with a case of small-pox on Sept. 5th and 6th, his own initial symptoms appearing on the morning of Sept. 18th. During this time he had never complained of any indisposition, although the captain had remarked on a drowsiness and inactivity quite unusual to the patient. The first complaint was made in company with three other native servants who had got a wetting the previous night and had thereafter gone to sleep for a few hours on the saloon floor in order to be at hand when the ship arrived at Colombo. They all complained of symptoms which at once suggested the early stages of an attack of ague—viz., headache, pains in the back and lower limbs, and hot, dry skin, the temperature, though above normal, in no case being febrile as yet. Malarial fever, or simply

FIG. 1.



Fifth day of eruption: vesicular stage.

"fever," as it is called by them, is always smouldering in a Lascar crew, and as similar causes had accounted for several well-marked cases in the previous voyage, the diagnosis of malarial fever was considered secure and the routine treatment—by quinine sulphate in ten-grain doses every few hours—was adopted. The relief following the exhibition of quinine in all the cases, with this single exception, seemed to justify this diagnosis, and it was fully anticipated that this case too would soon subside under its influence. On the contrary, the temperature curve was still rising (although unattended by any new symptom) on the second day, and continued so till the morning of the third day, when severe vomiting and retching set in. This was at first attributed to the usual dose of quinine, but in spite of phenacetin having been substituted it came on several times during the day and was seemingly independent of any stomach irritation, there being only a slight emesis of bile-coloured fluid, pointing rather to a constitutional cause, associated no doubt with the invasion of the disease. The temperature chart gradually evolved a curve resembling that typical of small-pox, a somewhat abrupt rise from normal to 104·4°, which crisis was reached on the fifth day of illness and one day after the first appearance of the exanthem. This was interrupted on two occasions by phenacetin, which produced a transitory fall. Coincident with the outbreak of the papules all over the body a distinct lysis set in, the temperature becoming almost subfebrile in the course of twenty-four hours, and, oscillating there for two days, on the morning of the third day reached normal. The secondary curve, which began to develop on the same day, although intermittent, showed a steady rise, reflecting the process of pustulation and consequent blood-poisoning. The pulse in the earlier stages presented no feature out of proportion to the degree of fever present, and only when the secondary fever set in was there any notable feature; then its rate increased as its strength diminished, its character becoming distinctly thready. These qualities were markedly changed by the administration of two doses of fifteen minims each of tincture of digitalis and some stimulant. From an early date the exanthem was regarded as significant of a specific fever, but, in the absence of previous experience of small-pox, was not for some time confidently held to indicate the presence of this disease. In the early stage the spots were distinctly "shotty," but might have passed

FIG. 2.

Seventh day of eruption: pustular stage.

except for the absence of a distinct "core" as ordinary pimples. The rapidly increasing area over which they began to appear and their transition into flat, hard elevations, mostly without any manifest congestion, led to a cross-examination of the patient as to his ever having seen a similar eruption. He said he had, and was sure that it was a certain disease common among natives of India, to which he gave the name "hoom," but which I have been unable to identify farther than that it is sometimes used to describe chicken-pox and is more loosely applied to many skin affections. When asked if he was familiar with small-pox the important fact was elicited that he had been staying for a few days, when the ship was lying at Calcutta, with an uncle stricken with small-pox there, and, in entire ignorance of any theory of infection, had been in constant communication with him as with any ordinary invalid. Though important this was not regarded as conclusive proof, for until it had assumed the characters shown in Fig. 1 the eruption did not seem to conform to the usual description of a small-pox vesicle; indeed, it did not suggest the presence of fluid

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at all, but presented a slightly elevated, usually oblong surface, quite firm to the touch and of a dull chocolate colour. Other characters common to the small-pox exanthem were, however, present—viz., distinct depression as if from drawing together of the centre in some cases, in others a softening of the surface with scabbing, without any evidence of the usual cycle of vesiculation and pustulation. Distinct vesiculation such as is suggested, to quote any one of the recognised authorities, by the description "hemispherical in form and opaline in appearance"[1] was not manifestly present, and, as many other indications pointed to the eruption being that of small-pox, proof of vesiculation was sought for by puncture of one of these flat elevations; the result was the escape of a small amount of serous fluid removing all doubt of the condition. Previous experience might have led to the same conclusion at an earlier stage, but as the decision of the true nature of the case was one of immense importance to the ship's company it was delayed by the outlook for such a condition as the common description of vesiculation had suggested. Subsequently confluence of these areas and the appearance of pustulation took their usual course, producing the appearance seen in Fig. 2, the only additional fact worthy of remark being the presence of black scabs among the pustules indicating unusually speedy maturation here and there. The prognosis was not at first grave, the only disturbing factors in the early stages being the great tropical heat both by day and night and the early appearance of delirium. The extensive confluence in the later stages indicated a serious outlook. Curiously, what appeared to be the turning-point towards recovery must have been a final struggle on the part of nature, for on the day preceding his death the patient had for the first time expressed himself as "getting better," and his general condition had, moreover, apparently improved.

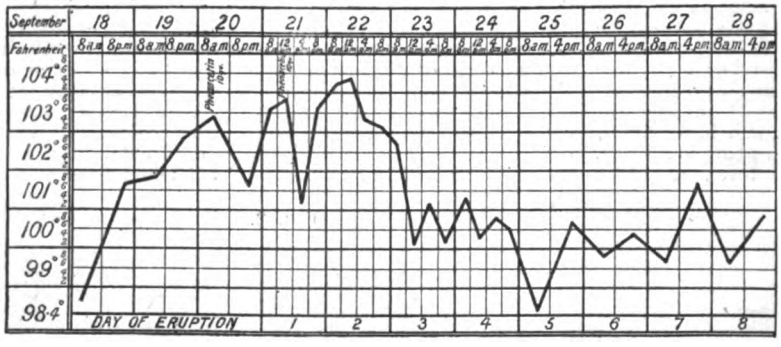

Chart showing rise until Sept. 22nd, when the temperature was over 104° and there were spots all over the body. Coincidently with the appearance of the rash the temperature fell.

With regard to treatment, little could be done medicinally. Quinine evidently had little or no effect in controlling the initial fever, although phenacetin in equal doses (ten grains) took effect upon two occasions. Bathing the eyes with a weak solution of perchloride of mercury gave much relief, as also did the application to the face of boric and zinc powder on a mask of boracic lint. Milk diet was adopted on the first evidence of continued fever; condensed milk only being available, this was given with fine-boiled rice three times daily. Alcoholic stimulant, for which there seemed no indication till the onset of the secondary fever, was at first refused on religious grounds (its use involving loss of caste), but was insisted on later when strength was evidently failing with good, although temporary, result. Isolation was at first no easy matter owing to the Lascars, having no idea of contagion, trying to communicate with the patient; the cabin had to be barricaded so that entrance could only be obtained in sight of the watch on the bridge; the delirium of the patient added another danger, as on one occasion he rushed out on deck and was got back with difficulty. On my part, too, there was great need for caution, as the case had to be taken full charge of in addition to my ordinary duties. To allow of this special clothing was set apart for my visits; my cabin was occasionally fumigated, and a hot bath, impregnated with Condy's fluid, was taken after every visit. Disinfection in the cabin set apart for the patient was effected by means of a moist sheet sprinkled with carbolic solution hung over the doorway. All food, &c., was passed to me through the barricades and the dishes washed with carbolic solution after use. After the death of the patient his cabin was washed down with the steam hose and afterwards scrubbed with carbolic acid, while both it and the forecastle adjoining were well fumigated. It was with difficulty that the Lascars could be argued into leaving to me the preparation of the body for burial, and, while conceding this, they insisted on holding a burial service on deck. Every precaution was taken by the captain, who stopped the ship and ran her broadside to the wind. Three of the Lascars who bore small-pox marks were chosen to remove the body from the cabin (where it had previously been wrapped in well-carbolised sheets and canvas) to the deck, where they deposited it on one side; the whole of the Lascar crew assembled on the other at a distance of some four yards while the service, lasting a quarter of an hour, was conducted. After the body was consigned to the deep additional precautions were taken to disinfect those who had acted as bearers.

These facts are given in some detail because they seemed to bear a sequel, for thirteen days afterwards (the ship having escaped quarantine at Suez, Port Said, and Malta) a young Lascar fireman was struck down by symptoms which soon left no doubt that he was suffering from small-pox. The coincidence of this lapse of time—corresponding so closely to the usual period of incubation—with the onset of his symptoms seemed to point to the burial service on deck as a loophole in the disinfectant precautions. This was all the more disappointing as the danger of its being so had been clearly recognised, and though the service seemed inevitable great care had been taken to isolate the participants in the service from the deceased as far as possible. Fortunately for the sequel, this second case was of a much milder type and made a good recovery on reaching the Thames.

Glasgow.

[1] Hilton Fagge: Text-book of Principles and Practice of Medicine, third edition, p. 202.

FURTHER NOTE ON THE TREATMENT OF TAPEWORM.

BY LESLIE OGILVIE, B.Sc., M.B. EDIN., M.R.C.P. LOND.,
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IN THE LANCET of Aug. 4th, 1894, I contributed a note on the Treatment of Tapeworm. As six cases—two children and four adults—which I have since seen had been previously treated unsuccessfully I venture to think that my further experience may be of interest. The line of treatment indicated in my previous communication was successfully followed in all of these cases, but I desire to refer to two of them as they appear to me to corroborate the views I then expressed as to the necessity of preparing the patient before administering the vermifuge and the absence of danger in giving the considerable doses of the liquid extract of male-fern which I recommended if it is speedily washed from the bowel.

CASE 1.—The patient was a little girl aged seven years who had undergone treatment many times during three years, but without success. She had been given repeated small doses of about fifteen minims of the liquid extract of male-fern, and although numerous segments of the worm were passed after each course of treatment they re-appeared in the stools in two or three months, when the child herself would again ask for "fern," as she felt sick and irritable and had abdominal discomfort. The child dreaded the administration of the drug as it always made her so ill for some days, but she preferred this to the unpleasant sensations produced by the presence of the parasite. The medical man in attendance was afraid to give the large doses recommended by me—one drachm at 8 A.M. and another drachm or half a drachm at 9 A.M.—as he argued that if fifteen

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minims produced such severe toxic effects six or eight times that dose would be dangerous. As I previously pointed out this is exactly contrary to my experience. The small doses produce toxic effects because they remain in the bowel and are to some extent absorbed, while the large doses are sometimes expelled from the bowel within two hours of being taken, frequently before the final dose of castor oil has had time to operate. In this case I was not given time to follow thoroughly the few days of preliminary treatment by means of saline purgatives, and as, unfortunately, the child was especially constipated I had no means of properly gauging the amount of purgative required to evacuate the bowel with certainty. Without having the bowels satisfactorily moved by the evening and early morning doses of sulphate of magnesia and jalap I gave a drachm of the liquid extract at 8 A.M. followed by forty-five minims in an hour. As the castor oil given two hours afterwards failed to operate enemas were freely used and another dose of oil was administered about two o'clock. The entire tapeworm, including the head, was passed between four and five o'clock, together with a considerable quantity of mucus. The child had not suffered from the sickness, faintness, or other toxic effects which she always experienced after the small doses, but an erythematous rash appeared on the skin of the face and body in the evening, showing that some of the poison had been absorbed. She, however, felt well, ran about all day, and shared in the delight of her mother in having got rid of the enemy. I feel convinced that if I had insisted, as I usually do, on having the bowels freely opened for several days before administering the vermifuge, and if an effectual dose of castor oil had been given afterwards, the rash even would not have appeared. This case, therefore, shows the importance of procuring free evacuation of the bowel both before and soon after treatment by the vermifuge and, I think, goes far to establish the fact that effectual doses produce no more toxic effects than small inefficient doses, even though administered without the careful preparatory and subsequent measures I advise.

A case of exanthema after the use of extractum filicis maris ætherеum is reported by von F. Schmey.[1] The case was that of a broken-down old woman who, after taking ten grammes of the preparation, suffered from redness and swelling of the eyelids which spread to the cheeks and forehead and disappeared entirely in three days. Von Schmey thinks that the effect was perhaps due to the simultaneous administration of castor oil, in which filicic acid, the poisonous principle, is easily soluble. I certainly think that the castor oil should not be given along with the male-fern, because an ineffectual dose would lead to the poisonous symptoms above noted, and an efficient dose would wash the poison from the bowel before it had time to injure the worm. If an efficient dose is given two hours afterwards the solubility of the poisonous principle in the oil would facilitate its removal from the bowel.

CASE 2.—I was careful in this case, that of a middle-age woman with symptoms of obstinate constipation, to prescribe a course of purgatives for two weeks. The aperient which suited best in this case was Hunyadi Janos which she took for about a week with excellent results and no discomfort. As I previously pointed out, saline aperients are the best for the preparatory treatment as they rid the bowel of the excess of mucus which is present in most cases of tapeworm and thus expose the worm to the full action of the poison. It is more effectual to administer castor oil with jalap after the vermifuge because this combination is more rapid in its action, the object being to remove the poison from the bowel before it is absorbed, and the worm before it has time to recover and re-attach itself to the mucous membrane. In this case, after the course of medium doses of Hunyadi Janos every morning for a week, she had a dose of sulphate of magnesia and tincture of jalap one night followed by Hunyadi Janos in the morning at 7 A.M., the drachm doses of the liquid extract of male-fern at 8 and 9, and castor oil with tincture of jalap at 11 o'clock. The worm was passed along with much of the liquid extract between 9.30 and 11 o'clock, therefore before the oil was given; but, notwithstanding this, I gave the dose of castor oil and jalap to make sure that all the poison was removed from the bowel. The patient did not feel any ill effects from these apparently severe measures; in fact she suffered less than she had done on four previous occasions when she was unsuccessfully treated for tapeworm. It may be, of course, that the assurance that she was free from this parasite for ever made her minimise her sufferings.

Welbeck-street, W.

[1] Allgemeine Medicinische Centralzeitung, 1895, No. 68.

A CASE OF MALARIOUS FEVER.

BY SURGEON-LIEUTENANT-COLONEL E. LAWRIE, M.B. EDIN.,
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THE following case of malarious fever occurred in a medical student of the local medical school, who has just finished his curriculum and has been under my observation for five years. In his recollection and in mine he has never had fever until last September, when crescents were discovered in his blood the day after the first attack commenced. He always lived in the city of Hyderabad, but a month before he got fever he changed his residence to a malarious suburb called Troop Bazaar, and he has had fever about once in two months since. The last attack took place at the end of March, 1896. He was cured with quinine, and when he got well was directed to have his blood examined every day until the onset of the next attack—the attack under report,—in order to enable us to determine whether the presence of Laveran's bodies in the blood precedes or follows the disease. Accordingly, the microscope examinations of his blood were made daily, and no Laveran's bodies were found from April 8th to 30th inclusive. On the morning of April 30th he looked poorly and complained of pain and uneasiness in the region of the spleen and liver. The blood on this day was thoroughly examined by three competent observers and nothing abnormal was detected in it. He went home at 10 o'clock A.M., and at noon had very violent ague followed by the usual hot and sweating stages of intermittent fever. Next morning Laveran's bodies were found in the blood. He was kept under observation without quinine till May 4th, when we gave it to him, and he has had no fever or Laveran's bodies in the blood since and is now (May 7th) quite well. The following table shows the dates of the attacks of tertian ague, the results of the blood examinations, and the dates on which he took quinine, from April 30th to May 6th, 1896.

Table showing the relation between Intermittent Fever, Laveran's Bodies, and Quinine in the Case of a Patient attacked with Ague and Fever on April 30th, 1896.

Date.	Laveran's bodies.	Fever.	Quinine.
April 30th ...	None found at 9 A.M.	Came on with ague at noon.	None.
May 1st ...	Intra- and extra-corpuscular "swarming."	None.	None.
,, 2nd ...	Same as on May 1st; but leucocytes also "swarming."	Came on with ague at 11 A.M.	None.
,, 3rd ...	Same as on May 2nd.	None.	None.
,, 4th ...	Same as on May 3rd; rosettes.	Came on with ague at 8.30 A.M.	Ten grains at 10 A.M. and five grains at 4 P.M.
,, 5th ...	None.	None.	Five grains at 10 A.M. and five grains at 4 P.M.
,, 6th ...	None.	None.	Same as on May 5th.

In this case there were no Laveran's bodies in the blood before the disease began; they did not appear until after it was established and they were obviously one of its effects and not its cause. The bodies seen daily in the blood between May 1st and 4th bore signs of the well-marked relationship of Laveran's bodies to the white blood-cells to which I called attention in the address I had the honour of delivering before the profession in Bombay on April 4th last. Additional evidence in this direction was furnished unexpectedly by the rosette forms which were found in the blood on May 4th. One of these bodies was traced from its origin to its termination. It appeared first like a red blood-cell with a spot of black pigment in the centre. A number of small cells then made their appearance in the form of a rosette round the central black spot

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and went through the changes depicted in Figs. 5, 6, 7, and 8, Plate II., of Mannaberg's work except that the small cells were devoid of nuclei. The parent cell-wall was no longer visible and fourteen separate little cells, clustered round a clear black-looking cell—the original (?) pigment,—were left naked on the field. They now resembled Edington's diagrams of discharged blood-plates. While we were wondering if we should see each of these cells go off and lead an independent existence the original cell-wall re-appeared and enclosed them all in its interior again. They then gradually faded away and nothing remained but the original cell with a black fluffy spot in the centre. The rosette, instead of being, as the plasmodists declare, a "sporulating parasite," is thus shown to be nothing more than a transition form of the extra-corpuscular Laveran's body. The transition is analogous to changes which occur in the white blood-cell when, for example, its granules are shed and its cell-wall, after becoming invisible, reappears and encloses them again just when they seem to be about to enter upon an independent life. The most remarkable and suggestive point in the changes which the rosette body undergoes under the microscope is that before the rosette appears in the cell it looks like a red blood-cell, whereas afterwards it has more the appearance of a leucocyte.

THE PRACTICAL APPLICATION OF "X" RAYS TO SURGERY AND SURGICAL TEACHING.

BY WILLIAM TURNER, M.B., B.S. LOND., F.R.C.S., ENG.,
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BY the kind permission of the Surgical Staff of King's College Hospital I have been enabled, during the last few weeks, to do some experimental work upon cases in the wards and outside with my "x" ray apparatus, and I find that the practical application of the process to surgical work may briefly be grouped under three headings, thus—(1) to the finding of foreign bodies; (2) to general bone surgery, especially fractures; and (3), though perhaps the most important, to surgical teaching. I will content myself for the present with giving merely one or two cases in point.

1. The Finding of Foreign Bodies.

A woman aged twenty-two years ran a needle into her right hand close to the pisiform bone in August, 1894; a portion of it was removed directly after the accident, but it was thought that a piece was left behind in the hand. Pain and swelling of the hand and arm followed, but no abscess formed and no further indications as to the position of the needle were discovered. She had two or three such attacks, and in August, 1895, a year after the accident, she, for the first time, noticed that the thumb became swollen and painful and occasionally the joints (interphalangeal and metacarpo-phalangeal) were locked; these latter attacks were recurrent usually every three or six weeks and lasted about three days, and in consequence she was prevented from making any use of the hand. I saw her on April 27th, 1896, and found that there was swelling of the right thumb from the head of the metacarpal bone to the tip of the terminal phalanx, more marked on the palmar aspect. The swelling might be best described as an indefinite thickening evidently corresponding to the sheath of the flexor tendon; there was no creaking on movement, and the movements of the joints were normal and caused no pain. No trace of a foreign body could be felt. I asked Mr. Cheatle to see her and he agreed with me that there was no indication that a foreign body was the cause of the trouble and that, unless such was proved to be present, he would not recommend operation until other treatment had failed. I then examined it with the cryptoscope, and finding the condition as shown in the illustrations given below, photographed the thumb in two positions. Fig. 1 was taken with the palmar surface of the thumb on the plate, so the shadow of the needle is shown *through* the first phalanx. Fig. 2 was taken with the radial side on the plate, the hand being fully pronated. Exposure in each case was one minute. These photographs show very well the use of taking them in different positions so as to determine the exact position of the needle in the body. Two days later I cut down and opened the sheath of the long flexor and on hooking aside the tendon found the needle lying between it and the bone, as I had expected, and removed it. In this case a definite opinion as to the cause of the trouble was impossible to be formed without the use of the "x" rays unless after an

FIG. 1.

Needle shown through phalanx. The palmar surface of the thumb was on the plate. Exposure one minute.

exploratory incision, which is neither easy to obtain leave to do from the patient or friends nor always satisfactory from the surgeon's point of view.

I wish to emphasise the fact that in many cases of needles in the body, &c., it is quite unnecessary to examine them

FIG. 2.

Side view of thumb; the hand was pronated, so that the radial surface was on the plate. Exposure one minute.

with the cryptoscope or obtain a skiagraph of them, as they are obvious to the touch of the surgeon, and so there is no need, except for demonstrating purposes, to waste time over them; and also the fact that, although one can readily

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obtain skiagraphs of a part with a needle in it, it does not necessarily mean that the said needle will be always found by the operator with the same ease. This has been well shown in a case now under treatment at the hospital. A woman aged twenty-six years was sent up from the country on April 29th, 1896, having trodden upon a needle ten days previously. On the sole of the foot a mark was found just internal to the base of the fifth metatarsal bone and on a level with the spur of that bone deep tenderness could be easily elicited and the patient was unable to walk and do her work on account of pain. The cryptoscope having shown that a needle between a quarter and half an inch long was present photographs were taken in two positions and these apparently showed the needle in an accessible position. However, an exploratory incision down to the spot failed to reveal any indication of it, so the wound was sewn up and re-photographed. Finding the needle in the same position experiments were conducted with a skeleton foot on the screen and the same shadows were found to be produced by a needle lying in the sheath of the peroneus longus, so the wound was opened and the sheath and tendon carefully explored, but no trace of the needle was found. The foot was then photographed in four different positions with a guide needle placed in the wound and the relationship of the two thus determined, and a third operation was undertaken, but was equally unsuccessful. The skiagraph taken after the wounds were healed reveals the needle still in the same position. This case shows very clearly the great difficulty which may be experienced in removing a foreign body when one has the shadow only to work from.

Since these cases I have been successful in obtaining a skiagraph of a bullet of which no indication by external manipulation could be obtained. The man had shot himself, and the wound of entrance was over the fourth intercostal space about one and a half inches to the left of the left nipple. A probe passed back and slightly upwards for about three inches and appeared not to enter the chest, but to skirt the ribs. On admission the patient had no symptoms of wound of the lung, but there was a slight trace of dark blood in some sputum eighteen hours afterwards. The apparatus was all put upon a trolley with indiarubber wheels and wheeled into the ward to the bedside, and the plate being adjusted behind the left shoulder without moving the patient, with a fifteen minute exposure a skiagraph was obtained showing the position of the bullet external to the ribs, lying close to the axillary border of the scapula. This case is interesting, as it shows that the bullet does not lie in a dangerous position.

(To be continued.)

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF STRANGULATED FEMORAL HERNIA.

BY CLARKE WAKEFIELD, M.D. BRUX., F.R.C.S. EDIN.

THE following case seems to me to present several features of interest. A spinster aged sixty-nine years was first seen on April 13th at 11.30 P.M. The history was that she had worn a truss for thirty years without discomfort. During the last six months she had noticed that the hernia had increased slightly in size, but she had had no pain until the 12th at about 7 P.M. The pain gradually increased and the patient began to vomit. Late at night on the 13th, on examination I found a tense nodular hernia as big as a large horse-chestnut. The patient was retching violently and brought up some distinctly stercoraceous vomit. Her countenance was pinched and pale, her pulse thin and wiry. I tried gentle taxis, but from the history of the case and the rapidity with which the symptoms had come on I deemed it wise not to persevere with the attempts to reduce the hernia in this way. An hour after seeing the patient Dr. G. N. Adams kindly gave ether for me and I proceeded to operate. The operation was comparatively simple as the patient was very thin, the sac being exposed without any vessel requiring to be ligatured. On opening the sac some dark sanious fluid escaped, and a knuckle of bowel, which appeared by lamplight to be black, was exposed. The bowel had not lost its lustre and I decided to return it; this was easily done after incising the base of Gimbernat's ligament. It seemed wiser, in view of the deeply congested state of the gut (a piece of small intestine), not to attempt a radical operation or even ligature the neck of the sac, so I contented myself with removing a piece of omentum which was adherent to the sac and closed the upper three-fourths of the incision with catgut sutures. The temperature remaining normal the wound was not dressed again till the fifth day, when it was dressed for a reason which will presently be given. To return to the course of events following the operation. She vomited six times, and the bowels acted twice with loose motions early on the day after the operation. There was no vomiting on the second and third days, but on the fourth there was an attack of tympanites accompanied by frequent vomiting of bile-stained fluid. On the fifth day, these symptoms continuing, I gave a turpentine enema and changed the dressing to see whether anything to account for the symptoms could be seen in the wound, which, however, I found had healed by first intention. Eight hours after the enema was given she passed a scybalous motion, and from that time the recovery was uninterrupted. I last saw her a month after the operation; the patient was up and about, the scar was quite sound, and there was no impulse on coughing.

Remarks.—It is hardly necessary to remark on the insecurity of a person who wears a truss over an irreducible omental hernia, as I presume was the case of this patient for the thirty years during which she had worn the truss—a hollow Coles's truss. Perhaps the chief interest of the case rests in the attack of tympanites and vomiting mentioned above. Seeing that this attack ended suddenly after a large quantity of scybala had been passed there is little doubt that it was due to a temporary block in the large intestine.

Ladbroke-grove, W.

NOTES ON THE TREATMENT OF MEASLES.

BY A. DUNLEY OWEN, M.R.C.S. ENG., L.R.C.P. LOND.

DURING the early months of this year an epidemic of measles of a severe type visited Northampton and the surrounding district, and there was an unusually high mortality from this disease, chiefly, I believe, from concurrent bronchial and pulmonary inflammations. Of the cases that fell to my share I took notes of over 300 with a mortality of only 4, of whom one died from capillary bronchitis three hours after I was first called in, and the others were under two years old and succumbed to broncho-pneumonia. I attribute this low rate of mortality to the method of treatment I have invariably adopted—namely, to order jacket poultices, changeable every three hours, as soon as any indications of measles show themselves and before the rash appears, and I think this has been beneficial, for death has only occurred in those cases in which the mother discontinued the poultices after the first application, or, as in one case, thought proper not to poultice at all. The only medicinal treatment adopted has been ipecacuanha wine with acetate of ammonia, with a boric acid wash for the eyes in those cases which were complicated by catarrhal inflammation of the lids. Stomatitis occurred in about one-half of the cases and invariably yielded to the application of a saturated solution of chlorate of potash to the inside of the mouth, the children being too young to use a mouth wash.

I venture to think that these notes may be of some slight interest, as all the cases noted were of a severe, and some almost of a malignant, type, the slighter ones being passed over. Convalescence proved slow in nearly all the above cases; curiously, though, the town children gain strength far quicker than those in the surrounding country districts, possibly owing to the higher wages of the town workers procuring for their children a more generous diet.

Northampton.

CONGENITAL LUMBAR HYPERTRICHOSIS AFFECTING TWO SISTERS.

BY L. A. PARRY, M.B., B.S. LOND., F.R.C.S. ENG.

THE following examples of a not very common abnormality may be of interest to the readers of THE LANCET. The subjects are two girls, the third and seventh children of a family of seven; the remainder are not

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affected. The hirsuties dates from birth in either case. Both parents are English. The condition of the elder child as an infant was identical with that of the younger at the present day. The elder of the two girls, aged ten years, has in the lumbar region a triangular patch, base upwards, of fine silky golden hair; the base of the triangle reaches a level one inch above the highest point of the iliac crest, and the apex is one inch above the gluteal cleft. The hair, which is directed downwards, is of a slightly lighter colour than that of the scalp and attains a length of five inches; there are no mental defects. The younger patient presents the same condition as her sister, but in a much less degree. The elder is the subject of old infantile paralysis of the right leg, giving rise to local peripheral gangrene and talipes equinus. There is no sign of spina bifida or perforating ulcer, as in the cases referred to by Mr. Bland Sutton in THE LANCET of July 2nd, 1887.

South Norwood.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. GEORGE'S HOSPITAL.

A CASE OF PERFORATED GASTRIC ULCER TREATED BY LAPAROTOMY; RECOVERY.

(Under the care of Mr. C. T. DENT.)

COMPARATIVELY few cases have hitherto been published of the successful treatment by laparotomy of this formidable complication of a somewhat common disease. It seems, therefore, desirable to place this one on record, as showing that perforation of a gastric ulcer is not necessarily fatal if skilled assistance is obtained and the opening promptly sutured. It also affords a good example of the promptitude of the medical attendant in recognising the occurrence of a perforation before peritonitis has set in and the necessity for surgical interference. The chief points in this case are the occurrence of a perforation on the posterior aspect of the stomach and the oblique line taken by the perforating ulcer. It has been calculated that only 2 per cent. of ulcers of the posterior wall perforate.

A spare, anæmic woman aged twenty-six years who had suffered from indigestion for many years was admitted into St. George's Hospital on Nov. 19th, 1895. On one occasion three years previously she had had a tolerably profuse attack of hæmatemesis which came on suddenly at night. At 4.30 P.M. on the day of admission she was seized with sudden and severe epigastric pain which developed shortly after she had been moving some heavy boxes. She felt sick and, with the idea of relieving her symptoms, drank some hot water. This made her pain worse. Shortly after taking the water she vomited it all together with some half-digested food. As she had not eaten anything for some hours previously it was evident that her gastric digestion was very slow. She was seen shortly after the onset of the attack by Dr. Roxburgh Fuller, who, recognising the probability of perforation, sent her at once to the hospital for operation, acting thus with a promptitude all too rare in such cases, but to which she probably owed her recovery. The patient had for some time previously been suffering from menorrhagia. When seen directly after admission she complained of intense epigastric pain. The abdomen was rather distended and there was tenderness in the epigastric region. There were considerable difficulty of breathing and cardiac distress. The apex beat was an inch or an inch and a half higher than natural. The resonance in the left hypochondriac region was very marked and gave a higher note than natural. There seemed to be little doubt that the patient was suffering from the effects of perforated gastric ulcer. Judging by the physical condition of the abdomen it was thought that the ulcer was on the posterior wall of the stomach. The operation was at once undertaken, between six and seven hours after the first onset of acute symptoms. Mr. Dent opened the abdomen in the median line above the umbilicus, an incision which in such cases appears to him on the whole to answer as well as any other. The peritoneal cavity contained some opalescent fluid of acid reaction; but there was no undigested food free in the cavity, so that presumably the perforation was a small one. The fluid was, as usual in cases of perforation on the posterior wall, chiefly in the left hypochondrium. Even at this early stage moderately firm adhesions had formed, limiting the characteristic cavity formed by the diaphragm, the falciform ligament, and the stomach. There was a slight amount of lymph on the under surface of the diaphragm and on the posterior surface of the stomach, and such coils of intestine as presented were of bright colour and injected, with their surfaces slightly roughened by lymph. Some tolerably firm bands of peritoneal adhesions about the stomach suggested previous trouble; one of these bands, passing obliquely, compressed the stomach very markedly. After separating the adhesions Mr. Dent was able to expose the posterior surface of the stomach. There was no gap to be seen. Midway between the greater and lesser curvatures and towards the pyloric extremity was a thicker and rougher deposit of lymph extending over an area of the size of half a crown. A probe passed into this rough surface entered a sinuous track but did not appear actually to enter the stomach. The operator of course avoided making more than the very lightest pressure. On grasping the posterior wall of the stomach between the fingers and thumb an indurated area of about the size of a five-shilling piece, circular and with well-defined edges, was readily felt. The rest of the stomach was fairly healthy. It seemed probable, therefore, that a small perforation had taken place at some point in this indurated area, probably about the centre. Mr. Dent therefore passed sutures through the muscular and serous walls of the stomach on either side of the indurated portion and sewed the two re-duplications over the induration. The cavity which contained the fluid that had escaped from the stomach was irrigated with hot boracic solution until the injection returned quite clear. No drainage-tube was employed. The patient vomited once after the operation. She was placed in bed with the head and shoulders well raised—a position which Mr. Dent considers to be of the greatest importance in all such cases and especially where, as in this instance, the heart's action is impeded by abdominal trouble. After flushing out the peritoneal cavity, especially after a long and tolerably exhausting operation on a heated operation table, patients are prone to break out into very profuse perspiration and, if not very carefully watched, run some risk of chill. The sweating may be largely obviated by sponging out the peritoneal cavity until nearly dry; but this seems to Mr. Dent an undesirable practice and one that prolongs the operation unduly. In such cases his usual practice is to avoid all linen clothing next the skin and to direct the nurse to rub over the limbs and the whole surface of the body gently and constantly for a couple of hours, if need be, with soft, warm towels. The effect of this very mild massage not only prevents any chill but constantly sends the patient off to sleep; and the rubbing may even be persevered in with advantage, if very gently done, during actual sleep. For the first twenty-four hours the patient was kept on nutrient enemata and suppositories. After that small quantities of food such as peptonised beef-tea, milk, chicken broth, and the like were given by the mouth. The day after operation there was considerable distension, obviously of the colon, and the temperature ran up a little, but the trouble passed away at once after an enema rutœ had been given with a long tube. The highest temperature was 100·2° F. on the second day after operation. After this the temperature fell to normal and remained so. Throughout the patient was kept well raised in bed and turned on to her right side with the idea of keeping the food away as much as possible from contact with the ulcerated surface and favouring its passage through the pylorus. In all gastric operations the patients will do better if they are kept well raised in bed from the first, and in cases of pyloroplasty Mr. Dent has seen vomiting at once checked by merely raising the patient. Save for a little stitch-hole suppuration the recovery was uninterrupted. Such suppuration, which merely signifies the separation of minute sloughs owing to the pressure of the stitches, is almost invariable, he thinks, when there is any degree of

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distension after laparotomy. The apex beat gradually came down towards the normal, but was above the usual point even when she left the hospital. Almost from the first the patient exhibited considerable intolerance of any form of milk. Benger's food was found to answer well. The patient was seen a few months after operation. She was then in good health and made no complaint of digestive troubles.

Remarks by MR. DENT.—There is little to be said about a case such as this, which presented really no complications. The chief credit is really due to the medical man who recognised the symptoms so promptly and allowed no time to be wasted. It was quite clear from the condition of the abdomen that in a very few hours the case would have been a very much more formidable one for the operator. As it was I cannot but think that she only just escaped the lung complications which have led to a fatal issue in so many cases which have been operated on. In this instance as the woman was not much exhausted I delayed giving any food by the mouth for twenty-four hours, but I would not hesitate to give food by the mouth almost immediately after operation if there is much exhaustion. I do not consider that "physiological rest" of the stomach is practically so complete when all food by the mouth is absolutely withheld as when small quantities of easily absorbable materials which are likely to pass readily on into the intestine are given. In this case milk did not seem to be such a food, and I think this will often be found the case. I believe it to be also very important in these cases, as in those of strangulated hernia, to bring about action of the bowels as early as possible. The idea that we are resting damaged intestine by allowing accumulation to take place in it and distention to occur is unsound, and the accumulation that will take place in such cases even when apparently next to no food has been taken for a long time, and where constant vomiting possibly occurs, is surprisingly great. Physiological rest of the intestine is best secured when the natural functions of the intestine are being discharged as nearly as may be in the normal manner. In the museum of St. George's Hospital are several specimens illustrating a condition similar to that which I believe existed in my patient. The track of perforation is often sinuous and of considerable length when it passes obliquely through the coats of the stomach.

SUSSEX COUNTY HOSPITAL.

A CASE OF PERFORATED GASTRIC ULCER; LAPAROTOMY; RECOVERY.

(Under the care of Mr. R. F. JOWERS.)

IN THE LANCET of March 2nd, 1895 (Mirror of Hospital Practice), we published the notes of a case of successful operation after perforation of a gastric ulcer, which was also treated at the Sussex County Hospital and by the same surgeon. We are pleased to place the account of this somewhat similar case before the readers of THE LANCET. It may be recollected that in the other instance alluded to a woman aged twenty-four had suffered from dyspeptic symptoms for two years, symptoms of perforation came on six hours before the operation, when an ulcer on the anterior aspect of the stomach was found, drawn into the wound. and sutured with some difficulty. Symptoms of collapse on the twelfth day led to a re-opening of the wound, but nothing wrong was found, and afterwards the patient got rapidly well. Mr. Jowers appended to his case a list of those which had been subjected to the operation, twenty-five in number, with success in about 35 per cent. So many have been recorded since that the list is far too long for the space at our disposal. For the following notes we are indebted to Dr. Hood, assistant house surgeon.

On the evening of Feb. 10th, 1896, Mr. Jowers was asked by Mr. Baines to see a patient to whom he had just been called and in whom he had diagnosed perforated gastric ulcer. She was a somewhat anæmic but well-nourished girl aged nineteen years. Between two and three months before admission she first felt pain after food in the left side and between the shoulders, lasting about an hour. This became gradually worse, until in a month's time she had great tenderness all over the left hypochondriac region, so that she was obliged to remove her stays in the evening. This continued till the date of admission, but during the whole time she had never vomited or brought up blood. On the afternoon of the day of admission (Feb. 10th,) she was out shopping. About 5 P.M. she had her usual meal of tea and bread-and-butter and again went out. On returning two hours later she was seized with sudden acute pain over the whole abdomen and faintness. The pain was so severe that she lay "doubled up," groaning, and unable to bear being touched. She was given some brandy, which made the pain worse, and then some peppermint, which was almost immediately vomited. There was no blood in the vomit. When first seen by Mr. Jowers about 8.30 P.M. she was extremely collapsed and in intense pain, the slightest movement or touch causing her to scream out. She was supported by pillows so as to relax as far as possible the abdominal muscles, and the knees were drawn up. The abdomen was fixed, scarcely moving with respiration, but there was no marked distension. At this time there was no loss of liver dulness. The pulse was feeble and rapid. It was decided to give her a hypodermic injection of morphia at once and remove her as soon as possible to the hospital. On her admission she was in much the same condition, except that the liver dulness had disappeared and the abdomen was slightly distended. Before being taken to the operating theatre an enema of milk, beef-tea, and brandy was given and ether administered. Mr. Jowers, assisted by Dr. Black, made an incision in the median line, commencing just below the xiphosternum and continued vertically downwards for about three inches. An unusually thick layer of sub-peritoneal fat was met with. On opening the peritoneum a small quantity of free gas escaped with a strong odour of peppermint. The stomach presented at the wound and was carefully drawn forwards and examined; some recent lymph was noticed on its surface and on the edge of the liver. A perforated ulcer rather smaller than a threepenny piece was found on the anterior wall at the cardiac end near the entrance of the œsophagus. By means of two silk sutures passed through the outer walls of the stomach at some distance from the ulcer the latter was brought well into the abdominal wound. Gauze was packed around and a tube passed through the ulcer into the stomach, some greenish fluid escaping smelling strongly of peppermint. An attempt was then made to wash out the stomach through the tube, but it proved unsatisfactory owing to the tube getting blocked by solid food. The edges of the ulcer were then pared by two curved incisions leaving an elliptical opening about an inch in length which was closed by two rows of Lembert's sutures of very fine silk. The abdomen was thoroughly flushed with hot water, the washing being continued till the water returned quite clear. The abdominal wound was closed with salmon-gut sutures, a glass drainage-tube being inserted at the lower end, and cyanide gauze dressing was applied with a Keith's rubber dressing surrounding the tube. On the 11th the patient was sick twice during the night, bringing up undigested food smelling of peppermint. At 7 A.M. the patient was drowsy with contracted pupils, being still somewhat under the influence of morphia; the pulse was 130 and feeble, the respiration was 56, and the temperature was 101° F. The abdomen was scarcely moving and generally tender. She had passed urine. Nutrient enemata of milk, beef-tea, and brandy had been given every four hours, but nothing by the mouth. The patient was ordered half a pint of coffee with an ounce of brandy per rectum. At 4 P.M. the temperature was 100·4°, the pulse was improving, and the abdomen was beginning to move. By means of a glass syringe and tube a little flaky turbid serum had been drawn out of the drainage-tube four times. She had suffered a good deal of pain and had an anxious facial expression. Twenty minims of tincture of opium were given in a nutrient enema at 4 P.M., at 8 P.M. a hypodermic injection of three minims of morphia solution, at 12 midnight fifteen minims of tincture of opium, and at 4 A.M. ten minims in a nutrient enema. On the 12th the pain and general tenderness were much relieved, the abdomen was moving fairly, and the facial expression had become much more cheerful. She was sick once at 4 A.M. with green bilious vomit. The pulse was 108, the respiration 28, and the temperature 98 6°. The patient had had her mouth washed out but had swallowed nothing since the operation, but she had retained the enemata. No flatus had been passed since the previous day. About a drachm of flaky and slightly turbid serum was drawn up from the drainage-tube. The abdomen being slightly distended, an enema of turpentine and gruel was given at 3.30 P.M. She

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was sick several times and had a good deal of pain. On the 13th, however, she had no pain or tenderness, the abdomen was moving well, and there was no sickness, the patient passing flatus freely. The bowels were opened loosely four times. The pulse was 110, the respiration 20, and the temperature was 99·4°. The serum drawn up from the drainage-tube being quite clear the tube was withdrawn and the stitch, inserted for the purpose at the time of operation, was tied. Small pieces of ice were given by the mouth. On the 14th the patient was going on well. A teaspoonful of hot water was given by the mouth every half-hour when the patient was awake. The nutrient injections were continued. On the 15th two teaspoonfuls of peptonised milk and beef-tea were given alternately every half-hour and increased to a tablespoonful at 12 noon. There was no pain or sickness. On the 16th the patient's food was increased to one ounce of milk and beef-tea alternately every hour. Her temperature was 99°, the pulse 80, and the respiration was 24. There was still no pain or sickness. Nutrient enemata were administered every six hours. Two stitches were removed. On the 19th the remaining stitches were removed, the wound being quite healed. An egg beaten up in peptonised milk was ordered. The nutrient enemata were continued till March 3rd, and fluid diet was continued till the 9th, when boiled fish was given. Owing to the patient's dislike for fish minced chicken was substituted next day. This, with milk pudding, custard, &c., was continued until she left the hospital quite well on the 26th. On April 10th the patient reported herself in the out-patient room and said she had no pain or sickness. She appeared to be in excellent health.

Remarks by Mr. JOWERS.—This was a case presenting no great difficulties to the operator. The ulcer was situated anteriorly and towards the cardiac end and was easily reached. The way in which the liver dulness varied is noteworthy, for though there was nearly complete absence of liver dulness when the patient was seen in bed just before removal to the theatre it appeared to be normal when she was fully extended under the anæsthetic on the operating table, a fact which can only be attributed to the change in position. As not infrequently happens in perforating ulcer, either of the stomach or duodenum, there had been no previous vomiting or hæmatemesis. To the fact that a prompt diagnosis was made by Mr. Baines and that she was thereby enabled to be operated upon some three and a half hours after perforation the satisfactory result may be attributed.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Splenic Anæmia.

THE last ordinary meeting of the present session took place on June 9th, Dr. W. HOWSLIP DICKINSON, President, being in the chair.

The PRESIDENT made brief allusion to the losses which the society had sustained since the last meeting by the deaths of Sir J. Russell Reynolds and Sir George Johnson, the former of whom, he said, was distinguished by his culture and his learning and the latter had been one of the main supports of the society during the greater part of his career, had once been President, and most of his work had seen the light in the society's Transactions.

Dr. SAMUEL WEST read a paper on a case of Splenic Anæmia (spleno-megalic primitive) and gave an account of the disease. The patient was a man aged thirty-six who came to hospital suffering with extreme anæmia, high temperature, and a large spleen. The examination of the blood proved that it was not a case of leucocythæmia. The illness began twelve months previously with profuse bleeding after extraction of a tooth, from which time the patient had been getting weaker and weaker, and had lost much weight. He suffered frequently from epistaxis. On his admission the patient was described as looking cachectic and very ill, and extremely pale, with a flush on the cheeks; the temperature, was 103° F. He was spitting some blood-stained fluid, but it appeared to come from the gums. There were no conditions in the chest or other parts of the body, excepting the abdomen, which anæmia would not account for. In the abdomen a very large spleen was found which was slightly tender to the touch. Examination of the blood showed that the red corpuscles were much reduced, as was also the hæmoglobin, and though the white cells were increased they were not more than the fever would account for. It was obviously not a case of leucocythæmia. A daily account of the case was given, but there was nothing special to note except the maintenance of high temperature and the progressive loss of strength. A few attacks of epistaxis occurred and there was a little bleeding from the gums. On Nov. 27th two large hæmorrhages were discovered in the retina which had not been there before. On Jan. 3rd the patient, who had been hoarse for some time, developed œdema of the larynx. The dyspnœa became so urgent on the 5th that tracheotomy had to be performed. The wound took on an unhealthy action from the first and frequent oozing took place from its surface, which on the 8th was severe enough to require plugging. On the 10th hæmorrhage broke out afresh, blood appeared to be sucked into the trachea, and the patient died in a few minutes. A post-mortem examination was made, but there was nothing notable to record except the condition of the liver and the spleen. The liver weighed ninety-three ounces; on microscopical examination the interstitial tissue was found to be slightly increased. The spleen weighed seventy-six ounces, was very soft, and contained one infarct; microscopical examination showed that there was a condition of slight cirrhosis, affecting especially the Malpighian bodies, which were decreased in size. Neither liver nor spleen gave the iron reaction. There was a form of profound anæmia, progressive in character, of no long duration, associated with great enlargement of the spleen, but without leucocytosis or enlarged glands. The disease was very rare and peculiar in its character, and therefore deserved a special name. It had been described under various names: splenic anæmia commonly, in this country; splenic cachexia, splenic pseudo-leukæmia, lymphadenoma-splenica, and also spleno-megalic primitive. There were three stages in the disease; the first, that in which the symptoms were merely those of gradually increasing weakness, with occasional pain in the splenic region; the second, where the anæmia became more marked, and the spleen greatly enlarged; and the final stage, that of cachexia and death from asthenia. It was in the second stage that most of the patients came under observation, and they were then found to suffer usually from severe attacks of pain in the splenic region, paroxysmal in character and somewhat like colic. The temperature was raised to 102° F. or more and the spleen was found considerably enlarged. The blood changes were not characteristic and were not different from those of grave anæmia of simple origin, and no parasites had been discovered. Bleeding from various parts was very common and especially from the nose, but sometimes also from the stomach and bowels. In the later stages the hæmophilic condition was usually pronounced, but the patient generally died of exhaustion. The disease appeared to be continually progressive and of comparatively short duration—twelve months or so. The diagnosis was easy but the cases were rare. The disease might occur at any age, but it was commonest in adults and in males. The causes were unknown. The morbid anatomy seemed to show that the only two organs affected were the liver and spleen. In the liver slight cirrhosis was usually found, and in the spleen also a condition of cirrhosis which affected especially the Malpighian bodies. These might be completely surrounded by fibrous tissue and atrophied. These changes in the spleen were not found in any other form of anæmia with which we were at present acquainted. The peculiarities of the present case were (1) the acute onset and short duration; (2) the hæmophilic condition which developed so early; (3) the œdema of the larynx, which necessitated tracheotomy: and (4) the elevation of temperature, which was continuous as long as the patient was under observation. The number of cases recorded was very small, probably under twenty. The claim that these cases formed a definite clinical group of anæmia must, he thought, be regarded as fully established. The case was brought forward partly on account of its interest and rarity and partly with a view to discussion of these peculiar and grave forms of anæmia.

Brigade-Surgeon-Lieutenant-Colonel KENNETH MACLEOD said that last February a child aged seven was brought to him with splenic enlargement for him to determine whether it was malarious or otherwise. The boy was born in this country of healthy parents and went over

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to live in a suburb of Calcutta from 1889 to 1892, in which latter year the patient returned home. There was no history of malaria in India. In 1894 the child had attacks of fever here which were followed by sweating and there was progressive enlargement of the spleen. The result of a careful examination convinced him that the case was one of non-malarial enlargement of the spleen, but he regretted that he had made no examination of the blood. There was absence of improvement under anti-malarial treatment, so arsenic and iron had been given internally, iodine applied locally, and the patient sent to the seaside.

Dr. COUPLAND remarked that the whole point about these cases was the absence of leucocytosis. The subject was novel to a certain extent, but many physicians had seen cases of progressive splenic enlargement without leucocythæmia. He referred to the case of a married woman aged forty-three whom he had seen with Dr. Albert Wheeler of Honor Oak. There had been an attack of acute rheumatism in 1870, and after her second child was born she had a severe attack of "ague," but it never recurred. A swelling in her left side was noticed in the beginning of 1888, and in the November of the same year the spleen was considerably enlarged. There was no excess of leucocytes in the blood, and there was never any marked anæmia. She went on year by year with occasional pain and diarrhœa and she gradually sank, emaciated, dying of asthenia in November, 1890. At the post-mortem examination there was enormous enlargement of the spleen with extensive hæmorrhages into its substance; its tissue was firm. He had read Banti's paper, pointing out the advantages of splenectomy in these cases and he regretted that he did not recommend splenectomy in this case. About four years ago a woman came into the Middlesex Hospital with anæmia, weakness, and enlarged spleen. Under treatment she improved slightly and was sent home. She returned later with a relapse and Mr. Gould removed the spleen. For a year or two she improved greatly and passed into a condition of plethora. Two years later she returned to the hospital bleeding from the rectum, and some internal hæmorrhoids were removed. Six weeks ago she came back again very ill indeed, bleeding from the stomach and bowel. At the necropsy the source of the hæmorrhage was found to be varix of the œsophageal veins and dilated veins in the lower bowel. There was ascites and the liver showed evidence of advanced syphilis, the presence of which raised doubts as to the case being one of the class under review.

Dr. PYE-SMITH said that years ago Dr. Wilks had described these cases fully and carefully. Two years ago he saw a patient who was a fine healthy-looking man who had a large spleen and suffered from hæmorrhages, but there was no leucocythæmia. The case proved fatal. The natural associants of this disease pathologically were the other profound anæmias. In the whole group would be found diminution of red corpuscles, liability to hæmorrhages, intermittent pyrexia, and a fatal termination. In the treatment of them iron, quinine, and iodide of potassium proved useless; phosphorus was pernicious; arsenic occasionally did good, and the only treatment that cured was the early removal of the spleen. The relationship with malaria was not a pathological one, the resemblance being confined to the clinical aspect.

Dr. GALLOWAY referred to a case he had seen at the Great Northern Hospital with Dr. Clifford Beale. At the necropsy six or eight large, firm vegetations, were found round the aortic orifice, and a diagnosis of ulcerative endocarditis had been suggested during life.

Dr. NORMAN MOORE mentioned the case of a child under his care, a boy aged ten years, whose spleen was very much enlarged, the liver being also enlarged. There was slight ascites, and there had been one copious attack of hæmatemesis. He had been under observation for two years, and there was no leukæmia or amyloid disease and the boy had not lived in a malarious region. A cardiac murmur was present. He had thought that the condition was a form of congenital syphilis, but this was negatived by the history. He asked whether Dr. West considered the duration of the disease an essential point.

Dr. F. TAYLOR mentioned the case of a girl aged thirteen in whom the symptoms had lasted already for four years. Paroxysmal pain was first noticed on the left side and swelling shortly afterwards: a year later the patient was noticed to be anæmic. When admitted later to Guy's hospital the spleen was greatly enlarged; there were apical systolic and pulmonary basic murmurs, and the red blood corpuscles were diminished in number. No parasites were found in the blood, and the patient had not lived in a malarious district. The patient was three months in the hospital, and there was no approach to pernicious anæmia during that time. The actual increase of leucocytes was small; treatment produced no material change, and the parents declined splenectomy. The patient died after the disease had lasted four and a half years. Two years ago a medical man came under his observation who was suffering from marked anæmia. He was taken ill in November, 1893. For two years he had noticed something wrong in the left flank; he had been taking arsenic without avail, and inhalations of oxygen were tried, under which he appeared to improve. There was no excess of white blood corpuscles; there was a scaly eruption on the palm and a tender nodule on the tibia, but he did not admit having contracted syphilis. He was still alive but was not working, and so the duration of his illness up to the present was nearly four years. One important outcome of these observations was that the diagnosis of leucocythæmia was not to be made without an examination of the blood. If syphilis were a cause of enlargement of the spleen it could only operate through cirrhosis of the liver or amyloid disease. He mentioned another case which came under his care in 1893 for hæmatemesis. The patient was a lad aged sixteen who had never taken alcohol. On examination the spleen was greatly enlarged, and there was much anæmia; the blood showed no excess of white corpuscles, but the red corpuscles and hæmoglobin were both deficient. He improved and went out of the hospital. In October, 1895, he was still pale; the blood was examined and there was no leucocytosis. In February of the present year he again suffered from hæmatemesis, which rendered him very anæmic; the spleen was still enlarged and there were retinal hæmorrhages and optic neuritis. The blood was as before, but later the white corpuscles had increased in number but not sufficiently yet to justify the case being regarded as one of leucocytosis.

Dr. LESLIE MURRAY said that in certain cases there was a distinct diminution of leucocytes and there was no anæmia. He referred to a case which lasted twelve months; diarrhœa was present, which necessitated the stoppage of the arsenic, and there was occasional pyrexia with gradually progressive asthenia. The spleen weighed over 6 lb. and showed recent and old hæmorrhages and infarcts, but no cirrhosis. The liver was twice its normal size and contained minute nodules between the lobules like points of granulation tissue. The whole of the solitary glands and Peyer's patches were also enlarged. Iodide of potassium had a good effect and diminished the spleen by two inches. Another case from the same place—a marshy district of Scotland—came to him three months later, in which the fatal result was due to septic peritonitis.

Dr. KANTHACK said that he had made a mistake in the description of Dr. West's case, for there was a distinct increase of fibrous tissue in the spleen. The blood in these cases should be carefully examined and the white corpuscles catalogued according to the commonly accepted code. Cases of splenic anæmia occurred in children and adults. In children considerable leucocytosis was often present though not amounting to leucocythæmia. In adults leucocytosis was not present normally. Rachitic and syphilitic conditions in children might be associated with severe anæmia and thus a condition might be established indistinguishable from splenic anæmia. In the adult cases pathology still left them in the dark. He thought that splenectomy was not a good operation in these cases, for so far as pathological teaching went the spleen in these cases was rather a compensatory organ than the seat of the disease.

Mr. PEARCE GOULD protested against the value of splenectomy being judged by the prevailing pathological view of the disease. The cases ought to be judged on their merits, and Banti's results could not be set aside by any theoretical considerations as to the nature of the affection.

Dr. JOHN HARLEY asked whether there was any connexion between the endocarditis and the splenic affection, for several observers had noticed the coincident existence of the two diseases.

The PRESIDENT asked if there were any antecedent history of malaria.

Dr. WEST, in reply, said it would be useful to have cases like that related by Dr. Coupland recorded in the Transactions beside his own. There was no history of malaria or of syphilis. One of the cases related by Dr. Murray was

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evidently Hodgkin's disease. No organisms had ever been discovered in connexion with these cases. The diagnosis of these cases was often extremely difficult and he would hesitate before adopting so heroic a procedure as splenectomy for this disease.

ISLINGTON MEDICAL SOCIETY.

Two Deaths from Coal-Gas Poisoning.—Ulceration of the Tongue and Mouth.—Uneventful Midwifery (4700 cases).—Needle in the Wrist and Roentgen Rays.—Obscure Case of Perforating Ulcer of the Stomach.

THE last meeting of this society was held at 25, Highbury-place on May 26th. The following is a brief report of the proceedings:—

Mr. JOHN T. JACKSON read notes on two cases of Fatal Coal-gas Poisoning. Two servants, the elder aged fifty-six years and the younger aged fourteen years, were in the habit of sleeping together in a small, badly ventilated bedroom without a fireplace, and in which there was a gas-bracket by the window. They were forbidden by their mistress to use the gas and were supplied with a small safety oil-lamp and a candlestick. On the morning of April 25th, about seven o'clock, as they did not appear to be getting up at the usual time, their mistress went up to their bedroom and immediately smelt a strong smell of gas, and upon their door being opened found the room full of it. One of the sons coming to her assistance opened the window and turned off the gas-tap, from which it had been escaping. Upon looking round they saw the elder patient lying half out of the bed and dead, but seeing that the younger one was still breathing they carried her into the next room, placed her on the bed, and opened the window. Mr. Jackson was summoned a little before 8 A.M. and found the woman dead, so he attended to the girl immediately. He found her lying on the bed quite unconscious, with the pupils widely dilated, the conjunctivæ injected, and the extremities cold. The face was pallid, but not dusky, neither were the lips. The breathing was quick, but not laboured, and the pulse was quick and feeble. Hot bottles were applied to the feet and legs and blankets thrown over them and mustard plasters to the chest, the heart, and the back of the neck. She was given some sal volatile and water by the mouth without difficulty. Shortly afterwards convulsions came on affecting the facial muscles, with closure of the jaws and also both arms and hands. The legs did not appear to be affected. With the assistance of another practitioner, who had also been called in, artificial respiration was performed for a time, but as there seemed to be no difficulty in breathing this was left off. Hot coffee was given per rectum, and as the convulsions still continued bromide of potassium and brandy were injected by the rectum at intervals of three hours. The convulsions were accompanied by restlessness and some moaning. There was no return of consciousness, and she remained in this condition until 6.30 P.M., when the breathing became more hurried, she coughed up blood-stained, frothy mucus, her face became covered with perspiration, and the pulse becoming more rapid she died about 10 P.M. There was no post-mortem examination. On examining the servants' room the candle was found quite burned down in the candlestick. The supposition is that the woman had been sitting up late, burnt out the candle, had lighted the gas and had not properly turned it off, or in attempting to do it had turned it slightly on when the flame went out. Similar incidents were mentioned by other members.

Dr. A. REID brought forward some notes on Ulceration of the Tongue and Mouth (stomatitis, cancrum oris, &c.), which he said were common enough in children but not so frequent in adults. A case occurred in a woman aged twenty-two years, to whom he was called on April 11th last. He found the patient (recently married) looking very ill, anæmic, and generally run down. There was a thin, quick pulse and the temperature was 101° F. The tongue was very foul and the characteristic fœtid breath of stomatitis was present. There was loss of appetite and sleep. On examining the mouth the tongue was found to have a thick, yellow fur; it was not very swollen; the gums were spongy with spots and superficial ulcerations. Nothing was observed on the inside of the cheeks. Dr. Reid ordered a calomel aperient, a mixture of chlorate of potassium, and mouth washes of chlorate of potassium and Condy's fluid to be used alternately. He insisted on a liberal supply of nourishing soup and wine or brandy. She did not improve for several days. Her tongue got more fixed and she could not articulate. He then found a slough forming along the left side of the tongue. She was unable to use the mouth washes thoroughly, so glycerine of borax was applied with a brush. The slough slowly separated and the tongue healed. Under citrate of iron and quinine with strychnine, combined with liberal feeding and painting the gums with iodine, she recovered rapidly and perfectly.

Mr. JAGO read a paper on Uneventful Midwifery (4700 cases), in which he gave the following particulars. The term "uneventful" as applied to midwifery could, of necessity, only be used in a comparative sense. How far he was justified in adopting it as descriptive of his own experience must be left to the judgment of the members. He had gathered the records of rather more than 4700 cases extending over a period of twenty-three years, the lowest number attended in one year being 19 and the highest 295. He regretted that he had not kept a methodical table of the different presentations, the use of instrumental aid, versione, &c., the cases being of no use in the matter of definite statistics. The chief "events" in Mr. Jago's practice, however, were very clear in his memory and are briefly related as follows. The main consideration in obstetrics is, he considered, the death-rate, and he had to record nine deaths. Two deaths were in cases of advanced phthisis and were not primarily due to the puerperal state. Two were from hæmorrhage, one a case of placenta prævia and the other of concealed accidental hæmorrhage. One death was probably the result of embolism and one distinctly due to privation. The remaining three cases were of septic infection. Of the last, two happened quite twenty years ago, and the third in 1892. This last case was of peculiar interest and taught a very definite lesson. The patient was a woman aged thirty-eight years with her first child. The labour was hard and instrumental, but in no way unusual. She did very well until the fourth day, when symptoms of septic infection became manifest, and she died on the eighth day after delivery from puerperal peritonitis. The child was circumcised on the same day, and on the fourth day afterwards was seized with pyrexia, sickness, tenderness in the right iliac region, tumefaction of the abdominal walls, &c., and died on the eighth day after circumcision from what Mr. Jago considered septic peritonitis. The importance of this case lies in the fact that the drains in the area of the next house (which was unoccupied) were exposed for the construction of an intercepting trap; the lying-in room was in the front of the house, and the month being July the windows were kept constantly open. Only once had he had occasion to perforate the cranium, and in this case he thought it would not have been necessary had the use of chloroform not been prohibited on account of bronchial complications. He had seen three cases of placenta prævia. In one case, as already stated, the patient died. In the second the labour was completed before his arrival, the placenta having been expelled in front of the head of the child. In the last case delivery was safely effected by the adoption of Dr. Barnes's recommendation. In all the cases the children were still-born, the period of confinement being about the eighth month of pregnancy. He only recalled one case of prolapsed funis, and in this the child was stillborn. Once only had he seen a shoulder presentation, or at least he presumed the shoulder presented. He was called to the case by a midwife, who had apparently been pulling on the arm in the hope of effecting delivery. Three times he had had occasion to induce premature labour. In one case of much interest, at the wish of Dr. Fancourt Barnes, who had removed a large ovarian tumour at the fourth month of pregnancy, labour was induced at the seventh month to prevent the weakening of the abdominal walls by the over-stretching of the recent cicatrix. Labour was induced in each by the introduction of the gum elastic catheter. He had to record two ruptures of the perineum through the sphincter ani and for about an inch up the septum. Both were forceps cases; in one the presentation was normal, and in the second face to pubis. One was repaired by the quilled suture, but the result was only partially satisfactory; in the other one deep and four superficial sutures were used, with the best results. This patient Mr. Jago had since attended in four confinements without further mishap. He had no accurate data as regards twin births, but he remembered one case in which one child had evidently died about the sixth month and

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was flattened out, taking the distinct curve of the uterine cavity. These facts constituted the exceptional occurrences in his experience. If he might venture to generalise and deduce from them he should like to submit to their consideration two conclusions to which he was led. The first was that clean midwifery need not be ostentatiously antiseptic, and, secondly, that among the lower middle and respectable artisan classes variations from the normal state are comparatively rare.

Dr. GLOVER exhibited a photograph of a Needle in the Wrist shown by the Roentgen process, taken by Mr. W. P. Granville, 36, Oakfield-road, Stroud-green. It was easily removed after being in six months. He also gave particulars of a misleading case of Perforating Ulcer of the Stomach, fatal in sixteen hours from the time of his first seeing it, occurring during menstruation, the pain and peritonitis being most marked in the left ovarian region, where pain had been complained of for weeks. Death occurred from shock.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.

The Climate and Mineral Springs of Bridge of Allan.

AN ordinary meeting of this society was held on May 20th in the rooms of the Medical Society of London, Chandos-street, Cavendish-square, W., the President, Dr. HENRY LEWIS, being in the chair.

Dr. HALDANE read a paper on the Climate and Mineral Springs of Bridge of Allan. He pointed out that the mildness and freshness of the climate, due to the situation of the town on a gentle slope facing south, surrounded behind and at the sides by hills, made it a suitable Scottish winter resort for many invalids, while the waters acted as a mild and safe aperient, diuretic and deobstruent and were used with success in chronic constipation and liver and glandular affections, the treatment and baths being carried on equally well in summer or winter. The baths were found useful in some cases of chronic skin diseases and rheumatism. The "Nauheim treatment" of cardiac affections was now being tested.

Dr. MYRTLE (Harrogate) considered Bridge of Allan more suitable for cases of bronchial irritation and phthisis than any other part of Scotland.

Mr. MOXON (Matlock) and Dr. GILBERT (Tunbridge Wells) considered that the change of climate and mode of life had more to do with the benefit received by patients at Bridge of Allan than the waters.

Dr. TYSON (Folkestone) said that they would do a great amount of good by placing their own health resorts in the proper position they deserved, and they did not wish to push the claims of their own health resorts to the exclusion of foreign spas.

Dr. SOLLY (Harrogate) agreed that it was certainly time to bring before the profession the advantages of their home health resorts, but in doing so they must be careful not to claim too much for any particular resort.

Dr. SNOW (Bournemouth) said that in this country they did not sufficiently minister to the needs of the minds of the visitors by providing suitable amusements. All this must be altered.

Dr. LEONARD WILLIAMS (Sidmouth) endorsed the remarks of Dr. Solly.

Mr. SHIRLEY JONES (Droitwich) also spoke and Dr. HALDANE replied.

Dr. HYDE (Buxton) then moved the following resolution:—"This meeting is of opinion that increased travelling facilities in the shape of specially reduced fares, through communication, and quicker and more frequent train services in connexion with British health resorts are desirable, not only in the interests of such resorts, but also in those of the visitors, and particularly invalids, who have to resort to the spas and watering places in search of health; and the meeting further resolves that the council be requested to appoint a committee to consider the subject with a view to influencing the various railway authorities, and taking such other steps as may be deemed desirable." He showed the disadvantages under which our home resorts laboured on account of the cheaper travelling facilities granted to visitors to continental resorts, giving numerous illustrations. He said that health resorts were not ordinary towns, that the traffic was essentially a holiday traffic, and that the fares should be reduced and other concessions and alterations made as to the length of stay, &c.

Dr. SNOW (Bournemouth) warmly seconded the resolution and said that the railway companies should be approached in the most friendly way, and he thought it would be better to do this through the Councils of the different towns.

Dr. MYRTLE (Harrogate) said that on many lines hunters, golfers, and curlers could travel for reduced fares, and visitors to health-resorts ought to be treated similarly. He pleaded for a better sanitary accommodation in all trains.

Dr. SOLLY (Harrogate) urged the necessity of providing through carriages. Many invalids refused again to face journeys on account of change and long waits.

Mr. MOXON (Matlock) thought that they should certainly lay before the railway companies the points raised by the previous speakers.

Dr. TYSON (Folkestone) was strongly in favour of each district working out its own case with the different railway authorities, because some towns had no complaints to make.

Mr. CUFFE (Woodhall Spa) said that at Woodhall Spa they had approached the railway company some years previously with the greatest success as regarded reduced fares, extended time of stay, and through carriages.

Mr. TREGELLES FOX (Strathpeffer Spa) thought that the suggested improvements would be remunerative to the railway companies, and that the society was entitled to back its propositions with a certain amount of sentimental support.

Dr. LEONARD WILLIAMS (Sidmouth) thought that a committee should be appointed, but should only exercise its influence on application from the various health resorts.

Dr. HYDE, replying, agreed that they could not do much on account of the commercial aspects, but he thought concentrated influence would be more powerful and efficient than that of individuals.

The resolution was carried unanimously.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

Syphilis Simulating Tuberculosis.—Laryngeal Autoscopy.—Instruments Used by Native Indian Oculists.—The Rôle of the Carbohydrates in Diabetes with an Inquiry into the Constitution of Infants' Food.—Primary Sarcoma of the Liver Simulating Hepatic Abscess.—Opium Poisoning.

THE tenth meeting of this society was held on June 3rd, Dr. ARGYLL ROBERTSON, President, being in the chair.

Mr. CATHCART showed a case of Syphilis Simulating Tuberculosis.

Dr. LOGAN TURNER gave a demonstration on Dr. Kirstein's method of Laryngeal Autoscopy. The principle of the method consisted in bringing the interior of the larynx and trachea *directly* under the eye of the observer without the use of the laryngeal mirror, and hence there was no reflected image. In carrying out the examination there must be a straight line between the aperture of the mouth and the interior of the larynx and trachea. This was obtained by raising the patient's head till it formed an angle of 60 degrees with the axis of the trunk. By depresing the posterior part of the tongue immediately in front of the epiglottis the epiglottis was raised and drawn forwards. The larynx and trachea were illuminated by means of an electric lamp placed in the handle of the autoscope. The instrument required some dexterity in its use, and many patients were quite unable to submit to the pressure required to depress the tongue and draw forward the epiglottis. The instrument consisted of a spatula of nickel-plated palladium, fourteen centimetres long, slightly hollowed out on its upper surface and slightly curved backwards at its distal end, where it was notched to receive the central fold of the glosso-epiglottic ligament. The spatula was fixed at right angles to the handle and was provided with a small sliding plate at its proximal end, thus forming a short tunnel through which the light was transmitted and through which instruments could be passed. The handle was provided with a small electric lamp, the rays from which were directed along the spatula into the cavity of the larynx. The examiner, standing in front of the patient, who was seated in a chair with the head at an angle of sixty degrees with the trunk, introduced the spatula immediately in front of the epiglottis. The handle was then

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elevated till the sliding plate came into contact with the teeth of the upper jaw; the epiglottis was thus raised and a view of the larynx and trachea obtained. Cocaine might be used with advantage, but there was considerable variation in the success of the procedure, many patients being unable to stand the necessary pressure. If successful a very good view of the larynx and trachea was obtained. Dr. Turner did not think that autoscopy could take the place of ordinary laryngoscopy, but it was very useful in children where an anæsthetic was used.

The PRESIDENT showed specimens of the Instruments used by native Indian Oculists for couching cataract, which had been sent by his friend Dr. Jennings. An ordinary bleeding lancet was used for the incision, and the lens shot out with one of the instruments shown which consisted of a bayonet-shaped blade made of coarse metal.

Dr. AITCHISON ROBERTSON read a paper on the *Rôle* of the Carbohydrates in Diabetes with an Inquiry into the Constitution of Infants' Food. Having glanced at the part played by the carbohydrates in diet he next considered the digestion of starch by the saliva and in pancreatic digestion. In infants the secretion of saliva was small and the diastatic ferment small in amount. Little starch could be digested. At the end of the first year diastatic property reached a maximum. The best food for infants was mothers' milk. Many children were fed on condensed milk, but he thought children fed thus were liable to gastro-intestinal troubles and convalesced from illness more slowly than those fed on mothers' milk. The sweetened variety of condensed milk was most used, but contained much added sugar. These milks were not to be recommended. He had examined specimens of various artificial foods after preparation according to the directions given and not as found commercially. He concluded that most consisted of wheaten flour mixed with malt. In many the preparation with boiling water prevented the conversion of the starch. Instead of malt some contained pancreatic ferment, but in the ordinary feeding of children it was not necessary to digest the proteid matter for proteid was well digested by children. In some of the foods the starch had been fully converted by the diastase of malt into dextrines. Combinations of starch and dextrine were present in some foods. If these dextrinised foods were properly prepared they formed a valuable addition to the milk with which they were used. Almost all the artificial foods were deficient in fat, so cream should be added in their preparation. — Dr. CARMICHAEL, Dr. BLACK, Dr. GILLESPIE, Dr. JAMIESON, Dr. BURN MURDOCH, and Dr. RITCHIE took part in the discussion which followed.

Dr. BYROM BRAMWELL read notes on a remarkable case of Primary Sarcoma of the Liver which simulated hepatic abscess. The patient, a young woman aged twenty-five years was admitted to the Royal Infirmary, Edinburgh, suffering from debility, emaciation, and pain in the right side of the chest. When admitted to the hospital dulness was found posteriorly with the typical curve of a pleural effusion. A hypodermic needle was inserted by the house physician, but no fluid was obtained. When the patient was examined while lying on her back it was at once noticed that the lower part of the chest on the right side was bulging and that the heart was displaced upwards. There was great pain in the fifth interspace in the right mammary line. A fluid enlargement of the liver was suspected. The needle of an aspirator was inserted at the painful point in the fifth interspace and some dark chocolate-coloured fluid was obtained. Hepatic abscess was diagnosed, although it was remarkable that the patient had never been out of the country, never had dysentery, nor could any cause for the abscess be discovered. Fifty-three ounces of dark chocolate-coloured fluid were drawn off with the aspirator. The fluid contained much more blood than would have been expected in an abscess. The microscope showed leucocytes, blood corpuscles, and debris of broken-down cells, but no characteristic cells could be found. She remained easier for some days, but the side became distended again and all her urgent symptoms returned. Mr. Cotterill operated and incised a large cavity and introduced a drainage-tube. She was much relieved, but blood continued to leak through the tube and produced profound anæmia. The tube was removed, ice bags applied, and various remedies tried, but the bleeding continued. Mr. Cotterill decided that the only procedure possible was to sew up the opening, which was accordingly done, and pressure applied. The bleeding stopped, but the cavity filled up again and had to be aspirated. The patient died a month after admission to the hospital, no other disease having been found in any other part of the body.—Dr. LEITH gave a description of the pathological conditions present. On cutting into the liver a large cavity was found occupying more than half the bulk of the organ. It contained broken-down blood-clot. Around were isolated centres of growth. The liver weighed about 9 lb. It was an example of the rare condition, primary sarcoma of the liver, consisting of spindle cells with some giant cells. The specimen and photographs were shown.—Dr. AFFLECK thought the case well illustrated the difficulties in diagnosing hepatic tumours. He remembered the case of a woman who was treated for typhoid fever for three months before being sent to the infirmary. On admission a swelling was found in the hepatic region. It was aspirated and some chocolate-coloured matter removed. The symptoms were so urgent that Mr. Duncan incised and found a large cavity containing grumous chocolate-coloured matter. The patient died and post mortem an abscess of the liver was found, which communicated with the stomach through a sinus leading to an old gastric ulcer.

Dr. JAMES RITCHIE read notes on two cases of Opium Poisoning. In the first case a catarrhal condition of the stomach was present, and when the stomach tube was passed seven hours after the laudanum had been taken a very considerable quantity was found in the stomach. The second case was treated with permanganate of potash, with very satisfactory results.

Reviews and Notices of Books.

Researches into the Anatomy and Pathology of the Eye. By E. TREACHER COLLINS, F.R.C.S. Eng., Assistant Surgeon to the Royal London Ophthalmic Hospital, Moorfields; and Hunterian Professor to the Royal College of Surgeons of England, 1893–94. With 10 Plates and 28 Figures in the Text. London: H. K. Lewis. 1896. Pp. 140. Price 6*s*.

THE volume before us, though of small compass, represents a very large amount of careful work. Mr. Treacher Collins held for several years the post of Curator of the Museum at the Royal London Ophthalmic Hospital, and had then as part of his duties to examine and report upon enucleated eyes, tumours, and pathological specimens generally. As the surgical staff of that hospital is large, the patients numerous, and operations frequent, he had extensive opportunities of observation, and of these he has taken advantage in a way highly creditable to his skill and industry, and has produced a work which, although by no means an exhaustive treatise on the pathology of the eye, yet treats of many subjects, and of each in so original and interesting a manner that the several chapters will be read and re-read by every ophthalmic surgeon, and will form the basis of the pathology of the eye in the text-books on the points with which he deals for some time to come. In the summer of 1894 Mr. Collins delivered a course of lectures as Hunterian Professor at the Royal College of Surgeons of England on the Development of Various Parts of the Eye, which he has reproduced here with much additional matter, consisting chiefly of the effects of concussion on the eye and the pathology of cysts of the iris.

In the first chapter he dwells at some length on the development of the suspensory ligament of the lens, showing that the fibres of which this ligament is composed are, in the first instance, cellular adhesions passing between the sides of the lens and the ciliary processes, and that as growth proceeds the cells lose their nuclei and become fibres. The absence of such fibres enables an explanation to be given of the condition known as coloboma lentis and ectopia lentis. He discusses the origin of true anterior polar cataract, a name he restricts to those opacities which are immediately posterior to the anterior capsule, and shows that they are formed by the proliferation of the cells lining the capsule, though after some time a hyaline layer is formed between the

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proliferated cell mass and the lens substance, the anterior capsule in such cases appearing to split at its periphery of the neoplasm into two layers. He agrees with the late Mr. Hulke in thinking that another form of anterior polar cataract may result from perforating ulcer of the cornea and the temporary contact of the prominent surface of the lens with the flaccid cornea. The second chapter is chiefly occupied with the histology and pathology of zonular cataract and the etiological relation between this kind of cataract and rickets. He appears to think that the evidence at present obtained is in favour of the connexion of the two diseases. A short section is devoted to the development of the vitreous humour which he finds in a specimen from a fœtus believed to be about at the tenth week in the form of a thin layer separating the posterior surface of the lens from the inner layer of the secondary optic vesicle. A definite hyaline membrane is already present and the rudimentary vitreous is composed of a network of fine fibres with granules lying on them, the interspaces being filled with a clear fluid; he gives several drawings of sections of the central artery of the vitreous. The author devotes a chapter to Cysts of the Iris, a rather rare but very interesting form of disease. The first recorded case is that by Mackenzie, who noticed that the little tumour was preceded by a wound. In 1860 D. A. V. Guépin, in collating the various cases that had been reported up to that date, drew attention to the fact that cysts of the iris were generally, if not always, preceded by a punctured wound, and the correctness of his statement has received the support of all succeeding observers. The precise pathological conditions that lead to the formation of cysts of the iris are fully given by Mr. Collins. In some instances eyelashes have been translated by the instrument inflicting the wound into the substance of the iris, and the conclusion was drawn that the cysts in such cases proceed from the rootsheath; but in 1869 Mr. Hulke, after collecting the details of nineteen cases, suggested that a part of the membrane of Descemet might in some instances have been torn off and applied to the surface of the iris. Mr. Collins, however, points out that "cysts of the iris which follow wounds of the eye are, as a rule, found to be lined by laminated epithelium, and it seems," he thinks, "more probable that it is the surface epithelium which is implanted and which forms the starting point of the cyst rather than the endothelium on Descemet's membrane." This view is in accordance with the experiments of Masse, who produced both epithelial, pearl-like tumours and true cysts by grafting on the iris of rabbits' eyes fragments of conjunctiva and skin, and it is fully borne out by the microscopical examinations which have been made by Mr. Treacher Collins himself, of which he gives many original drawings.

In speaking of glioma of the retina Mr. Collins states that, although he has not made a special study of the retina, he has observed that the layers of the retina are quite undifferentiated in the human fœtus at the third month and that the retinal cells at that period are very similar in appearance to those which compose the mass of a glioma, the majority being rounded with large nuclei and some having minute spicules. He rightly observes that the differences between glioma and sarcoma are constant and well marked, glioma occurring in infancy or early childhood, affecting both eyes in 20 per cent. of the infants attacked and not recurring after removal if three years have elapsed; it is rarely associated with secondary growths, and arises from tissue of epiblastic origin, the cells being rounded with large nuclei and occasionally with spicules, whilst sarcoma may occur at any age, is never bilateral, is frequently followed by secondary growths, often presents fusiform as well as round cells, and arises from mesoblastic tissue.

In regard to the hyaline nodules which are to be met with in pathological specimens on the inner surface of the membrane of Bruch, Mr. Collins is inclined to believe that they are an excretion from the pigmented epithelial cells of the choroid, and attributes the formation of the membrane of Bruch itself to the same cells.

Referring to the difficulties that present themselves in explaining the occurrence of glaucoma, he proceeds to discuss the conditions which may lead to that affection in eyes in which the iris is partially or wholly absent; in those affected with buphthalmos, in cases occurring after cataract, in cases of traumatic aniridia, and in cases of recurrent glaucoma after iridectomy. He shows that in almost every case microscopical examination demonstrates that the glaucomatous symptoms arise from narrowing of the angle between the iris and cornea and consequent interference with the drainage of the aqueous humour. The drawings illustrating this are well executed. Mr. Collins may be congratulated both on the novelty and the value of his work.

The Histo-pathology of the Diseases of the Skin. By Dr. P. G. UNNA. Translated from the German by NORMAN WALKER, M.D. Edin. Edinburgh: William Clay. 1896. Price 31*s.* 6*d.* net.

THE publication of this work marks an important episode in dermatology. Nowhere but in Germany could an author have been found to undertake a work of such magnitude, 1205 large octavo pages, on the pathology of a single branch of medicine, and although Gustav Simon in 1848 (not 1840 as stated in the preface) undertook a similar task, both dermatology and histology were then in their infancy and the ground to be covered was therefore much less. Dr. Unna, indeed, does not now pretend to cover the whole ground of the histo-pathology of the skin. This would be far beyond the power of a single individual, who has aimed not at a compilation from the labours of others, but to go through *de novo* as much as he could by his individual efforts and those of his pupils working under his supervision. The work is divided into six sections: (1) Anomalies of Circulation; (2) Inflammation; (3) Progressive Disturbances of Nutrition, corresponding to what are usually classed as neoplasms, but including also pigmentations; (4) Regressive Disturbances of Nutrition, including Degenerative and Atrophic Changes, Gangrene, &c.; (5) Malformations; and (6) Saprophytes and Foreign Bodies—the saprophytes including a few vegetable parasitic diseases, and the foreign bodies being represented only by argyria. As might be expected, Sections 2 and 3 take up three-fourths of the entire book, 600 pages being occupied with the different forms of inflammation.

The author has very wisely prefixed a short clinical description of the affection he is about to consider pathologically. This enhances the value of the book to the general reader, and would be, indeed, necessary in many instances to the dermatologist, so that there should be no mistake about the eruption examined. It is the more essential in this work, as the author never hesitates to re-christen a disease, however generally recognised its original name may be, if he considers it may be more accurately described from a pathological standpoint. This is much to be regretted, for the multiplication of designations for the same disease by different authors has been the bane of dermatology in the past and has done much to hinder progress. No author can claim to be final in his views as to the pathology of any eruption, and as revision of pathological theories is constantly going on if every generation of pathologists should consider itself entitled to alter the names already in vogue because they express a possibly exploded theory of its pathogeny, it is obvious that there will be no finality. All old-established names are better left simply as labels, which may be quite distinctive even if they are not pathologically sound.

We do not intend to discuss the author's views of the individual diseases of which he treats. This would involve a general analysis and go far beyond the scope of a review

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Everywhere he states the grounds on which he draws his conclusions and points out where he differs from previous authors, and he gives most of the recent bibliography at the end of each article. It remains for the reader to weigh for himself the facts with the conclusions and form his own opinion according to his judgment founded on clinical and pathological experience. Whatever the result in individual instances there can be no question that the author has done a profound service to dermatology and has not only laid a broad foundation but erected much of the superstructure which the now numerous band of young and enthusiastic workers can assist to complete.

The work should be read carefully by every dermatologist who wishes to keep abreast of his subject, and every practitioner who is interested in diseases of the skin will never regret having devoted some of his spare time to perusing the more general pathological portions of the work.

Much praise is due to the translator, Dr. Norman Walker, who has executed a difficult and arduous task in a very creditable manner. The work is done into very readable English, and it is only where there was no exact equivalent in English for some of the new pathological terms that it is observable that the work is not originally an English one. It has also some advantages over the German edition. Dr. Unna has seized the opportunity "to make certain alterations and emendations of the original," and at Dr. Norman Walker's suggestion illustrations have been freely introduced, so that there is a double plate of nineteen coloured figures prefixed and forty-two well-executed woodcuts in the text. The publisher's share in the production of the work leaves nothing to be desired, and author, translator, and publisher are to be congratulated on their enterprise in undertaking and success in producing such an important and valuable work.

The Pathology and Treatment of Venereal Diseases. By ROBERT W. TAYLOR, M.D., Clinical Professor of Venereal Diseases at the College of Physicians and Surgeons, New York. Pp. 1000. Edinburgh and London: Young J. Pentland. 1896.

THE first thing which strikes the reader of this bulky encyclopædic work on venereal diseases is the space allowed to gonorrhœa and its complications, immediate and remote, these alone taking up half the book, or rather more than is given to syphilis and its sequelæ. This well illustrates the change which has come over modern views with regard to these complaints. Gonorrhœa is no longer regarded lightly by the surgeon, as the serious character of sequelæ in women as well as men has been so prominently brought forward in recent years. The work, as we have mentioned above, is of an encyclopædic character. Dr. Taylor does not confine himself to his own experience and observation, but gives, often with tedious fulness, the views of others, even when they have been long exploded. If a second edition should be required the pruning-knife must be freely employed; moreover a separation of the work into two volumes would make it much more convenient. We hope also that some of the histories (often quoted from other authors), which are given in the book will be reconsidered before they are admitted into a future edition in their present form. The work begins with a consideration of gonorrhœa in the male. A description of the anatomy of the parts is followed by an admirably clear account of the gonococcus and its life history and a very judicial consideration of the importance to be attached to its presence or absence in stained specimens of the discharge. With reference to subacute and chronic cases the author says: "But the doubt comes in in subacute and chronic cases, just the ones in which we are anxious to determine whether the long-drawn-out inflammation is really kept up by the gonococcus, and whether this micro-organism has, as it is claimed it has, an indefinite life as a morbific agent in the male urethra. It will be very readily seen that the bacteriological studies of the urethral secretions are very difficult, intricate, and attended at every step with liability to doubt, confusion, and error; consequently scepticism and conservatism are warranted, indeed are essential, even in the presence of statements made by experienced and skilled observers." The morbid anatomy of chronic gonorrhœa and of stricture is clearly described and well illustrated, and the symptoms, complications, and treatment of gonorrhœa in the male are given in great detail. Gonorrhœal ophthalmia is also well described and the treatment very clearly indicated. The sequelæ, such as gonorrhœal rheumatism, general pyæmia, endocarditis, &c., are clearly described and references given to recently published papers. The late local effects, such as stricture, are very fully considered. Gonorrhœa in the female and the sequelæ of pelvic inflammation and suppuration receive the full attention that their recently recognised importance demands, and this section of the book concludes with an account of the conditions often met with as accompaniments of gonorrhœa, balanitis, phimosis, and paraphimosis, and there is also an excellent account of vulvo-vaginitis frequently met with in children, which Dr. Taylor agrees with most English observers in regarding as usually non-specific.

The section on Chancroids is adequate and the coloured plate accompanying it is excellent. Iodoform in America, as here, is the application chiefly relied on.

The section on Syphilis occupies the second half of the book, and so far as the account of the primary and secondary stages is concerned is excellent. The morbid anatomy and the various modes of infection are considered and a good account of the appearances of the chancre and its variations according to its site are given, the letterpress descriptions being here much superior to the coloured plate. The general symptoms—fever, albuminuria, and cutaneous affections of the secondary stage—are fully and clearly described, as are the secondary affections of the eye and ear. The treatment of syphilis in the primary and secondary stages is considered at great length. We are surprised to find Dr. Taylor emphatic in advising postponement of mercurial treatment after a chancre has been diagnosed until undoubted secondary symptoms occur. Nothing seems to be gained by this delay except, as Dr. Taylor suggests, that the alarm experienced by the patient will make him willing to undergo the prolonged course of treatment necessary. Dr. Taylor is a strong advocate of mercury. Although admitting the efficacy of inunction he seems to find it resented by patients, and administers mercury in the form of the green iodide or tannate in pill for six months, suspending it when there is trouble with the gums or bowels. Soon after this he adds to the mercury iodide of potassium, giving a mixture containing the perchloride of mercury and iodide of potassium throughout the secondary stage.

The consideration of tertiary syphilis and of congenital syphilis is meagre and unsatisfactory as compared with other parts of the subject. In another edition the book would be greatly improved by an amplification of these sections and compression of the chapters on treatment. The writer has given the views of others very fully, often only to discountenance them. The book would be more useful if antiquated methods were expunged and the results of the writer's own extended experience given more prominently. With these slight qualifications we are able to express nothing but admiration for the work.

The descriptions are clear, the illustrations for the most part accurate and helpful, and the fulness and detail with which the subject is treated make the book one of the most useful works of reference that the busy practitioner can keep on his shelves.

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The Diseases of Children's Teeth: their Prevention and Treatment. A Manual for Medical Practitioners and Students. By R. DENISON PEDLEY, M.R.C.S., L.D.S. Eng., F.R.C.S. Edin., Dental Surgeon to the Evelina Hospital for Sick Children, Southwark. With numerous Illustrations. London: J. P. Segg and Co., Regent-street. America: The S. S. White Dental Manufacturing Company, Chestnut-street, Philadelphia, Pennsylvania, U.S.A. Price 7*s.* 6*d.* 1896.

THIS book is written by a dental surgeon who has had an unusual experience in the subject of which he treats and who is already known to the profession by his careful investigations into the condition of the teeth of children in our large pauper schools. It is designed for the use of general practitioners in medicine, who are not infrequently consulted about the teeth of children and are often so situated that they have to supply the place of a dentist. There is, perhaps, a tendency on the part of students to neglect the dental department of their hospital, and this book is well adapted to assist them in the requirements of active practice. The book is divided into eight chapters, which treat of the structure of teeth; eruption; caries; inflammation of the pulp; inflammation of the periodontal membrane, periodontitis, alveolar abscess, necrosis, and other sequelæ; irregularities of the teeth; hygiene of the mouth; and treatment. Whilst not too diffuse there is enough said on the various subjects treated of to enable the practitioner to gain a fair working knowledge of the subject, and the practical suggestions made regarding treatment should enable him to do much more than extract teeth for the relief of pain. The illustrations are numerous and adequate; in the chapter dealing with irregularities of the teeth they are even too numerous and take up too much space. There is a good index. Mr. Pedley may be congratulated on having written a useful book, and one which supplies a want in the profession.

Analytical Records
FROM
THE LANCET LABORATORY.

SCOTCH WHISKY, "BIG BEN" BRAND.
(JAMES S. DENMAN AND CO., 20, PICCADILLY, W.)

AN analysis of this sample gave the following results: alcohol, by weight 40·30 per cent., by volume 47·67 per cent., equal to 83·54 per cent. proof spirit; extractives, 0·16 per cent.; mineral matters, 0·02 per cent.; acidity, calculated as acetic acid, 0·03 per cent. The whisky is stated to be ten years old—a statement which seems to be borne out by the soft and mellow character of the spirit to the taste. The low amount of extractives and the practical absence of acidity are noteworthy points.

"ANTI-MICROBE" SPIRITS.
(LEROY'S ANTI-MICROBE AND WINE AND SPIRIT CO., LIMITED, MANCHESTER; AGENT IN LONDON—A. H. WACHTER, 38, CHEAPSIDE.)

The basis of these preparations, including brandy and whisky, is an elixir which is described as being prepared (we quote it strictly) "from a recipe found among the manuscripts of an old Egyptian *savant*, and with the help of the highest medical and scientific authorities ingredients have been added which make the elixir an infallible remedy and antidote in all miasmatic diseases." The elixir tastes and smells strongly of an oily aromatic product suspiciously like pumilio pine; it contained 1·63 per cent. solid matter and 0·10 per cent. mineral matter. On evaporation of the brandy the liquid as the alcohol was expelled turned milky from separation of oil. The fixed residue amounted to 2·02 per cent. and the mineral matter to *nil*. The brandy gave a strong black colour with perchloride of iron, indicating tannic acid extractives. Its alcoholic strength was 41·29 per cent. by weight, 49·81 per cent. by volume, equal to 87·29 per cent. proof spirit. There are two kinds made, one for hot climates and the other for ordinary use, the latter probably containing less elixir. From the malarial point of view we believe the preparations to be worthless, and it is a pity that the manuscripts referred to in the statement above survived the "Egyptian *savant*," and, still worse, that medical and scientific authorities were found—if that is a fact—to "help" in suggesting "ingredients" which "make the elixir an infallible remedy and antidote in all miasmatic diseases." We should have been inclined to have looked upon the so-called remedy with slightly more favour if the vehicles chosen for its administration had not been whisky and brandy.

HOME-MADE BEEF TEA.
(FREDK. MASON, YORK WORKS, 52, ACRE-LANE, BRIXTON, S.W.)

A really valuable "invalid" preparation of this kind should be contained in glass jars rather than tins, since in the latter case there is always a risk of metallic contamination, especially when, as in this instance, the contents are liquid. We obtained a distinct, though probably not serious, indication of metal in this preparation in confirmation of this view. Otherwise its composition is excellent, analysis showing it to contain the nourishing as well as stimulating constituents of beef in good proportion. The "tea" was in good condition and perfectly sound to the taste. Though according to the microscope it contained no muscular fibre, an albuminous precipitate derived from the decomposition of alkaline albuminate was obtained on boiling with a few drops of acetic acid. Analysis gave the following results: total dry matter, 10·44 per cent.; consisting of matters precipitated by alcohol, 7·06 per cent.; albumin, 0·60 per cent.; crystalline principles (creatin, &c.), 2·10 per cent.; and mineral matter, 0·68 per cent.

(1) ACID GLYCERINE OF PEPSIN; (2) IMPROVED GREGORY'S POWDER; AND (3) AURAL OVOIDS.
(J. G. BULLOCK AND CO., 3, HANOVER-STREET, HANOVER-SQUARE, W.)

Glycerine, as is well known, is an excellent vehicle for administering pepsin since it is a good solvent, and is, moreover, preservative. The preparation before us possesses high digestive power, as proved in our experiments with it on albumin, and it is practically free from the objectionable taste which frequently characterises digestive mixtures with the same basis. The chief merit of the improved Gregory's powder consists in the purity of its ingredients and consequent freedom from inert matters. It may conveniently be taken in "rice" capsules. "Aural ovoids" are intended for the application of certain medicaments in the ear passage. We have examined the following: (1) extract. opii, ½ gr.; (2) extract. opii, ½ gr., cocaine hyd., $\frac{1}{16}$ gr.; and (3) iodoformin 1 oz., extract. opii, ½ gr.; but ovoids containing other substances may be had to order. Their use and value are emphasised in the translation of Professor Grüber's "Diseases of the Ear" by Dr. Law and Dr. Jewell.

JEYES' SANITARY COMPOUNDS COMPANY, LIMITED, have received three further awards for their preparations—viz., Second Leicestershire Trades and Industrial Exhibition, held at Leicester, a gold medal; Yorkshire Brewers and Allied Trades Exhibition, held at Leeds, a gold medal and diploma; and Second Derbyshire Trades and Industrial Exhibition, held at Derby, a gold medal and diploma. The same firm have been again entrusted with the disinfection of Bisley Camp during the meeting of the National Rifle Association.

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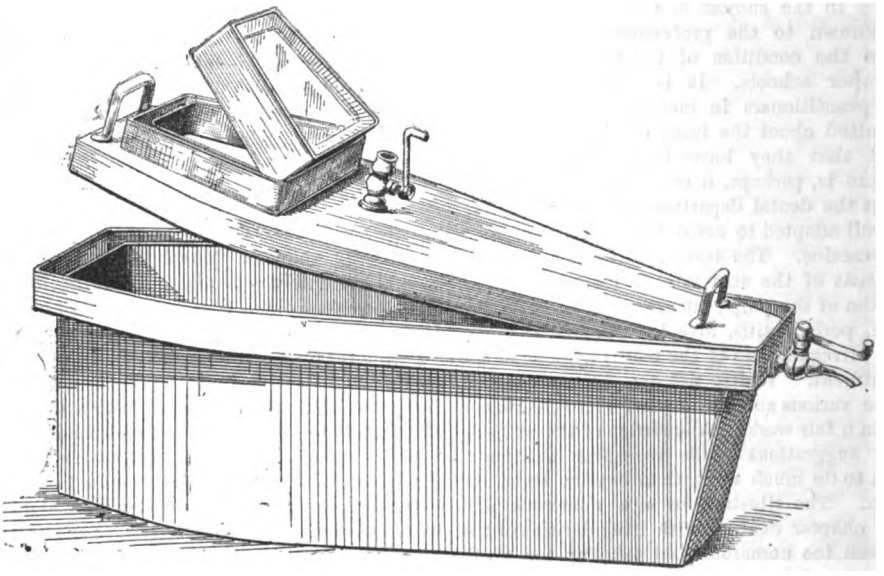
New Inventions.

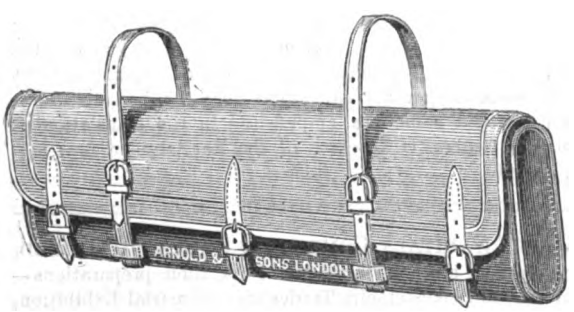
BIRCH'S MORTUARY SHELL.

THE mortuary shell illustrated below is one which may be worthy of the attention of public bodies, hospitals, vestries, shipping authorities, &c. From the illustration, which explains the invention as well as any written words could do, it will be seen that the corpse can be viewed through the glass face-piece without any fear of infection, and by filling a gutter running round the line of junction between the lid and the main receptacle with water the shell can be hermetically sealed. Lastly, a small tap in the centre of the lid, which communicates with the interior of the shell, can have attached to it indiarubber tubing leading out of the window or up the chimney, thereby preventing accumulation of gas. The weight of the shell is about three-quarters of a hundredweight, and the cost (according to size) is as follows: 5 ft. 6 in. long, £6 5s. net; 6 ft. long, £6 10s. net; 6 ft. 6 in. long, £7 net. The shell is manufactured at Myerson's Iron Works, 211 and 213, St. John-street, Clerkenwell, and a specimen may be seen at the St. Marylebone mortuary.



A MIDWIFERY SATCHEL FOR THE SADDLE.

PERHAPS a description of a leather case for midwifery instruments and bottles, which Messrs. Arnold and Sons, London, have made for me, will be of use to some country practitioners who do most of their work on horseback. The case is made of the best cow-hide and is fifteen inches long by eleven inches in circumference; it is oval at the ends and is closed by three straps and attached to the front of the off-side of the saddle by two encircling bands of leather. Its



contents are as follows. One three-ounce bottle for chloroform; two one-ounce bottles for ergot and chloral; hypodermic syringe in case, with tabloids of ergotin and morphia; a pair of frænum scissors; packet of curved needles with stout silk sutures; a vaginal syringe; silk catheter, No. 8; and a pair of Simpson's long forceps. All the instruments and bottles fit in perfectly and can be taken out for use as quickly as from the ordinary obstetric bag. The satchel is not in the way when riding.

GEORGE D. MACKINTOSH, L.R.C.P. Irel.

A NEW OPTOMETER.

WE have received an optometer from Mr. Davidson, of 120, Great Portland-street, London, W., adapted to facilitate the selection of appropriate glasses in cases of myopia, hypermetropia, and astigmatism. It consists of a stand supporting a transverse bar, along which travel two wooden discs about ten inches in diameter. In the rims of these discs are inserted fifteen lenses, viz., −1 D, −2 D, &c., up to −8 D, and + 1 D, + 2 D, &c., up to + 7 D., and more might, perhaps, with advantage have been added. A blackened disc with a stenopæic slit can be placed before each lens. An arm, easily removable, at right angles to the transverse bar, and on the same plane, supports a frame in which a card slips having variously sized type and an astigmatic clock. This arm is perforated and can be attached to a gas pipe so that good illumination is secured. A small rack is attached to the stem containing a few extra glasses such as a 0·25 D, a prism, and several other glasses. The instrument is handy enough, and can be applied in addition to its use as a test for refraction as a means of determining the defect, if any, of convergent power, and by means of appropriate dials and cards of colour-blindness. It will prove useful to the country practitioner, and the cost, four and a half guineas, is moderate.

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THE LANCET.

LONDON: SATURDAY, JUNE 20, 1896.

THERE never was a time in the history of the Royal College of Surgeons of England since 1843 when it was more desirable that the reforming element in the Council should be strengthened. At successive elections in late years Fellows anxious to advance with the times and to satisfy the legitimate aspirations of the Fellows and Members have been elected to the Council by very substantial and sometimes triumphant votes. The result of this has been that opinion on the Council is now very evenly balanced and the addition of one or two reforming Fellows would completely turn the scale. We have lately commented on the peculiar vicissitudes in the prospects of the Members of the College obtaining representation on the Council due to the chance presence or absence of reforming Fellows. At one moment everything seemed favourable for the immediate settlement of the question, and the next, owing to determined opposition at an opportune moment, reform kicked the beam. These vicissitudes do not enhance the dignity of the Council or conduce to the welfare of the College, and as they retard the development of the College as one of the greatest professional institutions in the United Kingdom we should be glad—loyal as THE LANCET has ever been to the cause of reform—to see a decided accession of strength to the more liberal section of the Council. The present time, moreover, is peculiarly favourable for the settlement of all constitutional questions which have arisen both as regards the privileges of the Fellows and the representation of the Members of the College upon the Council. The latter question dominates the situation entirely. If the Fellows of the College when polled should be so ill-advised as to vote largely against the Members' claims, a contingency, however, which we are far from expecting, all changes favourable to the Fellows will have to wait; but should there be a large or substantial majority the other way the Fellows will be able to secure what privileges they please. This is a consequence which the Fellows should not lose sight of at the coming election. The difficulty, however, arises that there will only be one absolute vacancy—namely, that created by the retirement of a gentleman who had decidedly liberal tendencies, and voted for the polling of the Fellows which is now about to take place, whilst those who are standing for re-election are opposed, no doubt conscientiously, to the Members' request for representation, as shown by their recent votes, and yet they have certain claims upon the constituency for re-election which we do not wish to ignore. It certainly seems strange to us, nearing as we are the close of the nineteenth century, during which so much has been done to remove disabilities and popularise institutions, that there should be found in the Council of the College nearly a dozen Fellows who feel keenly that the admission of representatives of the Members of the College, and especially Members themselves, to the Council Board would be a very dangerous and lowering measure. And yet so it is, and we deplore it, and deplore it more especially because among these Fellows are some of the most useful and active Members of the Council—men who occupy leading positions as surgeons, lecturers, teachers, and authors. This is the situation, and we feel it our duty to state it without desiring to influence the votes of the electors one way or the other. No doubt obstacles of this kind will gradually disappear, and disappear very quickly if the Fellows will unmistakably indicate by their votes, in answer to the Council's circular, that they wish the Members to share in the privilege of electing the Council. This would supply a remedy at once, and we appeal to the Fellows at large to end in this special manner a condition of things which really paralyses the energies of the Council, inasmuch as it perpetuates interminable discussions both inside and outside the Council concerning a concession to the Members which will abstract nothing from the power and influence of the Fellows in the Council of the College. With regard to the candidates themselves, the electors cannot complain that their choice of fit and proper persons to represent them is limited or that there is any want of variety in the qualifications of these candidates. On the contrary, in recent years there has been *un embarras des richesses*, and owing to the severe competition and the conflicting claims upon the votes of the electors several candidates who would have made most excellent councillors have not only failed, perhaps on more than one occasion, to command success, but have retired disheartened from the field. This year there are eight candidates for three vacancies created by the retirement in rotation of Mr. CADGE, Mr. BRYANT, and Mr. PICK. Mr. CADGE, having enjoyed two full and consecutive terms of office amounting to sixteen years, has retired from the Council altogether, while Mr. BRYANT (Fellow, 1853), who has served for the same period, and has been re-elected for five years as the representative of the College in the General Medical Council, and Mr. PICK (Fellow, 1866), who is now one of the vice-presidents and has served for eight years only, are standing for re-election. The six other candidates in the order of seniority are Mr. GEORGE POLLOCK (Fellow, 1846), Mr. J. N. C. DAVIES-COLLEY (Fellow, 1870), Sir W. B. DALBY (Fellow, 1870), Mr. R. CLEMENT LUCAS (Fellow, 1871), Mr. EDMUND OWEN (Fellow, 1872), and Mr. W. J. WALSHAM (Fellow, 1875). Of the eight candidates three are connected with St. George's Hospital, three with Guy's Hospital, one with St. Mary's Hospital, and one with St. Bartholomew's Hospital.

It is never a very congenial task to us to make a choice of particular candidates for recommendation to the suffrages of the electors, and the task is not always an easy one because of the reticence of candidates themselves in regard to their views on current questions. Of the eight candidates for the Council we know the views of four or five more or less completely, three being more or less reformers and the other two upholders of the *status quo ante*. The three former are Mr. GEORGE D. POLLOCK, Mr. DAVIES-COLLEY, and Mr. CLEMENT LUCAS. Mr. POLLOCK might of course have been elected to the Council long ago, and no doubt have held the office of President, had he cared to come forward for the Council

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when he was well known to the Fellows generally, but, curiously enough, he could never be persuaded to do so by his numerous friends and admirers. A more high-minded and honourable gentleman and accomplished surgeon does not exist in the profession, and his candidature has been prompted by public spirit at a time when he is fully entitled to enjoy the *otium cum dignitate*. He is sincerely desirous to see the Council of the College acting in perfect harmony with the Fellows and with the Members of the College, and he is fully convinced that it is time that the Members of the College received due recognition of their claims to representation. The great advantage of his accession to the Council would be that the electors could absolutely rely on his conforming in the Council to the views and policy which he has for many years supported as President of the Association of Fellows, which must be greatly indebted to him for his faithfulness to the cause of reform even in periods of discouragement, and which ought to be loyal to him to a man. Of Mr. DAVIES-COLLEY we have spoken favourably on previous occasions, and we believe that he has liberal tendencies, but we are not so fully assured of his zeal as of that of his junior colleague, Mr. CLEMENT LUCAS, who has expressed his intention of advancing the cause of progress and supporting the Members' claims. Of the views of Sir WILLIAM DALBY, Mr. EDMUND OWEN, and Mr. W. J. WALSHAM we really know little or nothing. We know that Mr. OWEN is a popular surgeon, with considerable force of character, and if he be at all imbued with reforming principles we may be sure that he will express them forcibly and act on them energetically. We sincerely trust that Mr. WALSHAM'S reason for coming forward is not because he thinks that St. Bartholomew's Hospital is insufficiently represented in having only five members of its staff on a council numbering twenty-four Fellows. Possibly he may be urged by an irresistible *vis a tergo* and has not fully considered the subject, but we really think that the staff of St. Bartholomew's Hospital should adopt a self-denying ordinance and decide not to put forward another colleague as a candidate for the Council until one at least of the present group on the Council retires. St. Bartholomew's Hospital has supplied so many Fellows to the College that if their full strength is polled they can probably carry their representative into the Council, especially where the candidates are numerous; and St. Bartholomew's Hospital is so strong that it ought to be merciful and spare a seat for some unrepresented school.

This, then, is the position of affairs, and the task imposed upon us will be seen to be one of great difficulty and delicacy. With regard to the re-election of Mr. BRYANT we are opposed on principle to the re-election of a councillor for a third eight years' term of office, especially when he has enjoyed most of the honours and emoluments which the College has to offer, including the Presidency. Moreover, we are not in accord with Mr. BRYANT on the question of the representation of Members of the College on the Council, of which he is, perhaps, the most determined opponent. On the other hand, Mr. BRYANT is a representative surgeon and a regular and active member of Council and the representative of the College on the General Council of Medical Education and Registration, and although it is not necessary for this representative to be on the Council, the late Mr. MARSHALL having held the office after he left the Council, it is certainly more convenient. Mr. PICK has fair prospects of becoming President in due course, and has many excellent qualities as a surgeon and member of Council, but, again, we are not in accordance with his views on College politics. On these topics we could not desire better representatives than either Mr. POLLOCK or Mr. CLEMENT LUCAS, our only regret being that Mr. POLLOCK has deferred his candidature so long, for he is senior even to Mr. BRYANT as a Fellow of the College. We have no doubt that any one of the other candidates would prove a good Councillor, but we are not so certain about their views and we cannot recommend a sixth representative of St. Bartholomew's Hospital. In the foregoing remarks we have endeavoured to place the position of affairs impartially before the Fellows, sincerely trusting that they will arrive at a decision which will be just to individuals and at the same time conducive to the welfare, progress, and development of the College.

THE case of REGINA *v.* PRIESTLEY is one possessing more than transient interest for medical men. PRIESTLEY, a person without any legal qualification as a surgeon or dentist and calling himself a herbalist and dentist, undertook to treat a female domestic servant and to remove certain teeth which he pronounced to be decayed. On April 17th the girl went to PRIESTLEY'S house at Idle and was there examined by him. She asked him if he gave gas and he appeared to have implied that he did, and further, when pressed by the girl's mistress as to whether the gas would do her any harm, he said that it would not. After taking a heavy meal the girl repaired again to PRIESTLEY'S rooms. According to the evidence he then gave her half an ounce of chloroform while she was seated upright in a chair and without loosening her clothing. No third person was in the room at the time of the administration. After a few minutes the unfortunate girl died from the effects of the chloroform. PRIESTLEY was committed by the coroner at the finding of his court for manslaughter and was tried under this charge at the Leeds assizes. In summing up, Mr. Justice WRIGHT said: "The law allows an unqualified person to perform operations and practise his profession, and provided he is not negligent, but uses due care, he is not criminally liable," and as the jury were not able to agree that PRIESTLEY had shown negligence he was acquitted. That such is the law and the interpretation the forensic mind puts upon it cannot be gainsaid, but none the less is it a most deplorable state of affairs. While upon the one hand we have a number of special laws compelling medical practitioners to go through an expensive and arduous curriculum before "qualifying," yet upon the other hand we are told that the law so stands that any unqualified person may "practise his profession," even to the extent of giving a substance which leads to the patient's death, without let or hindrance. To give chloroform in the way in which PRIESTLEY is reported in the evidence to have administered it is to court disaster. It is discouraging to find that after nearly fifty years of its use so little general knowledge

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of the properties of chloroform should exist and that the alphabet of its use should be unknown. If any medical man were to chloroform a patient sitting in a chair and with a stomach full of food he would be justly censured and would be certainly responsible for the results of his action. It then becomes a question as to who should give anæsthetics? Are these bodies such innocuous agents that the "man in the street" may use them with impunity? It was but a short time ago that a provincial surgeon informed our readers that he entrusted his patients' lives to a trained nurse, she administering the anæsthetic while he operated. In other hospitals we are told that the matron or a ward nurse acts as anæsthetist; the dispenser is also called upon to perform a similar office. It is a frequent occurrence in obstetric practice to intrust the chloroform to a nurse or even to one of those females who as *amicæ curiæ* hover about the parturient couch. It is, we learn, a common custom of dentists, whose qualification to practise is registration before July, 1878, or the possession of the L.D.S., to administer chloroform to their patients. There are several aspects of this most hazardous proceeding. When a medical man relegates to an unqualified person the duties which belong to him—and all, we presume, will admit that it is at least desirable that the chloroformist should possess such knowledge as would give the patient the minimum of risk whilst inhaling the anæsthetic—he becomes guilty of the offence of "covering." In the event of a patient dying from the effects of chloroform under these circumstances it is more than probable that an action for damages would be brought against the medical man who abetted the person giving the chloroform. But there is a higher platform and one from which the profession is always apt to view ethico-legal questions—that is the moral duty which we all owe to our patients to protect them from all possible risks and dangers. A glance through the records of fatalities enumerated in our recently published volume[1] reveals that even in the hands of expert and highly accomplished surgeons deaths under anæsthetics are constantly occurring. If such is the case what action can be more culpable than to increase the known peril of any operation, whether in obstetric or general surgery, by committing the chloroform into the hands of a nurse or other ignorant person? In the case of REGINA *v.* PRIESTLEY the defendant was given, by the judge's direction, the benefit of the doubt, but it is more than likely that others will be less fortunate and will learn when too late that a little knowledge is a dangerous thing alike to practitioner and to patient.

THE Army Medical Service has been drifting for some years past into a more and more unsatisfactory state, until it has reached a condition in which it fails to attract a sufficient number of candidates to fill its appointments. Lord ROBERTS the other day, in replying for the Army at the festival dinner in aid of the re-endowment fund of Guy's Hospital at the Imperial Institute, dwelt upon the great importance of securing the best men that could be got as officers for the Army Medical Staff, and he assigned several weighty, if obvious and commonly recognised, reasons in favour of that view. Almost every family in the United Kingdom, no matter in what station of life, is interested in the subject. In civil practice the advice and assistance of the highest authorities and of experts in any branch of the profession can be obtained in cases of unusual difficulty or gravity; but this obviously cannot be the case in army life. The military surgeon must very often rely entirely upon his own skill and judgment without any extraneous aid from men of acknowledged eminence and without, at any rate, the moral support of their opinion and experience. The army surgeon serving abroad is frequently in sole charge of an isolated district and of a large number of individuals quite beyond the reach of further aid, while to confine his labours within the strict field of his professional duties, pure and simple, would, in the opinion of the Government and military authorities, be attended with a waste of energy and an expense that would be prohibitory and impracticable.

It devolves upon a medical officer, then, to discharge other than strictly professional duties, notwithstanding that these are, and must always form, his primary and paramount duty—that for which he has been specially educated and is paid. Those, however, who know anything of army life are aware that these duties, except under special circumstances and conditions that are rather occasional than usual and ordinary, do not engross his sole attention, and that he has numerous other responsibilities and a large amount of work to discharge in connexion with extra-professional labours which the State has committed to his charge. As far as we can understand, the medical officers contend for one of two things—either for a purely professional department organised and paid as civil surgeons and physicians would be; or for a military organisation in which the medical department would be a military service discharging duties of a mixed and not a purely professional character. As they already hold the latter, then a position in the army worthy in every respect of its responsibilities and claims should be theirs. It must be "up to date" also, in the phraseology of the day, by which we mean that the position which the profession occupies scientifically and socially at the present time must be recognised, and this is not what it was fifty years ago. Medical officers contend that it was by no action of theirs that the relative rank which contented them in the past was abrogated, that it is not their doing that military rank and titles have been scattered broadcast among branches of the service that not so very long ago did not possess them, and that the possession of these alone should be held in respect or find favour in military eyes. We are strongly of opinion that the whole question, together with all other grievances—real and alleged, should be once for all carefully and impartially considered, and that the medical service should be justly and generously dealt with in a way calculated to satisfy all reasonable men in and out of the medical service.

If anyone will turn to the pages of THE LANCET during the past quarter of a century it will be found that we initiated, we may say, and have always advocated, the idea of the formation of an Army Medical Service under some such designation as a Royal Corps of Surgeons or Royal Medical Staff Corps, and that its officers should have power and

[1] THE LANCET and the Hyderabad Commissions on Chloroform.

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command, but only, of course, within the limits of their functions. We are extremely sorry that this line was not followed years ago, as it would, we believe, have prevented all that has subsequently taken place. It is quite clear that the rank and position of every medical officer must be an assured and fully recognised one in the service, even apart altogether from the question of titles. There are, moreover, several very real grievances of which medical officers complain. Their life is one of comparative expatriation owing to the shortness of their service at home; and the frequent changes of station and duty to which they are subjected surely cannot be for the good of the service generally or of the patients committed to their charge. The rates of pay in India require to be readjusted; a medical officer should be paid wherever he is serving according to his rank. It would be a very good plan, in our opinion, to institute for the medical service something like that which the Staff College is for the general service, so that an incentive and impetus might be given to the more scientific and highly trained medical officers to make manifest their qualifications and attainments, and for this purpose, too, there should be greater opportunities afforded to them than exist at present for the *bonâ-fide* study of their profession. A service, again, organised on the dead level system of strict seniority does not, we confess, commend itself to us. Seniority is an important factor in weighing the claims of a medical officer for selection for the higher appointments, but seniority should not be the sole and dominating factor in such cases. There may be, and no doubt are, other points that could have been advantageously touched upon, but we trust that something has been done here to formulate the requirements of the service, and we can only hope that the War Office will give the whole subject full, fair, and impartial consideration.

Annotations.

"Ne quid nimis."

THE CAUSES OF DEATH IN COLLIERY EXPLOSIONS.

AN exceedingly important and interesting contribution to this subject has recently been published by Dr. Haldane in a Blue-book prepared for the Secretary of State for the Home Department. The report is based in the main upon the terrible explosions that happened in the Tylorstown, Brancepeth, and Micklefield explosions. We could wish we were able to publish this report *in extenso*, but its length precludes this course in spite of the excessive importance of the subject. Without entering into the specific details of each explosion, we may be content with simply recording the general results. Dr. Haldane divides the bodies of the unfortunate victims into two classes: first, those of men who had been killed by after-damp; and, secondly, those killed instantaneously by violence. It is the former class—which comprises 91 per cent. of the whole in the explosions referred to—with which we are more concerned in connexion with the consideration of affording some means of preventing this loss of life. There is little doubt that the cause of death by inhaling after-damp is due to carbon monoxide. This is clear from the investigation in some cases of the blood of the victims and from the characteristic, almost life-like, appearance of the corpses. The blood taken from both men and horses was shown by means of the well-known spectroscopic appearance afforded by carboxy-hæmoglobin to be highly charged with carbon monoxide. These facts make it evident that in most fire-damp explosions there must be in parts of the field of explosion not sufficient oxygen for complete combustion, and instead of carbon dioxide and aqueous vapour a variable mixture of carbon dioxide, carbon monoxide, watery vapour, and probably hydrogen will be formed, and these, when mixed with about 80 per cent. of nitrogen and any undecomposed fire-damp will constitute the after-damp. There are reasons for believing, however, that this proportion is by no means high, and it is probable on theoretical grounds that in an explosion with an excess of fire-damp and without dust not more than about 3 or 4 per cent. of carbon monoxide will be formed in any part of the track of the explosion. The evidence is clear, however, that whatever poisonous gases exist the gas present in the most poisonous proportions is carbon monoxide, and this gas undoubtedly occurs in the after-damp of all great colliery explosions. *A priori*, in these explosions there must have been an insufficiency of oxygen for complete combustion. Everything indicates in fact that the exceeding danger of after-damp is referable to the constant presence of carbon monoxide. Apart from the results of the experiments made with the blood, the pinkness of the lips and the general life-like appearance of the bodies recovered after explosions point to the same poison. From experiments tried upon himself, Dr. Haldane calculated that about six hours are required for the carbon monoxide to disappear entirely from the blood in severe cases of poisoning. Although this is so, the distressing after-effects continue, which may end fatally. In regard to treatment, Dr. Haldane considers the administration of oxygen would be of service in rapidly clearing the blood of carbon monoxide, but the first effect of cool fresh air would appear to be dangerous. This is suggested as being due to the cold diminishing the blood-supply to the brain or to the temperature of the body being reduced owing to impairment of the heat-producing or heat-regulating functions. At any rate the application of hot water bottles and blankets appear to be of great service. In regard to preventive measures, in addition to increased facilities for ventilating the mines in times of emergency, Dr. Haldane suggests that the work of rescue would be much more safe if a few simple precautions were observed. Thus the presence of a dangerous proportion of carbon monoxide may be detected easily and sufficiently quickly by observing the symptoms exhibited by a mouse. A few white mice might easily be kept for this purpose in the engine-room at the top of the down cast-shaft and be taken down in small cages by the rescuers. With the help of the indications afforded by the mice it would be possible for the rescuers to keep within the limits of safety and yet go forward with rapidity and confidence as far as they could. He also lays down some sensible directions as to the position the men should take after the occurrence of the explosion, and some reasonable measures which should be observed by the rescuing party. He suggests also that cylinders of compressed oxygen should be at all times available in the mine. As will be seen from this brief digest, the report is an admirable piece of work dealing exhaustively with the scientific aspects of colliery explosions, their probable nature, and the effects they produce. The community at large will welcome such an earnest and solid endeavour to minimise the sorrow occurring from one of the most distressing calamities that can happen in this country.

LORD KELVIN.

THE congratulations which fell so thickly and so unstintedly upon Lord Kelvin on the occasion of the commemoration of the jubilee of his professorship of natural

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philosophy in Glasgow University represent something more, we are sure, than mere felicitation on so long a tenure of so distinguished an office. It was a fitting opportunity of recognising his brilliant achievements in scientific work and the splendid results of the application of his discoveries towards advancing so much of the progress in the public weal which has been so marked a characteristic of the closing century. As is well known, Lord Kelvin's keen perceptive faculty has been chiefly directed to the study of the laws governing that still mystical force—electricity. Yet with characteristic modesty he admitted the other day that he knew no more of electric and magnetic force, or of the relation between ether, electricity, and ponderable matter, or of chemical affinity, than he knew and tried to teach his students of natural philosophy fifty years ago in his first session as professor. He forgot to add, perhaps, in the exceeding good taste which he has always evinced, the enormous impetus, as the outcome of his work, which he has given to what we may call telegraphic science or the science of the transmission of words from distant lands and across the sea in a space of time so lightning-like as to excite our deepest wonder and admiration. His scientific triumphs in this direction were appropriately enough demonstrated in a very happy way on the occasion of the meeting at Glasgow to which we have referred. Thus a congratulatory message was sent from the jubilee committee by way of Newfoundland, Chicago, San Francisco, Los Angelos, New Orleans, Jacksonville, Florida, Washington, New York, Newfoundland, and thence to Glasgow University, a distance of some 20,000 miles, in about seven minutes. There was used for the first time a cable recorder on a cable and land wire of immense length. The marvellously quick time of transmission demonstrated the successful working of Lord Kelvin's syphon recorder. Despite his confession also as to his insight in regard to the vagaries of magnetic force he has so far mastered them as to have ultimately placed a marvellously accurate and delicate instrument at the service of the navigator, and we venture to say that there is hardly a ship afloat which does not carry a Sir William Thomson's compass, the boon conferred by the introduction of which will be admitted by all those who "go down to the sea in ships." Then there are the manifold instruments of exact measurement used in physical science which are less prominent as directly of public service, but none the less are they of equal importance, and a reference to text-books on physics will reveal how intimately associated with Lord Kelvin's name is almost every section of electrical and magnetic science. The medical profession upon whose labours Lord Kelvin's discoveries are not without an important bearing will join, we feel sure, in adding congratulations to those already awarded him and to which he is so richly entitled.

"A BENEFICENT MEDICAL DISCOVERY."

UNDER this somewhat high-faluting title a contemporary makes a good deal of copy anent the use of oxygen with chloroform. An interviewer waited upon Mr. T. G. H. Nicholson, M.R.C.S. Eng., anæsthetist to the Hahnemann Hospital, Liverpool, and naturally found that gentleman "shy." Unfortunately he appears to have overcome his shyness and to have dropped that laudable reticence which, we are told, cloaked his speech when first approached. Had he at once stated to the representative of the *Liverpool Courier* that he possessed no right to be regarded as a discoverer he might have avoided both undesirable notoriety and newspaper puffing which should be a source of extreme annoyance to any member of the medical profession. We are told that this gentleman patented an apparatus for administering oxygen gas with chloroform in 1893, but the idea had been "simmering" in his head since 1891. We do not suppose for one moment that any wilful misrepresentation of facts has been intended, but it is of interest to trace the "simmering" of the same idea in other minds throughout the past twenty years or so. The "discovery" is the well-known method of Neudörfer, which he introduced into practice in Vienna about twenty years ago. Even as early as 1860 Lallemand, Perrin, and Duroy investigated the supposed antidotal value of oxygen in chloroform toxæmia, and came to the conclusion that its merits in that respect were slight. Snow in 1849 was also familiar with it and recorded a case in which forced respiration of oxygen was practised in what proved to be fatal syncope. Neudörfer, however, suggested that by actually combining oxygen gas with chloroform vapour it might be possible to lessen the risk of asphyxia. Whether this was done by maintaining the vitality of the tissues or by simply producing a due dilution of the chloroform does not appear certain. At all events, Idelson, Bertels, Kreutzmann, and others have followed Neudörfer's method and have regarded it with favour. Mr. George Foy described a simple apparatus for giving oxygen, and this can be combined with a chloroform apparatus, affording a ready means of combining the use of oxygen and chloroform. Kreutzmann[1] also devised an apparatus of less complexity than that which Neudörfer employed. The mixture has further been successfully tried in America, but experience has taught that while oxygen is of value in asphyxial conditions it really possesses no merit as a physiological antagonist to chloroform. The plan referred to is neither new nor yet so old as to be safely re-introduced as a novelty, save in the pages of a lay journal whose zeal for "copy" outruns its discretion. Many letters of somewhat fulsome adulation of this "discovery" have appeared, but as yet we have not seen any disclaimer from Mr. Nicholson of this bantling or any attempt to render to Neudörfer whatever credit may be due for his discovery.

TOXICOLOGICAL EFFECTS OF CREOLIN.

CREOLIN compounds are now so extensively used as disinfectant washes, more especially as they are believed to be non-poisonous, that the results of an investigation by Professor Hobday of the Royal Veterinary College calculated to disturb this notion will be read with interest and instruction; at any rate, they should place the public on their guard in respect to the application of these compounds to the body. The investigation was set on foot by observing the fatal effect of applying solutions of creolin to a couple of valuable ferrets affected with lice and mange. The amount of creolin used was estimated at about two ounces to a quart of water, in spite of which dilution both animals were dead within half an hour of the application. Again, in the case of a valuable bull terrier severely affected with follicular mange "the result was most alarming and all attempts to save the animal failed," the application having consisted in rubbing the affected parts with a solution containing four ounces of creolin and four ounces of water. To set at rest the question whether this alarming result was due to any peculiar idiosyncrasy of the animal a fox terrier was treated in the same way, but the result was equally unfortunate. Several animals (dogs and cats) were then submitted to experiment with more or less toxic effects, and in the majority of instances those effects were followed by death. This important report concludes with the following observations: that creolin is a narcotic and irritant poison to the dog and cat, and that its use in these animals must be watched with the greatest care; that it is especially toxic when spread in emulsions of a certain strength over a large area of the body; that

[1] Centralblatt für Chirurgie, No. 35, 1887.

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its effect is more rapidly seen and more violent when mixed with water than when applied pure or when mixed up into the form of an ointment; that when mixed in certain proportions and applied externally it will act as a violent irritant; that the less refined preparation of creolin is not so toxic in action as pure creolin; and that it is not so readily absorbed from the stomach, from small wounds, or from the subcutaneous tissues as from a large area of skin surface. The results are certainly very striking and would appear to show that creolin cannot be regarded as an absolutely safe external application. Its claimed advantage, therefore, over carbolic acid of being non-poisonous cannot fully obtain. Professor Hobday does not enter into the exact composition of the preparations he used. It may be fairly assumed, however, that they consisted of a strongly alkaline and resinous solution of cresylic acid. Did the alkali play any part in the symptoms observed, and was carbolic acid present in appreciable quantity? The observations, at any rate, are valuable and are based upon trials made with preparations to be found on the market which are generally stated to be innocuous. It is reasonable from the foregoing to enjoin care in the use of these preparations for external application to the human being and other animals.

THE POSITION AND REMUNERATION OF MEDICAL MEN.

OUR correspondent "M.D." discusses many subjects any one of which would require a leading article for its proper treatment; the amendments of the Medical Act; the exposure of qualified men to the competition of charlatans; the overcrowding of the profession, caused partly by the competition of the schools and of the examining boards; the absence of instruction in the business aspects of the profession; the alleged want of consideration of medical teachers for the ultimate fate of students; and the want of provision in our medical societies for discussion of matters of professional reform and political combination, are all touched on in his suggestive communication. We shall not attempt to treat these subjects in one short article. The state of the profession might well occupy our leading corporations and societies a little more than it does. There is certainly one reform that might be further pressed without hardship to any and with infinite advantage to the public—we mean the exaction from *entrants* to the profession of proof of a more complete preliminary education than is now required. This would check the rush into the profession at a merciful point, and before men who were never meant for such a pursuit had committed themselves to it. As to the necessity for amendment of the Medical Acts there is a general agreement. When proposals for the same take definite form medical men of each town and locality should hold meetings for their consideration. It is difficult to interest Parliament in Medical Acts. It is certainly not wise to be often disturbing the Acts or the bodies which administer them; but when the rare occasion arises for doing so the well-considered views of medical men would not be likely to be disregarded.

CANON WILBERFORCE UPON HOSPITALS.

WE have before now had occasion to take Canon Wilberforce severely to task for various statements which he made about hospitals, and therefore we have all the more pleasure in noting the moving and yet eminently sensible and sound discourse which he gave at Westminster Abbey upon Hospital Sunday. We do not suppose for an instant that Canon Wilberforce has changed his views upon the question of vivisection. We believe him to be perfectly sincere in those views, although mistaken, but we congratulate him upon being able to look at the question of hospital relief apart from the minor, or, if he prefers it, collateral question of experiments upon animals. That everyone cannot do this is apparent from the circular to which the preacher alluded, evidently the same document to which we referred in our columns of May 30th. Canon Wilberforce's remarks upon this subject were admirable, and it is a great pleasure for us to be able to say so.

THE PHILADELPHIA POLYCLINIC.

THE Philadelphia Polyclinic holds a special position among the hospitals of the Pennsylvanian city, being devoted entirely to post-graduate teaching. It is situated almost equidistant from the University of Pennsylvania, the Jefferson Medical College, and the Medico-Chirurgical College, and was opened early in 1883, its dispensary services treat about 15,000 new patients annually, and its course of study is based essentially on direct personal instruction by the teaching staff, which at present includes upwards of thirty-five professors and lecturers. There is an ample supply of clinical material. The new laboratory building is one of the finest in the country and is completely equipped with all modern appliances. Arrangements are being made to provide an exceptionally powerful "x" rays apparatus superior to the efficient instrument which is at present available for purposes of diagnosis, and Edison's fluoroscope will be used for direct visual observation of internal parts. The fees for the entire work and instruction in all the clinical departments are $90 for six weeks, and $150 for three months; pathology, bacteriology, operative surgery on the dead body, the putting up of fractures, dressings, and bandaging, &c., are extra subjects. The institution publishes a small journal which is likewise called the *Philadelphia Polyclinic*.

THE ABUSE OF TOBACCO.

SOCIETIES for the suppression of human frailty, though very numerous, are not as a rule remarkable for moderation; but, judging by their utterances, this reproach cannot with justice be levelled against the chief officials of a certain Parisian society whose object it is to prevent the abuse of tobacco. At a meeting held last April for the purpose of distributing prizes and rewards Dr. Gruby, the president of this association, commenced his inaugural address in the following reassuring terms. "The society against the abuse of tobacco proscribes the inordinate employment of that substance, but by no means condemns a moderate and judicious use. The very best things in the world are capable of producing injurious effects when taken to excess." Continuing his discourse, Dr. Gruby, as in duty bound, next proceeded to enumerate the various maladies and disorders which are supposed to attend upon indulgence in tobacco, but the list did not contain anything that was either striking or new. The general secretary, Dr. Gélineau, then read his report on the working of the society, winding up with the information that the executive intended to submit a petition to the Chamber of Deputies praying that "all telegraph messengers and schoolboys should be prevented from smoking, and also that tobacconists should be forbidden to sell their wares to mere infants whose lips should know no other pleasure than the cheeks of their mothers." Finally—after a disquisition from Dr. Edgard Bérillon on the treatment of *tabacomia* by hypnotic suggestion, and a lecture by M. Decroix on the dangerous progress of opium-eating in France—a lengthy roll of prize-winners was announced. First in order were several teachers, of whom one had founded a league against the abuse of tobacco amongst his pupils, while another had invented a copybook with headlines proclaiming the noxious effects of the direful weed. After the pedagogues came a sparse troop of omnibus conductors, whose claim to recompense lay in having interdicted smoking on the platforms of their vehicles; but the *lauréats* next on the list, although somewhat invidiously styled

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"provincial" journalists by the metropolitan reporter, must surely be as rare in their profession as black swans were supposed to be when Juvenal penned his satires. Last of all—on the principle, we presume, that *finis coronat opus*—came the author of a formidable counterblast in the shape of a series of anti-nicotian sonnets; but there is apparently a limit to enthusiasm, even among zealots, and the verses were taken as read. The programme was now exhausted, but before the audience dispersed the secretary felt constrained to remonstrate with them on their excessive zeal. Most of the members, he said, were more royalist than the king. It was a fatal mistake to try to do too much. Tobacco has enough sins of its own to answer for without being made a scapegoat for half the ills that flesh is heir to. Moderation must be the watchword of the society if the evils which unquestionably do accompany the misuse of tobacco, especially in the case of immature boys, are to be remedied. It is to be hoped that these words of wisdom have been taken to heart by the hearers, and that no captious critic will accuse the society's officers of endeavouring at one and the same time to run with the fox and hunt with the hounds. It must be confessed that between the words and the deeds of these gentlemen there is a certain amount of incongruity; but then this world is full of contradictions.

THE PLAIN TRUTH AT INQUESTS.

TACT in the use of words is a faculty to be exercised by all sensible persons as long as this is consistent with a true and clear understanding. To medical men its employment is a daily necessity. Perhaps no class of men are more often called upon thus to clothe hard facts with a truly fitting dress of language. It is therefore the more important that they should not mistake the spurious for the real quality. Men are apt to fall into this error with the best intentions. We may be allowed to quote from recent experience of a coroner's court. On the occasion in question a medical witness, who had verified by post-mortem examination certain lesions due to alcoholism, very briefly described the death as due to "natural causes," his desire being if possible to avert the scandal of drunkenness. His was but a trifling error of judgment and it derives what little importance it possesses from its rather ungracious treatment by the presiding coroner. Had his evidence been stated with equal moderation but more precision it would still have been unexceptionable on the ground of good feeling and it would better have served its intended purpose, which was the enlightenment of the coroner and his jury. It is sometimes compatible with good sense and true kindness to speak plainly. This was a case in point.

ANNUAL PAUPER RETURNS.

THE Local Government Board have issued their annual return of paupers, including lunatics and vagrants, relieved on the first day of the present year, with comparative data for previous years. From this return it appears that, including 169 persons relieved both as in-door and out-door patients, the gross total of persons obtaining relief on Jan. 1st last was 840,625. On the estimated population of the Registrar-General this gives a rate of 2·8 per cent. of the population, or 1 person relieved in each 36 of the entire country. Of this total, 229,721 were in-door and 610,904 out-door paupers. The vagrant class accounted for only 13,239, including 7859 who were relieved in two unions on this same day. Only 390 of the vagrants were out-door relief cases. The in-door paupers include all those in Poor-law establishments such as district schools and the like. The able-bodied adult paupers relieved included 36,999 males and 75,380 females, and 168,669 children under sixteen years of age, the offspring of able-bodied paupers, were also relieved. The insane numbered 37,076 males, 46,379 females, and 1750 children under sixteen years of age. The ratio of paupers relieved to population was in England and Wales 27·7 per 1000; in London it was 28·2, in the eastern counties 37·1, and in the south-western counties 40·4. In-door paupers were at the rate of 7·6 per 1000 in the whole country, in Wales only 4·1, in Yorkshire only 4·5, but in London 15·8. As compared with the first day of 1895 the only groups of counties showing a decline this year were Yorkshire and the northern counties group. London showed an increase of 1·3 per cent., the north-western group of 3·0, the south-eastern and south midland of 3·1 and 3·5 respectively, and the north midland of 4·7 per cent. Throughout the country the increase was 1·6 per cent. Compared with earlier years the proportion of paupers to population was larger than on the same day of the five immediately preceding years, but smaller than in any of the years 1858–90 inclusive. In 1877, when the number of paupers was the smallest on record, the total was 12·8 per cent. fewer than in the present year. The able-bodied paupers were this year larger in their total number than in fourteen out of the twenty preceding years, but smaller than in the other eighteen years 1858–75. The data are given in detail for each of the Poor-law unions of England and Wales.

MEDICAL LONGEVITY.

DR. SALZMANN of Esslingen—who apparently is largely endowed by nature with a predilection for investigating the contents of ancient records, and who, more fortunate than the majority of his compeers, likewise enjoys exceptional facilities for indulging in his hobby—has recently devoted his attention to determining the average duration of life among members of the medical profession. After an exhaustive examination of all accessible archives referring to the last four centuries the following are the results arrived at by the zealous antiquarian. The average duration of a medical man's life during the sixteenth century was thirty-six years, five months; in the seventeenth century it was forty-five years, eight months; in the eighteenth century forty-nine years, eight months; and in the nineteenth century fifty-six years, seven months. It would appear from these data that—whether the survival be of the fittest or not—the duration of medical life has been increasing in a marvellous manner. Should the same rate be maintained practitioners of medicine may ere long all look forward to centennial honours—by no means a rosy prospect from the point of view of the neophyte who, as it is, finds it sufficiently hard to make good his footing within the densely crowded ranks. According to Dr. Salzmann the addition of over twenty years to the average medical lifetime is due to the advance of medical science, preventive and curative; so the ironical apophthegm, "Physician, heal thyself," can no longer be launched with any effect. In a speech delivered some time ago the present leader of the House of Commons alluded to the possibility of normal human life becoming extended "to the patriarchal term of 120 years." A fearful prospect truly in these days of rapid living when some men (having exhausted life's possibilities) look upon themselves as Struldbrugs at forty.

LIVERPOOL LADIES' CHARITY AND LYING-IN HOSPITAL.

A SPECIAL general meeting of the subscribers to the Ladies' Charity and Lying-in Hospital, Brownlow-hill, has been called for Tuesday next (23rd inst.), to consider the position. Mr. James Lister, the hon. secretary, states in a letter accompanying the notice that owing to the action of the medical profession the board of management had been unable to obtain the services of a medical staff. It is now

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suggested that the general control in medical matters of all the cases should be placed under the hospital medical officers. The board of management is understood now to think it desirable that the rules should be altered in such a way as to admit of representation upon it of the medical staff. We heartily agree with the new views of the board of management.

THE CASE OF MR. R. B. ANDERSON.

MR. TIMOTHY HOLMES has given notice that at the forthcoming meeting of the Fellows of the Royal College of Surgeons of England to be held on July 2nd, he will move: "That the Council be requested to instruct its representative on the General Medical Council to forward in every way which seems feasible the objects of the Civil Rights Defence Committee in the case of Mr. R. B. Anderson." We invite every Fellow to support this motion. Mr. Anderson's wrongs are well known and we need not go into them now, but somehow or other his wrongs must be redressed.

COMMERCE AND PHILANTHROPY.

MR. WILLIAM COOPER of Stafford is doubtless a sound man of business. Doubtless, too, like Abou Ben Adhem, he desires to be written as one who loves his fellow men, but he has committed what we will mildly stigmatise as an error in taste. He has a business to sell, apparently a hotel with brine baths attached, and "as the success of this company will be largely dependent upon the support given to it by the medical profession" he makes the following offer—bribe we consider the proper word—to the medical profession:—

> The vendor undertakes, immediately after completion of the purchase of the premises and the receipt by him of the first instalment of the purchase money (which is fixed for the first day of September next), to pay to each subscriber to this issue who is also a duly qualified medical man, an underwriting commission at the rate of 10 per cent. in respect of shares, and 5 per cent. on debentures subscribed for and allotted to him, provided the contract to take such shares or debentures accompanying this prospectus is duly returned before June 20th instant.

There can be no doubt as to Mr. William Cooper's line of argument. It is a bribe to medical men to send patients to the Stafford Brine Baths Hotel and so increase the business done there, and Mr. William Cooper evidently thinks that if medical men have a pecuniary interest in the concern they will be the more likely to send patients to it. Besides baths, however, the medical man who comes to this lure will have an interest in a variety of commercial pursuits, as follows:

> To carry on the business of hotel, restaurant, café, tavern, beerhouse, refreshment room and lodging-house keepers, licensed victuallers, wine, beer, and spirit merchants, brewers, malsters, distillers, importers and manufacturers of aërated, mineral and artificial waters and other drinks, purveyors, caterers for public amusements generally, coach, cab, and carriage proprietors, livery stable keepers, jobmasters, dairymen, ice merchants, importers and brokers of food, live and dead stock, and foreign and colonial produce of all descriptions, hair-dressers, perfumers, chemists, proprietors of clubs, baths, dressing-rooms, laundries, reading, writing, and newspaper rooms, libraries, grounds and places of amusement, recreation, sport, entertainment, and instruction of all kinds, tobacco and cigar merchants, agents for railways and shipping companies and carriers, theatrical and opera box-office proprietors, entrepreneurs and general agents, and any other business which can be conveniently carried on in connection therewith.

All these businesses are perfectly legitimate and honourable, neither is there any reason why a man should not invest his money in any or all of them; but he should do so as a private individual and not as a member of a profession, which, equally with its sister faculties, ought to be above suspicion, even more than the London County Council.

GUARDIANS AS SANITARY AUTHORITIES.

THE return to sanity in guardians on the vaccination question is slow. In fact, it may be said that they have been tried as administrators of the Vaccination Acts and found wanting. The medical officer of health of Islington points out to the vestry that the proportion of unvaccinated children to those born has increased in that huge parish from 8·0 per cent. in 1885 to 18·0 per cent. in 1895. Mr. Harris was directed by the Public Health Committee in 1894 to represent to the guardians this grave state of matters, but nothing remedial has been done. In neighbouring parishes matters are as bad or worse. In Hackney, indeed, it is nothing short of a public scandal, the last available return showing that 41 per cent. of infants born remain unvaccinated. No wonder that the Vestry of St. Pancras has decided to convene a conference of delegates from vestries and district boards to consider the advisability of transferring the administration of the Vaccination Acts from boards of guardians to the sanitary authorities and that the sanitary committee of Islington has advised the vestry to appoint a deputation to attend the conference. On going to press we hear there is a localised group of cases of small-pox in Islington, which is likely to increase the earnestness of the vestry in this matter.

HEAT AFFECTIONS.

THE exceptional heat that has prevailed during the last few days has naturally been the subject of common remark. With each recurrence of hot weather we get, of course, its usual concomitants in the shape of discomfort, sleepless nights, more or less nervous depression, and affections attributable to heat fevers, heat exhaustion, and occasionally sunstroke, to say nothing of the distress to infants and children and their liability to attacks of indigestion and diarrhœa or nervous exhaustion. We do not think there is anything that can be said at the present time that has not been often said before. For those who live in the country surrounded by fresh air, who can dress in the lightest and coolest attire, and take their exercise when and how they like, hot weather is so enjoyable that a good many people revel in it. But it is a very different thing for those who are compelled to live in cities, to travel by underground railways, and to submit to the dust, closeness, and noise of London streets, and a succession of bands and organ-grinders, the practising of "scales" by inexperienced pianists, violinists, and vocalists, the yells of newsboys and race-card sellers, varied occasionally by the possible howling-whine of some pet dog that has been inadvertently left outside a house at night. Medical men cannot do much to relieve these sources of distress and discomfort; but a good deal may be done by the exercise of a little physiological intelligence and common sense to avert some of the other and graver effects of heat. Toleration of heat depends much on the vigour of the constitution, the state of the health, and the mode of living, especially in freedom from excess in alcohol and food, in being suitably appareled, and in getting all the air and ventilation that are available. We need not dwell upon the different forms of sunstroke and heat affections; they are pretty well known. Among the gravest of them is the exhaustion caused by heat which is followed by syncope, a condition allied to shock from the effect of a powerful sun on the nerve centres, especially the respiratory centre, and that form attended with the over-heating of the blood and all the tissues of the body. Men on parade or when marching, if oppressed with accoutrements and clothing, or when occupying heated and badly ventilated barracks in tropical or subtropical climates, are very apt to suffer. A dry heat, it is well known, is better tolerated than a moist one, and we have evidence of this in the experience of our soldiers in the present Soudan campaign. The treatment obviously cannot be the same in all cases, but where a high body temperature is a characteristic feature of the attack cold is the remedy—cold water, ice, and exposure to currents of air. The great heat of Saturday last resulted in three cases of sunstroke, one of which ended fatally, in the Royal Irish Rifles on their march from Lydd camp to Brighton. We can all of us, at any rate during exceptionally hot weather, try to keep quiet and abstain from "worritting" ourselves and other people, and

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clothe and eat lightly. For children who feel the heat there is, of course, nothing like removal from towns and cities to seaside and country places.

ST. MARY'S HOSPITAL: CLARENCE MEMORIAL FUND.

THE festival dinner of St. Mary's Hospital was held in the Whitehall Rooms of the Hôtel Métropole on Wednesday last, Sir Wm. Broadbent presiding, and resulted in the addition of nearly £4700 to the Clarence Memorial Fund. This sum represents only one third of the amount which is required to complete the new buildings, and owing to the inadequacy and unsuitability of the present out-patient department it is most desirable that the work should be carried out immediately. In addition to a new out-patient department the Clarence wing will comprise a nurses' home, lying-in wards, various special wards, and a medical college. These are all urgently needed in a hospital whose original accommodation for some 70 or 80 in-patients has been stretched to a limit of 281. If the hospital is to adequately fulfil its function of ministering to the sick poor in a vastly crowded portion of the metropolis there must be no delay in building the first portion of the Clarence wing. We earnestly hope, therefore, great as have been the demands upon the benevolent lately, that they will allow a portion of their charity to flow towards a most deserving institution. With the exception of the £4700 consequent on the festival dinner the whole of the funds have been absorbed in the building of the basement.

A PROTEST AGAINST THE USE OF ALKALI IN COCOA.

FROM practical experience gained in THE LANCET Laboratory during the past year it is evident that the practice of treating cocoa with alkali is largely on the increase. It is done ostensibly, we believe, to render the cocoa more "soluble"; in reality the cocoa fat is in part by this treatment saponified, so that the infusion made with it presents the appearance, and conveys to the palate the impression, of a richer and more full-bodied beverage. In addition the powder is considerably deepened in colour, which is probably and wrongly judged by an ignorant public to indicate richness of quality. If it were necessary to treat cocoa in this way in order to make it palatable and digestible we should have nothing to say; but it is not so, and that being the case it constitutes a mild but distinct form of fraud. We go further and enter a protest against this treatment of cocoa with alkali because we are confident that in many cases it may be productive of harm. It must be remembered that invalids and those suffering with certain forms of weak digestion are in a great number of cases prohibited the use of tea and coffee, and cocoa is invariably recommended as a substitute. Moreover it is well known that the long-continued use of alkalies leads to digestive disorder and consequently impaired nutrition. Yet we have examined cocoas containing from 1 up to as much as 3 per cent. of alkali calculated as potash. Cocoa the indigestible fat of which has been properly reduced to 30 per cent. by pressure in hot bags contains at the most only ½ per cent. of alkali. We have examined such cocoas which leave nothing to be desired as regards quality and flavour, while further tests have also shown the absence of an excess of nitrogen in the form of ammonia. This is why we believe that the treatment referred to is wholly unnecessary. We call attention to this fact because we believe that many medical men are not aware of it, and in certain cases under their care it might well happen that the exhibition of alkaline fluids as such cocoas would yield is very distinctly contra-indicated. It is absurd for manufacturers to argue that it is done to please the public taste. The same thing was urged long ago in regard to white bread; but the public have since been undeceived, and an enormous demand has arisen of late years for an unbleached, a healthy-looking, and an unimpoverished loaf. We hope the public will assert their good sense in a similar way in regard to cocoa.

QUALIFIED *v.* UNQUALIFIED.

THE public will, we suppose, to the end of time continue to exemplify the Horatian maxim about wishing to be deceived, and a most instructive case is reported from Grimsby. Alfred Barnes claimed £50 damages from two bone-setters named Bromfield, carrying on business in Grimsby, for unskilful treatment. On Jan. 20th he knocked his shoulder. On Feb. 1st he consulted Mr. Alexandre, a duly qualified medical man, who found nothing wrong with the joint, but did find an enlarged axillary gland, and recommended rest and poultices. On Feb. 7th Mr. Barnes consulted the Bromfields. Bromfield, sen., according to Bromfield, jun., said "the fat muscles were wrong," and pulling his knee in the axilla wrenched the joint. He, Bromfield, jun., put his hand on the patient's shoulder and felt the muscles "go." Eventually a large abscess formed and Mr. Barnes returned to Mr. Alexandre, who treated him for this. Mr. Barnes contended, and so did Mr. Alexandre and two other medical men, that the Bromfields' treatment had caused this abscess. On the other hand two medical men said that this could not be the case. The anatomical knowledge of these latter gentlemen is defective, for they both, according to the *Grimsby Independent*, said that an axillary abscess could not be diffused. The jury returned a verdict for the Bromfields, their solicitor pointing out that there was no law against a man practising as a bone-setter without a medical qualification. This is quite true, but there should be. We are sorry for Mr. Barnes' original accident, but he does not deserve the least sympathy for the results which followed. Perhaps, some day the legislature will wake up and come to the conclusion that if it obliges medical men to spend five years and a large sum of money in educating themselves they ought to be protected against those who have no qualification; and, moreover, since the law will not allow a man to sell a pint of beer, an ounce of tobacco, or buttons or pins in the street, without paying for the privilege, the law might also insist on an unqualified practitioner paying a small sum, say £200, for the privilege of dabbling in the economy of a fellow creature.

THE LAW AS TO THE SUPPLY OF POISONS.

THE evidence given at the inquiry into the death of Professor Middleton reveals, or perhaps we should say draws attention to, the very dangerous state of matters in regard to the supply of poison by prescription. The following is the evidence of the druggist as reported in the daily press. Thomas Henry Keen, a druggist, of 9, Bruton-street, W., said he supplied the deceased with a solution of morphia made up from a medical man's prescription. He had had it for twenty-two years, and the strength was 1 in 20. He usually purchased twenty-four bottles at a time, half of which were packed up ready for abroad. Each bottle contained twenty-four grains of essence of morphia. He had not seen Professor Middleton for some time. The morphia did not require signing for, as it was a prescription, so that there was no breach of the Pharmacy Act. What "essence of morphia" is we do not quite know, but one fact is clear. Here was a man able to supply himself for twenty-two years with a powerful drug, not in small quantities but in large, and that too on the authority of a single prescription written, we suppose, twenty-two years ago. The druggist was perfectly within his rights as the law stands, but we contend that the law should be

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altered. Prescriptions such as this ought to be endorsed by the physician in some such way as the following: "This prescription is not to be dispensed oftener than ——— without a fresh signature from me." In any hospital even so simple a thing as the ordinary gentian and rhubarb mixture is not supplied time after time without the authorisation of "rep. 14 days," or something of the kind, and if in addition the druggist were compelled to stamp the prescription with a date every time he made it up the patient could not go from one druggist to another, as is occasionally done now, and buy, say, one drachm of the drug he seeks from each. We suppose that any proposal of this sort would meet with the usual silly opposition, and cries of interference with personal liberty and fettering of commerce; but if our parental legislators prevent small boys from playing pitch and toss or "run in" the hard-working and industrious vendor of surprise packets we do not see why they should not try, at any rate, to protect the community from being able to poison itself.

THE annual dinner of the Oxford Medical School was held on June 13th in Magdalen College Junior Common Room (by permission of Mr. H. D. G. Leveson-Gower, president). Professor Arthur Thomson occupied the chair, and amongst those present were the Regius Professor of Medicine (Professor Burdon Sanderson), Professor Howden (Newcastle), Professor Gotch, Dr. J. Ritchie, Dr. G. Farmer, Dr. G. Wilson, Dr. F. G. Proudfoot, and Mr. H. P. Symonds, Mr. A. Winkfield, Mr. L. L. Morgan, &c. There were between forty and fifty present and everything was completely successful. Mr. F. P. T. Hilliard (Magdalen) acted as secretary and treasurer. The ménu card, a very clever design by Mr. C. L. Pilcher (Keble), we hope to reproduce in a coming number.

THE Colonial Office has learned by telegram from the Governor of Hong-Kong that there were 27 fresh cases of bubonic plague in the week ending June 15th and 22 deaths from the plague during the same period.

THE annual general meeting of the Society of Fellows of the Royal College of Surgeons will be held at 146, Harley-street, W., on July 1st, at 5 P.M.

DR. RALFE has resigned the post of Physician to the London Hospital, after sixteen years' service, and has been appointed Consulting Physician.

THE annual mess dinner of the Volunteer medical officers will take place at Limmer's Hotel on Saturday, July 18th.

INTER-HOSPITAL BOAT RACE.—Upon June 11th the annual Inter-Hospital Boat Race from Hammersmith to Putney took place in brilliant weather and was witnessed by a large assemblage. Three hospitals were represented—viz., Middlesex Hospital, Middlesex Station; St. George's Hospital, Centre Station; and London Hospital, Surrey Station. At the first attempt a foul took place between St. George's and Middlesex, and the crews were ordered back to the stake boats. After a short delay, necessitated by the rupture of a thowl string in the St. George's boat, a fresh start was made. Another slight foul between St. George's and London enabled Middlesex to get away with a slight lead. A grand race now ensued for the first mile between Middlesex and St. George's, the former, however, gradually increasing their lead. At the point opposite to the Ranelagh Club the St. George's crew were evidently beaten, and the Middlesex, holding the race well in hand, passed under Putney Bridge with a clear lead of two and a half lengths. London, who rowed a plucky stern chase, finished five lengths behind. The winners covered the course in the excellent time of nine minutes and three seconds.

THOMAS WAKLEY,

THE FOUNDER OF "THE LANCET."

A BIOGRAPHY.[1]

CHAPTER XXIV.

Proceedings at Bow-street.—Wakley continues to fight.—The College institute Criminal Proceedings. — The London College of Medicine.—Its Prospectus.—Its Failure.

SIR RICHARD BIRNIE and his fellow magistrates after deliberation decided that they could not grant Wakley a warrant against Ledbitter, the Bow-street officer who had assaulted him. The reasons for this were not made very clear in words by the worthy knight, who frankly confessed his partial feelings in the matter. He seems to have considered, first, that Wakley was debating in the building of the College affairs that were not collegiate, and that, therefore, the President of the College had a right to have him removed. To this Wakley said that the wrongs of the naval surgeons, whose diplomas and certificates were very generally granted to them by the College, were exactly matters of the highest collegiate as well as professional interest, and that even had they been otherwise the man Ledbitter had struck out at him with his truncheon in a murderous way. Sir Richard Birnie then said that Ledbitter was wrongly arrested, inasmuch as the Bow-street officer who had taken him in custody was not an actual eye-witness of the alleged assault, and it was a general instruction to the Bow-street officers that they should only arrest a man for a wrong-doing of which they had personal ken. To this argument, which was unfavourably criticised from the bench by another magistrate, Wakley responded by exhibiting his ruined clothes to the court and asking if there could be any reasonable doubt that he had been savagely assaulted. The Bow-street officers themselves, moreover, admitted the truth of Wakley's account, merely saying that they had received their instructions upon two separate occasions from the Council of the College to expel Wakley; and they identified a person in court, who turned out to be Mr. Wilde, the solicitor to the College, as the individual who had told them that for whatever they did the authorities of the College would hold them indemnified.

As Sir Richard Birnie would not grant a warrant the matter ceased there as far as legal proceedings on Wakley's part were concerned. Some preliminary steps were taken to bring Ledbitter to justice in another way, but Wakley was not truly desirous of prosecuting the man and did not persevere in the face of tedious formality. If he could have prosecuted the Council of the College for the assault he would have done so; this he said repeatedly, and no one can doubt that he meant what he said, but he was advised that his chance of making out a legal case against them was slender. A moral case, however, was easily to be established against them, and Wakley's pen was not idle. It is characteristic of him that after one powerful outburst of rage, his allusions to the personal indignity that he had undergone became infrequent and dispassionate. The fact that the Council had expelled him by violence and with the assistance of Bow-street officers from the theatre of the College added no bitterness whatever to his strictures. In fact, after the first natural feeling of wrath and insult had subsided he was not ungrateful to his enemies for providing him with so graphic a proof of his contention that they

[1] Chapters I., II., III., IV., V., VI., VII., VIII., IX., X., XI., XII., XIII., XIV., XV., XVI., XVII., XVIII., XIX., XX., XXI., XXII., and XXIII. were published in THE LANCET, Jan. 4th, 11th, 18th, and 25th, Feb. 1st, 8th, 15th, 22nd, and 29th, March 7th, 14th, 21st, and 28th, April 4th, 11th, 18th, and 25th, May 2nd, 16th, 23rd, 30th, June 6th, and 13th respectively.

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were autocratic, careless of the rights of their commonalty, and unscrupulous in their methods of preserving their own position as irresponsible rulers. These three propositions he demonstrated week after week ceaselessly and remorselessly, and concluded by recommending the London students not to affiliate themselves to the College of Surgeons at all but to be content with the licence of the Apothecaries' Hall, which Company charged less in fees and did more to protect its general body. His argument in support of this advice to students was ingenious. It was based on the working of the Apothecaries' Act of 1815, which had been unduly pressed by the Apothecaries' Hall against the College of Surgeons, properly qualified surgeons having been prosecuted by the Hall for dispensing medicines. The Hall, in fact, took active and selfish steps in defence of those possessing its licence, and Wakley, whilst reprobating the institution of prosecutions against the Members of the College of Surgeons, advised the coming men to join the Hall.

This advice may or may not have stung the Council of the College into reprisals; it was calculated to damage the corporate purse, which Wakley said was the tenderest spot in the Corporation, but certainly their next move was a strong and almost unwarrantable one. It was no less than a motion for a rule in the court of King's Bench calling upon Thomas Wakley, Thomas King, George Walker, and George Darby Dermott (whose name had not previously been conspicuous in the proceedings of the reformers) to show cause why a criminal information should not be filed against them for certain misdemeanours committed in the theatre of the Royal College of Surgeons of England on the occasion of the riotous proceedings at the College in protest against the exclusion of the naval surgeons from the King's levées. The motion was heard by Lord Tenterden who made the rule absolute against Wakley and King, and discharged it against the other defendants, stating in his remarks from the bench that it was illegal for the Members to discuss in the theatre of the College any subject not connected with the acknowledged duties of the Corporation.

Wakley undismayed responded with an entire elaborate and cut-and-dried scheme for a new corporation of surgeons to be entitled the London College of Medicine, to have a Royal Charter and to do everything as properly as the existing College did everything improperly.

The London College of Medicine was really a socialistic dream. The idea of founding such an institution undoubtedly sprang up in Wakley's mind as the swiftest and most drastic method of punishing the College of Surgeons. When he formulated the scheme for it he was not in a mood to weigh matters as calmly and judiciously as was his wont, for undoubtedly a great sense of personal anger had been roused in him by the institution of criminal proceedings against him. This bent his judgment, which had not been warped in the least by the violent physical treatment that he had received. He over-estimated—and for the first time—the power of his pen. As a destructive weapon it had proved terrific; he now proposed to employ it in construction. The London College of Medicine, "founded upon the most enlarged and liberal principles, in which all legally qualified practitioners, whether physicians, surgeons, or apothecaries," were to be "associated upon equal terms" and to be "recognised by the same title," was obviously fore-doomed to failure. Below is an abridgment of its prospectus, by which it will be seen that its constitution was really an attack on the College of Surgeons. The new College proposed to do for the public and the profession everything that the old one did not do, and for the neglect of which the more advanced reformers found such bitter fault with it. After a preliminary clause stating that all persons in the United Kingdom at present holding a medical or surgical degree or diploma were eligible to be chosen as Fellows without examination, it proceeded as follows:—

The possessors of the diploma of the London College of Medicine are denominated Fellows, and will enjoy, both in and out of the College, the title of Doctor.

The London College of Medicine will be under the government of a Chancellor, Vice-Chancellor, and Senate.

The Senate will consist of not less than thirty-six Fellows elected by ballot, annually, by the Fellows in general convocation.

The Chancellor, Vice-Chancellor, and Scrutators are elected by the Senate; a majority of the Senate to be present, or the election void; the elections to be conducted by ballot, and the decision of the majority, final.

On each examination of candidates for the diploma, seven of the Senate constitute a medical jury; the Scrutators are ineligible to the office of jurymen.

On each examination the votes of a majority of the jury to decide the candidate's admission or rejection.

The examination of candidates will be conducted in public by the Chancellor or Vice-Chancellor, the Scrutators, and the medical jury.

Candidates are not required to produce any certificates whatsoever; the capability of undergoing a fair and searching professional examination being considered the only professional qualification necessary for obtaining the diploma.

The fee demanded for the diploma of the College is three guineas from gentlemen engaged in practice, and five guineas from students. No candidate after a second rejection to be eligible for re-examination until twelve months shall have elapsed.

Wakley went to his personal friend, who was to be in the immediate future his political god-father, Joseph Hume, for assistance in the matter, and Hume consented to take the chair at the preliminary meetings, which were enthusiastic entirely because Wakley's strictures against the College of Surgeons were so forcible and so amusing. Hume had once been a medical man, but his whole career was now political, and he really did not understand the nature of the departure he was being made to float. If Wakley had submitted his scheme to any man of Hume's talent but who was in touch with the needs of the profession, a lecturer or a man with experience on a hospital staff, he would have received criticism and guidance that would have prevented him from pursuing with so much energy such a will-o'-the-wisp as the scheme for founding the London College of Medicine was bound to prove. But Hume, a reformer and a great politician, almost a statesman, was quite ignorant of the true needs of the medical man or the real extent to which the College of Surgeons had abused its position. He was informed by Wakley, who was too angry at the time to be able to inform him quite impartially, and so when things were referred to his judgment he could only frame an answer in accordance with one-sided information.

But in the absence of competent advice Wakley, with immense perseverance, wrote up the cause of the London College of Medicine, where the ruling body was to be elected by universal suffrage; where there were to be no grades of rank or distinctions in title; where no monopoly in the teaching or the granting of certificates to the taught was to be countenanced; where the fees were to be low and only the standard of courtesy between examiners and examined high. But write as he would he could not galvanise this stillborn scheme into life. It was without the elements of existence. To begin with, unless the Government granted the promoters a charter their association among themselves was no use. Unless the State recognised the diplomas of the new college there would be no inducements to candidates to present themselves to obtain them. Now it was not for a moment probable that Government would have anything to do with the new scheme. A Royal charter had been granted to the College of Surgeons together with much money. Against this charter

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a petition had been presented to Parliament which had so little to recommend it to the notice of the House that after a perfunctory order to the impeached corporation to present certain accounts the matter dropped out of notice. The House would certainly consider the new scheme the outcome of private ill-will against the officers of the older body, who had already been recognised by the Crown and were in receipt of public money. To support a rival body designed in every way to ruin that corporation would be to stultify the action of the Crown in granting the charter and to waste the money already granted with no niggard hand. So that if Wakley had been supported by the mass of the College in the way that he confidently expected he had nothing to hope for from Government. But as a matter of fact for the first time the better sort of his own particular followers and readers were not wholly with him. They admitted the perfect unselfishness of his project, but they did not want it. They had no real hate of their College or its authorities. They desired it to be reformed and they thought that Wakley might reform it. But they did not want it destroyed and a new institution with no history and no prestige substituted for it; so that the London College of Medicine died of inanition before anyone save its inventor and a few ardent and not wholly disinterested colleagues would allow that it had ever been born.

The criminal proceedings against Wakley and King also came to a speedy termination. Though supported by Lord Tenterden's rule and dared by Wakley to proceed, the Council decided to let the matter drop. So that the outcome of the great and stormy meeting of Feb. 14th, 1831, was nothing at all save that the naval surgeons were re-admitted to the King's levées, to agitate for which was the reason that Wakley summoned the Members together. Wakley was advised that he could not prosecute the Council, and he did not desire to prosecute Ledbitter. The Council having been successful in their initiatory steps against Wakley decided that it would be impolitic to proceed further. The London College of Medicine, instituted to meet the wants of the rank and file of the profession and to take the place of the College of Surgeons, whose behaviour towards its members was so ruthless, came to an early and inglorious end.

(To be continued.)

THE ROYAL MILITARY TOURNAMENT.

To state that this year's meeting at the Agricultural Hall has been a successful one in all respects is to convey but an inadequate impression of the entirely satisfactory nature of the financial results of the show, which, we believe, have completely eclipsed any former record. Crowded afternoon houses day after day and overcrowded evening houses were the rule, with hundreds unable to find seats or standing room, walking about the gangway encircling the arena content to listen to the band and see what could be seen of varied uniforms, magnificent horses, and wonderful guns. Lord Methuen and his committee of management, though hampered by many unforeseen obstacles, have not failed to organise an entertainment quite equalling any presented in former years.

As one of the features of the London season the Royal Military Tournament has undoubtedly taken firm root and become dear to the heart of the public; and in view of the keen interest evinced in the show by all classes—an interest practically demonstrated by the thousands turned away at the doors for want of accommodation—it may not be out of place to suggest to the committee that the time has arrived for providing this great yearly fixture with a more suitable abiding place. The Agricultural Hall, though large, is neither sufficiently large nor commodious enough either for the men, horses, and guns which provide the spectacle, or for the overwhelming multitudes that throng to witness it. Though much has been done to improve the accommodation, lighting, ventilation, and general sanitary arrangements at the hall, it must be conceded that the building in many respects is unworthy of the great military gathering of the year. Its situation is by no means central, its approaches cannot be said to be good; and for want of space the unavoidable mixing up of perambulating audience, performers, horses, and artillery in a narrow circular passage within the building is neither satisfactory nor safe to the visiting public.

In all contests in which strength, swiftness, and equestrian exercises are concerned accidents to competitors may be looked for, and this year's tournament, though comparing in this respect favourably with bygone meetings, has not passed without casualties. At the rehearsal before the opening performance Captain Cowie, R.E., who was superintending the attack on the Afghan Fort at the end of the arena, fell from the trestle bridge, some sixteen feet, upon some planking below, alighting in a sitting posture upon the ischial tuberosities. On examination no fracture was apparent, but this officer has suffered much since from shock and contusions, the last account of him being that he was doing well though still confined to his bed. It is only right to mention that Captain Cowie came by his fall in a generous effort to prevent five or six other men from reaching a plank gangway which he thought insecure. On the morning of Thursday, June 4th, First-class Sergeant-Instructor of Fencing Foerster, Army Gymnastic Staff, who was judging at sabre practice for two officers, was the victim of a very lamentable accident. In his eagerness to judge correctly Sergeant Foerster happened for an instant to approach too closely the arc described by the sabre of one of the combatants, who was suddenly swinging it back to deliver a back-handed cut, when the tip of the sabre struck and completely ruptured the globe of Foerster's right eye with escape of the vitreous; the globe was so much disorganised that it was decided to extirpate it next morning. On Friday, the 5th, at the rail jump in the arena the horse of Rough-Rider Sergeant Rumsey fell and rolled upon him, causing temporary collapse; it is supposed that the cantle of the saddle came into violent contact with the abdomen as there has been much tenderness accompanied with some bruising, but with no rise in temperature or other grave symptoms since. With the exception of a slight concussion from a fall from a restive horse upon the paving outside the entry to the arena no other accident of importance occurred amongst the troops quartered at the hall. Various minor casualties occurred: a sprained knee from jumping, sundry contusions due to kicks from restive horses in stables, and some slight bruises and lacerations in the several competitions—in, for example, bayonet *v.* bayonet, in which Corporal of Horse Elliott sustained a contused and lacerated right thumb, which probably might have been averted had the right as well as the left hand been gauntleted. Most of the accidents recorded at this and at similar meetings have had their origin in the undue eagerness and haste of the competitors, a species of carelessness which it is difficult to prevent. The management, indeed, does its utmost to guard against casualties by insisting that the usual school of arms clothing shall be worn by all competitors—viz., helmets, masks, gauntlets, sporrans, padded jackets, and so forth—and it is to be congratulated upon the excellent condition of the arena this year, as proved by the non-occurrence of any overturning of the guns in the horse artillery galloping, of which this tournament has seen more than usual. We may suggest to those responsible for the furniture of the ring, however, that the rail jump should be invariably whitened, and that a thick layer of tan might with advantage cover the floor over which any future trestle bridge may be erected in a combined display. And, further, that those judging at sabre competitions as well as the competitors themselves should wear masks.

We are glad to note that since last year the free circulation of air throughout the building seems to have been secured, the temperature during an evening performance inside the arena being by no means oppressive; this improvement is partly due no doubt to the increase in the number of electric lights and the almost total abolition of gas as an illuminant. The removal of the greater number of the horses also to new stables adjoining the main building has further improved the atmospheric conditions, and the noticeable absence of ammoniacal stable effluvium was no doubt due to the free use of peat-moss litter, which we understand is coming into general use in our cavalry stables.

As in previous years, a temporary station hospital for the troops of two beds was established in a hut within an

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enclosure at the eastern end of Barford-street immediately outside the Agricultural Hall. Any accident or case of sickness requiring nursing was housed here for a night or so only, being transferred to the district hospital at Rochester-row as early as possible. A detachment of the Medical Staff Corps furnished orderlies for nursing duties at the Barford-street hospital, and a bearer-party with stretcher and all First Aid requisites was stationed under the Royal box during the whole of each performance, one medical officer also invariably being on duty in the judge's enclosure. As we have previously stated, the principal medical officer was Surgeon-Major Alexander, Coldstream Guards, whose arrangements for the immediate treatment of accidents were most excellent, assisted by Surgeon-Major Lawless, A.M.R., and Surgeon-Lieutenant K. Cameron, A.M.S.

The quantity and quality of the rations supplied were excellent, and the water-supply, lavatory, and latrine accommodation for the troops appeared to be ample. The men slept in cubicles on the gallery floor, as during the last two tournaments. As much as possible was done, by instituting cross ventilation, to render the atmosphere pure at night; some of the stables, however, appeared to us to be very oppressive, the probable explanation of this being the large amount of glass roofing used in their construction. Last year we called attention to the inconvenience caused to the men by the hot rays of the sun pouring through this glass roofing, and suggested as a preventative measure the use of a strip of canvas. We are glad to be able to report that this has been noted by the new committee and the roofing over the galleries has been distempered with whitewash. Another desirable improvement, due, we believe, to the indefatigable secretary, Major Eyre Crabbe, is the provision of baths for the men. These have been greatly appreciated.

We again draw attention to what we consider a danger to public safety—viz., the possibility of kicks from horses, &c., to people admitted through the Upper-street turnstiles, who, to reach their seats, must frequently pass behind a row of horses drawn up and about to enter the arena. An alley-way could easily be devised through St. Stephen's Hall by which this danger would be minimised. The proprietors of the hall might with advantage, we think, provide more than one cloak-room and lavatory for ladies.

Upon inquiry we ascertained that for this large muster of troops only one temperance bar had been provided by the contractors. We offer the suggestion to Messrs. Probyn and Co. that an additional temperance bar should be opened on the ground floor of the hall, and though officers and the general public may perhaps be charged fancy prices for mineral waters and other temperance beverages—we do not, however, approve of this—the private soldier, with his hard-earned, scanty pay, should not pay other than canteen prices for them. It is quite possible to make a respectable profit and at the same time to supply the soldier with ginger-beer, soda water, &c., at 1*d.* a bottle.

Chief-Surgeon Osborn, Dr. Harris, Dr. Hunter, with others of the St. John Ambulance Association, with a party of attendants of the St. John Ambulance Brigade, established an ambulance station in the arcade, where first aid was given in minor casualties of the kind usually found in any great concourse of spectators. We visited the ambulance station in the arcade, which consisted of one small cubicle, and appeared to serve for the reception both of female as well as of male applicants. We can scarcely congratulate the Tournament Committee this year upon the change that has been made in doing away with the very efficient ambulance service which gave so much satisfaction to the public for the last four years, a service which provided two well-equipped but separate receiving rooms for the treatment of male and female accident cases. This was as it should have been, and if the change has been made on the score of economy we cannot help being of opinion that the economy was ill-advised. Altogether, about 800 men, 390 horses, and some sixteen field guns were engaged in this year's tournament.

The general health of the troops has been excellent, and where as many as 800 or 900 men are gathered together from all parts of the kingdom under one roof and under many trying conditions this is no small matter, and speaks well for the general care of the soldier evinced by those responsible for it.

At some of the evening performances the overcrowding amongst the shilling spectators, wedged together in one enormous mass, was somewhat alarming. That this was felt to be so was proved by the request of a certain number to be released from the tightly packed crowd. This could only be done by hauling out individuals here and there into the arena. It is this vast shilling audience, hitherto provided with standing room only, which by its nightly patronage so largely contributes to the tournament treasury, and we venture to suggest to the management that some seating accommodation, tier above tier, might be provided for it. On the score of public safety it would be desirable, and as there would thereby be less restlessness and shifting in the crowd, it presumably would do away with much of the nervous fright of the horses which is so apparent and pitiable to witness when they have to make the circuit of that side of the arena.

Veterinary-Major Rowe, of the Home District, was the principal veterinary officer in charge of the horses, which were probably more numerous at the Agricultural Hall this year than at any former tournament.

THE ANNUAL REPORT OF THE SANITARY COMMISSIONER WITH THE GOVERNMENT OF INDIA FOR 1894.

[CONCLUDING NOTICE.[1]]

IN our last notice we passed in review and commented upon some of the points raised in the Sanitary Commissioner's report connected with the great prevalence of enteric fever among the European troops serving in India, as compared with that of the native army and the gaol population, and alluded to the great and apparently increasing drain and lamentable loss of life caused by that disease on the young manhood of the European force in India. We also adverted to the excellent analysis of the current views held by pathologists and epidemiologists in regard to cholera set forth in the sixth section of that report. We purpose now to touch upon some points connected with malarial fever, dysentery, and hepatic abscess, but before doing so would call attention to some general points that appear to merit consideration.

In the report of the Royal Commission on the Sanitary State of the Indian Army issued in 1863 the estimated mortality of the Company's troops during the years from 1800 to 1856 is stated to have oscillated between 69 and 70 per 1000. The Royal Commission, in calculating the saving of "army life" that might be effected by the application of ordinary sanitary methods, said that the death-rate of 20 per 1000 ruling among Indian Civil servants ought to be attainable for soldiers. They went beyond this and expressed a belief that in times of peace the death-rate among men of soldiers' ages in India might even be reduced to 10 per 1000 per annum, and subsequently in 1883 it actually was only 10·88 per 1000. Of course, the death-rate of a single year cannot be accepted as an indication of permanent improvement. India is the land of epidemics, and the presence or not of such disease-causes will make all the difference; but, allowing for ordinary fluctuations, the sickness and death-rate of late years among European troops in India seems to have been increasing on the whole, and we appear to be losing some of the ground that had been previously gained in this respect, notwithstanding that the ratios are, of course, far more favourable than they used to be when the life-conditions and environment of the British soldier serving in India were so different to what they are now. Prior to the introduction of the short-service system and apart from sanitary changes that have since been effected in India, the men were much older and of longer service, and they died from diseases incidental to service in hot climates under those conditions, whereas now that they are much younger and have relatively short periods of service in India they die disproportionately from enteric fever. It would be interesting to institute a comparison between the death-rates of men of thirty years of age and over and those of soldiers of from twenty to twenty-five years of age from enteric fever and the diseases which are especially incidental to young soldiers recently arrived in India. We require, if possible, to have some plain tabular statement of the loss and gain in these respects and of the actual, and

[1] The First and Second Notices were published in THE LANCET of May 9th and 16th, 1896, respectively.

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not merely the apparent, improvement which has taken place. It is very difficult amid the numerous and voluminous tables in the report for the reader to find out exactly what he wants to know. Does the increased liability of the young and recently arrived soldier to die from enteric fever counterbalance or not the greater liability of older soldiers of longer service in India to die from other diseases? While there is a very gratifying reduction in the death-rates from the more important diseases this is certainly not the case as regards enteric fever, for it has for some years past been the most important disease-cause in the Army of India.

While on this subject we would also suggest that not only should the health statistics be tabulated for corps, but for the stations and barracks occupied by them. If this were done locally for some years, as it probably is, the topographical medical history of every military station and of the various barracks in them could be registered and preserved for the guidance of successive military and medical authorities in locating the troops and in forming an estimate of the nature and amount of the diseases that might be expected to appear in different localities and barracks in a given time under given conditions. To this should be added a topographical description of the stations and barracks, with their food and water supplies, camping-grounds, &c. In that way we should have a valuable continuous record of the accumulated and accumulating results of local medical and sanitary experience. Moreover, it seems to us that, in addition to headquarters' sanitary bureaux and bacteriological institutes, there should be some organised method for having the causes of any local outbreaks of disease inquired into at once, with a view to the prompt application of practicable remedial measures. For this purpose there should be some public health organisation and officers, with a local board composed of an officer of the Public Works Department with a special knowledge of sanitary engineering, a medical officer specially skilled in hygiene, and a member of the Quartermaster-General's Department in every military district or large station cantonment, for the purpose of undertaking such investigations whenever their services were called for. The application of the results of bacteriological researches to the investigation of disease-causes is an essential part of the sanitary organisation; but it is, after all, only a means to an end. A practical sanitary machinery is necessary to carry on effective work in this direction. However interesting it may be in a scientific sense to demonstrate the existence of a special parasitic micro-organism in connexion with any given disease, the practical utility of such a discovery is small if we are merely to content ourselves by relegating it to that as the cause.

As regards malarial disease in India, the climatic difficulties, the comparative absence of drainage works, and the great and prohibitive cost of their construction, together with the poverty and ignorance of the natives, undoubtedly form enormous obstacles in the path of the sanitarian. Still, the sanitary history of London in the middle ages is the history of all old neglected towns and the remedies are very much the same. London with its vast population has been cured by the drainage of the subsoil and houses, by rapid removal of sewage to a distance, by closing wells and substituting water of better quality, by good paving and surface drainage, and by rigid attention to cleanliness. The practical remedies for malaria in many parts of India are to lower the water level and increase the movement of the subsoil water. Ague gave rise to about 27 per cent. of the admissions from all causes in the European army in India. Section 6 of the report contains a reference to the investigations into the micropathology of malarial fever that have been carried on in many parts of India, especially by Surgeon-Major Ronald Ross in Madras, Surgeon-Captain Murray in the Punjab, and Surgeon-Captain Maynard in Calcutta. Ever since the discovery of Laveran's blood parasite medical officers in India have naturally been keenly interested in the subject. A considerable amount of work has also been done by Carter, Cunningham, and Crombie.

Dysentery was, as usual, most prevalent in the Madras army. The number of deaths from hepatitis was increased in 1894 by twenty-three. The percentage of hepatic abscess in the total causes of death was highest in Burma Coast. The remarks on the relative prevalence of dysentery and hepatic abscess among European troops, native troops, and gaol population, and the pathological observations on these diseases with references to recent literature on these subjects contained in the sanitary commissioner's report, are well worth reading. That there is a real connexion between the two diseases may be considered as a well-established fact. The origin of this abscess seems, however, to be also dependent on some climatic influences. Europeans in the tropics are more liable than natives and the same is the case in Egypt. Apart from dysentery, hepatic affections and abscess are frequent among European residents. The natives of India are more liable to dysentery and malarial fever, but less liable to hepatic abscess, than the European temporary sojourners in the country. The highest ratio of admission from dysentery among European troops from 1870 downwards was 54·1, and the lowest 24·5; among native troops the highest was 96·3 and the lowest 39·3; among prisoners the highest was 113·3 and the lowest 79·4. On the other hand, the highest admission ratio from hepatitis among European troops in the same period was 58·1 and the lowest 18·1; the highest among native troops was 2·5 and the lowest 1·4; the highest among prisoners was 1·9 and the lowest 0·8. The dysentery of Europe is rarely followed by abscess of the liver. It is said that Roumania is the only European country where hepatic abscess is frequent as a complication of dysentery.

The report contains over 300 pages, with upwards of 200 more pages of annual returns and tables, and there remain quite a number of subjects and points on which we have not touched, but we have said sufficient to show that it is, in our opinion, an able official document, and that it affords a large amount of instructive and condensed information on a variety of subjects for those interested in the study of tropical medicine and hygiene.

THE HOLIDAY SEASON.

(*Continued from p. 1666.*)

THE LONDON AND NORTH-WESTERN RAILWAY COMPANY.—The inter-communication between the various railway companies in the British Isles makes it almost impossible to say exactly just where each line begins and ends, and the London and North-Western is no exception to the rule. The line from London communicates with Cambridge, Peterboro', Northampton, Rugby, Birmingham, Stafford, Crewe, Manchester, Leeds, York, Sunderland, Liverpool, and Newcastle; Glasgow, Edinburgh, Oban, Inverness, and Aberdeen; Dublin and Belfast, and various places in Wales. *Viâ* Dover, Folkestone, and Newhaven, the company issues through bookings to the Continent. Carlisle, the town which will this year be honoured by the presence of the British Medical Association is reached by this line, and no doubt excursions will be run during the time the meeting is in progress. The tourist programme, which embraces a comprehensive list of tours in England, Ireland, and Scotland, including the Lake District, North Wales, and the Isle of Man, is supplied gratis on application at the company's offices. The time-table gives particulars of the Continental routes.

THE GREAT WESTERN RAILWAY.—During the summer months this company will run cheap excursions to Bath, Bristol, Weston-super-Mare, Taunton, Ilfracombe, Exeter, Torquay, Plymouth, Falmouth, Penzance, Yeovil, Dorchester, Weymouth, Channel Islands, Shrewsbury, Welshpool, Barmouth, Aberystwyth, Ireland, and the Isle of Man. Visitors to any of these places will no doubt appreciate the list of seaside and country lodgings, boarding-houses, and hotels in districts served by this company, including Guernsey and Jersey.

THE SOUTH-EASTERN RAILWAY.—The programme of continental and local tourist and excursion arrangements giving particulars of special reduced fares and the list of farmhouses, hotels, and country lodgings in the districts served by this company is worth consulting.

SCOTLAND.

THE WEST HIGHLAND RAILWAY COMPANY.—Those who contemplate spending their holidays amidst the charming wild scenery of the West Highlands cannot do better than procure a copy of "Mountain, Moor, and Loch," a capital guide book to the district, illustrated with 230 original drawings and abounding in historical and literary allusions. The Highlands and Islands of Scotland include some of the most beautiful scenery in the world, and few places offer the advantages here presented for tourists. Grantown and Strathpeffer are both on this company's lines, the first

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with a climate which is said to be beneficial in pulmonary complaints and the latter well-known for its medicinal springs. To describe the West Highlands of Scotland here is unnecessary, and full particulars as to train and fares can be obtained on application to the General Manager of the Highland Railway Company, Inverness. It may not be out of place, however, to give our readers the reason why, according to the author of "Mountain, Moor, and Loch," a lobster is known in the West Highlands as a "Banarie flea." The story runs that an American stopping in the Banarie Hotel made himself obnoxious by his contemptuous remarks on Scottish scenery. "Ben Nevis"? he said, "do you call that a mountain? You should see our mighty Rockies! Loch Linnhe? do you call that a lake! You should see our Lake Superior! Rannoch Moor? do you call that a plain? You should see our western prairies"! and continued in this strain to the intense exasperation of the Highland waiter who went and procured a live lobster which he secreted in the American's bed in requital of the insults. Hardly had the American gone to sleep when the lobster caught him by the toe, causing him to jump out of bed with a yell. "Boots" appearing on the scene, the American (rubbing his big toe as he spoke) thus solemnly addressed him: "Boots, you may not have such big mountains and big lakes and big plains here as we have in the States, but you have the most tarnation big fleas I ever experienced."

THE CALEDONIAN AND LONDON AND NORTH-WESTERN RAILWAY.—Summer tours in Scotland and England, published conjointly by these companies is an illustrated handbook containing descriptive notes of the chief points of interest on the journey to Scotland with itinerary of tours, fares, &c. A good map of England and Scotland accompanies the book, together with plans of Edinburgh and Glasgow.

NORTH BRITISH RAILWAY.—The tourist arrangements of this company embrace some interesting tours in Scotland.

IRELAND.

Considering the wild and bewitching nature of the scenery of the Emerald Isle it is passing strange that the Isle of Erin does not attract more visitors. The railway companies are, perhaps, not quite so smart as those in England, but slowness is an advantage sometimes, and the tourist in Ireland will be amply repaid for any inconvenience he may be put to in this direction.

THE GREAT NORTHERN RAILWAY OF IRELAND in their tourist and excursion programme publish a selection of tours from Dublin extending to Londonderry in the north, Belfast on the north-east, and Bundoran on the north-west coast. This latter place is reached by the ordinary rail service in five or six hours from Dublin, Belfast, or Londonderry, and is surrounded by the districts of Lough Erne, Donegal, and Sligo, the scenic charms of which are all well known. The Valley of the Boyne, too, with its historic associations, will well repay the visitor. Full information and interesting pamphlets describing various parts of the district covered by this railway can be obtained on application to the company's offices in Dublin.

THE GREAT SOUTHERN AND WESTERN RAILWAY.—The iron ways of this company intersect the southern portion of Ireland, extending through the far-famed Lake district of Killarney to Valentia Harbour. The time-table of the company details a list of tours which should suit the convenience of all, and a tastefully printed illustrated booklet describes the lakes and fjords of Kerry, which embrace scenery which the present Poet Laureate has fitly described as enchanting. A glance at the illustrations in the booklet will, however, do more to impress the reader with the beauty of the district than words could do.

THE CORK, BANDON, AND SOUTH COAST RAILWAY.—This company also issues an illustrated booklet describing the journey from Cork to Glengariff and Killarney known as the Prince of Wales route. In advising tourists to Ireland to write to the company for a copy of the pamphlet we need do no more than quote Thackeray, who has said, "Within five miles round the pretty inn of Glengariff there is a country of the magnificence of which no pen can give an idea."

WALES.

THE CAMBRIAN RAILWAYS.—"Picturesque Wales," price 6*d*., a handbook of scenery accessible from the Cambrian Railways, will repay a perusal even by those who have decided to spend their holidays elsewhere. It is well illustrated, and contains what many of the railway handbooks lack, a good index. For wild and picturesque scenery and legendary tales Wales has few equals, and the archæologist, the botanist, and the painter will all find ample material for study and recreation. Those, too, who revel in the mysteries of orthography can—and we say it with all due reverence—follow their favourite pursuit by inquiring into the meaning of such soul-stirring names as Cwm-Bychan, Cwmhir, Llanfihangel-geneu'r-glyn, Ynys-y-maengwyn, and others, whose "linked sweetness long drawn out" cannot but charm. The tourist, excursion, and seaside arrangements for the season give some exceptional facilities to visitors, and a feature of the Cambrian Railways is the issue of cheap weekly season-tickets, enabling the holder to travel by all trains and between all coast stations, including Machynlleth and Dolgelly. Over 1000 miles can thus be travelled for 15*s*. third-class or 25*s*. first-class. Express trains with first- and third-class lavatory carriages are run daily during the season in connexion with fast trains on the London and North-Western, Great Western, and other railways between London, Liverpool, Manchester, Birmingham, &c. The Cambrian Railways "Souvenir of Wild Wales." price 6*d*., containing fifty-five views, is a capital little publication. Time-tables, tourist programmes, guide books, and full particulars of trains, fares, &c., may be obtained at any of the company's stations or booking offices, and at Cambrian Office, Crue Woode Buildings, 17, Back Goree, Liverpool; on application to Messrs. Henry Gaze and Sons, Limited, Excursion Tourist Agents, Strand, London; or to the Passenger Superintendent, Oswestry.

(To be continued.)

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on the 11th inst., the President, Mr. CHRISTOPHER HEATH, being in the chair.

On the recommendation of the Committee of Management it was resolved (1) that the Forest School, Walthamstow, be added to the list of recognised places of instruction in chemistry, physics, and practical chemistry; and (2) that the East London Hospital for Children, Shadwell, be recognised as a place of study during the fifth year of the curriculum.

The Laboratories Committee presented a report on the work on diphtheria for the Metropolitan Asylums Board as follows: (*a*) Examination of material for diagnosis; since March 6th 3705 specimens have been examined and reported upon. The average number of specimens examined per diem has been 47·5. (*b*) The preparation of antitoxic serum; since March 6th the director has supplied 3910 doses of antitoxic serum for the treatment of diphtheria in the hospitals of the Metropolitan Asylums Board, and all the demands have been fully met. In addition to the number of doses sent out a considerable addition has been made to the reserve stock set aside to meet extra calls should they arise.

The Deputation Committee recommended that the deputations of Fellows and of Members be informed that as the Council had determined to take a poll of the Fellows on the question of the representation of the Members on the Council it was inexpedient to consider any other points involving alterations in the Charter of the College. The recommendation was adopted, and it was resolved to send similar replies to the movers and seconders of the resolutions carried at the annual meeting of Fellows and Members in November, and at the January meeting of the Fellows. A letter was read from Mr. H. P. Dunn forwarding a copy of a resolution adopted by the Committee of the Association of Fellows, suggesting the points which should be submitted to each Fellow on the question of the representation of Members of the College upon the Council. It was referred to the committee on the circular to the Fellows, and the Council authorised the committee to receive representations in writing in reference to the subject. It was resolved, on the suggestion of the Secretary, that the Calendar should be made up to Aug. 1st in each year in order that it might include the results of the elections to the Council in July. A letter was read from Mr. Reginald Harrison and Mr. John Langton reporting their attendance as the representatives of the College at the Congress of the Surgical Society of Germany.

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METROPOLITAN HOSPITAL SUNDAY FUND.

THE following are some of the principal amounts received at the Mansion House, the lists of which have been received at THE LANCET Office, up to the time of our going to press on Thursday, when the total amounted to nearly £17,000. The total sum recorded at the corresponding period last year was nearly £15,000:—

	£	s.	d.
St. Michael's, Chester-square (with additions)	1496	0	0
Christ Church, Lancaster-gate	1257	16	7
St. James's, West Hampstead	320	3	1
St. Nicholas, Chislehurst (including £100 from Mr. Richard Foster)	335	11	0
St. Michael's, Paddington	167	16	8
St. Andrew's, Wells-street	140	16	9
All Saints', Ennismore-gardens	502	4	0
Westminster Abbey	220	19	6
St. Alban's, Streatham	204	1	3
All Saints', Clapham-park	129	7	0
Union Chapel, Islington	112	0	0
Christ Church, Gipsy-hill	108	0	0
Holy Trinity, Roehampton	108	9	5
St. Paul's, Avenue-road	111	17	10
St. James's, Kidbrook...	120	3	8
St. Peter's, Brockley	120	0	0
St. Mark's, North Audley-street	102	9	0
Holy Trinity, Sydenham	206	13	0
St. Mary's, Bryanston-square	263	3	2
St. Columba's, Pont-street	121	0	0
Greek Church	104	14	0
St. Thomas's, Portman-square	114	9	0
St. John's Presbyterian Church, Kensington	126	5	0
Christ Church, Highbury	107	3	7
Holy Trinity, Tulse Hill	156	13	9
St. Paul's, Beckenham	163	13	7
St. Stephen's, South Dulwich	176	0	0
St. George's, Bickley	85	6	0
Holy Trinity, Marylebone	91	2	7
All Saints', Clapham-park	53	18	3
St. Saviour's, Clapham	29	7	1
St. James's, Garlickhithe	38	13	8
Islington Parish Church	20	0	0
St. Anne's, Wandsworth	28	9	5
St. Luke's, Berwick-street	34	1	5
Hornsey Parish Church	49	15	10
St. Mary's, Brookfield, N.W.	22	2	2
West Ham Parish Church	25	1	1
St. Saviour's, Southwark	26	12	2
Metropolitan Tabernacle	114	15	9
Holy Trinity, Eltham	57	17	3
St. John's, Redhill	40	1	1
St. Michael's, Paddington	167	16	7
The Chapel, Dulwich College	60	19	0
St. James's, Hatcham	80	0	0
All Saints, New Cross	57	10	0
Royal Military Chapel, Wellington Barracks	74	6	1
St. Luke's, West Holloway	42	8	0
Emanuel Church, Wimbledom	74	14	9
St. Saviour's, Highbury	35	7	2
West Wickham, Kent	35	7	3

	£	s.	d.
Loyal United Friends, St. Luke's, E.C.	45	0	0
St. John's Wood Synagogue...	32	0	0
The Parish Church, Mitcham	33	10	0
St. Barnabas, Addison-road	140	13	8
St. Peter's, Eltham	50	14	0
St. Paul's, Great Portland-street	63	10	0
St. Mary's Parish Church, Acton	41	3	10
St. Mary's, Spring-grove	34	15	2
All Souls, Mansfield-street	44	15	9
St. Paul's, South Hampstead	112	5	3
St. Mary's, The Boltons, S.W.	85	0	0
Holy Trinity, Knightsbridge	58	9	0
The Parish Church, Hampstead	74	0	6
The Parish Church, Dartford	36	10	6
St. Matthew's, Red Hill	34	18	5
The Parish Church, Bromley	84	4	2
St. James's, Muswell-hill	56	4	3
St. Mary Magdalen, Peckham	36	5	3
St. Anne's, Highgate-rise	26	12	0
Wesleyan Church, Blackheath	22	12	3
St. Barnabas', Dulwich	21	17	6
Harrow Weald Church	27	10	10
Northwood Church	28	4	5
Holy Trinity, Lyonsdown, New Barnet	26	8	1
Wesleyan Church, Holly Park, N.	27	5	0
St. Peter's, Norbiton	20	0	0
"Delta" (a further)	200	0	0
Guesdon Trustees	311	15	1
Legacy (John Smith)	500	0	0
Edward Chas. Healey, Esq.	105	0	0
"In Memoriam" (Crosby Lockwood)	20	0	0
St. Anne's, Soho	74	5	4
Miss Emily Old	25	0	0
St. John's, Clapham-rise (first instalment)	30	0	0
Old Malden Parish Church	91	10	9
St. Mary's Parish Church, Finchley	41	10	11
St. Andrew's, South Streatham	30	11	2
All Saints', Foot's Cray	26	1	0
St. Paul's Cathedral	249	0	6
Brixton Congregational Church	58	11	9
J. D'Arcy Hartley, Esq.	25	0	0
Colonel Sir Reginald Hanson, Bart., M.P., Alderman, &c. ...	10	10	0
St. Mary's (Old Church), Stoke Newington	35	1	6
St. Stephen's, Westminster	45	0	0
Christ Church, Chislehurst	58	8	7
St. Giles's (Parish Church), Camberwell	85	15	10
Christian Evidence Society (East London Branch)	55	0	0
F. F....	21	0	0
St. Mary Magdalen, Enfield	30	14	11
St. James's, Camberwell	30	5	0
St. Andrew's, Leytonstone	46	14	11
Westbourne-grove Presbyterian Church	82	0	7
Major Jones	20	0	0
Christ Church and St. Andrew's, Hornsey	74	0	7
Harrow Weald Church	27	10	10
St. Paul's, West Brixton	23	16	9

Other amounts have been received and will be published in our next issue.

THE ARMY MEDICAL STAFF.

THE annual dinner of the officers of the Army Medical Staff was held in the Whitehall Rooms of the Hôtel Métropole upon June 15th. The following officers and guests were present:—

Director-Generals: J. Jameson (in the chair), and Sir W. A. Mackinnon, K.C.B., Q.H.S.

Surgeon-Major-Generals: A. F. Bradshaw, C.B., Sir J. Fayrer, Bart., K.C.S.I., Q.H.P., A. H. Fraser, J. Inkson, E. C. Markey, C.B., J. B. C. Reade, C.B., Q.H.S., P. B. Smith, W. Taylor, W. A. Thomson, Q.H.P., J. J. Thompson, and W. M. Webb.

Surgeon-Colonels: M. Cogan, R. W. Clifton, W. G. Don, J. H. Hughes, Sir R. W. Jackson, Kt., C.B., J. H. Jeffcoat, G. McGrath, T. O'Farrell, W. S. Price, W. Riordan, W. Sly, H. R. L. Veale, and J. Watts.

Brigade-Surgeon-Lieutenant-Colonels: G. Andrew, J. M. Beamish, J. F. Beattie, A. L. Browne, A. F. S. Clarke, J. A. Clery, R. de la C. Corbett, D S.O., A. Doig, E. J. Fairland, W. J. Fawcett, E. Footner, M. M. Gallwey, J. Hector, J. W. Hulseberg, L. A. Irving, J. Johnston, M. Knox, J. G. Leask, C. Mackinnon, H. W. Mackinnon, D.S.O., W. H. Macnamara, A. Macrobin, J. W. Morgan, W. F. Ruttledge, W. F. Stevenson, F. P. Staples, W. Temple, V.C., T. Wright, and T. W. Wright.

Surgeon-Lieutenant-Colonels: W. B. Allin, F. E. Barrow, G. D. Bourke, W. Donovan, W. C. Gasteen, W. L. Gubbins, G. H. Le Mottee, N. McCreery, T. Ligertwood, and W. S. Pratt.

Surgeon-Majors: W. G. A. Bedford, U. J. Bourke, Sir J. R. A. Clark, Bart., A. E. Croly, A. Dodd, J. B. Emerson, R. F. D. Hackett, R. D. Hodson, J. W. Jones, H. C. Kirkpatrick, J. Maher, E. L. Maunsell, J. McGill, W. O'Sullivan, E. R. Power, G. W. Robinson, M. R. Ryan, and H. O. Trevor.

Surgeon-Captains: G. Cardew, T. H. F. Clarkson, H. A. Cummins, J. G. Deacon, H. P. Elkington, J. Fayrer, E. M. Hassard, H. St. G. S. Hore, R. W. H. Jackson, J. Moir, F. J. Morgan, D. M. O'Callaghan, R. J. Power, J. Ruxton, and R. J. Windle.

Guests present: Mr. Christopher Heath (President of the Royal College of Surgeons of England), Surgeon-Major-General W. R. Hooper, I.M.S., Brigade-Surgeon-Lieutenant-Colonel H. Smith (3rd Volunteer Battalion, Hampshire Regiment), Surgeon-Major W. Collingridge (Militia Medical Staff Corps), Dr. H. P. Cholmeley, Mr. E. Hart, and Mr. Vesey Holt.

Guests invited, but unavoidably absent: Dr. Wilks, President of the Royal College of Physicians, Sir James Dick, K.C.B., the Director-General of the Medical Department of the Royal Navy, Sir W. Guyer Hunter, K.C.M.G., Q.H.S., Volunteer Medical Staff Corps.

We are glad to see that the number of officers present showed an increase over last year, ninety-five as against seventy-five, and we trust next year to see an even larger

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attendance. The arrangements were under the care of the hon. secretary to the dinner committee, Brigade-Surgeon-Lieutenant-Colonel Hector, to whom every credit is due, both for his excellent management and the untiring way in which he looked after the guests.

THE GENERAL MEDICAL COUNCIL:

THE RESIGNATION OF MR. WHEELHOUSE AND SIR WALTER FOSTER.

WE have received for publication the following letter addressed by Mr. Wheelhouse and Sir Walter Foster to the profession announcing their intention of not offering themselves for re-election at the expiration of their term of office on the Council in November next:—

TO THE MEMBERS OF THE PROFESSION IN ENGLAND AND WALES.

GENTLEMEN,—Ten years ago, after a struggle of many years' duration, Parliament conceded the boon of Direct Representation of the Profession on the General Medical Council, and you did us the honour to elect us as your first representatives. During those ten years we have endeavoured to serve you to the best of our ability, and have never lost sight of your true interests. We are not without the hope that we have been of service both to you and to the Council—to you, by acting as your exponents in the various questions of professional importance that have from time to time been brought under the notice of the Council, and to the Council by seeking temperately to place your views before it and, as far as possible, to assist in carrying out its general work. In what we have succeeded and in what we have failed we are content to leave the history of the Council to determine; but, so far as your wishes have been compatible with the Acts of Parliament which it is the duty of the Council to administer we have never lost sight of them or failed to advocate them to the utmost of our power.

The time has now come when, for the third time, you are called upon to choose your representatives, and, after careful and anxious consideration, we have determined to ask you to release us from the responsibility of the office. We desire most cordially to thank you for the great honour you have conferred upon us by twice entrusting us with your interests, and also to place on record our grateful sense of all the kindness we have personally received at the hands of every member of the Council, and especially of the various presidents under whom it has been our privilege to serve.

In conclusion, we would urge you to make very deliberate and careful choice of your future representatives, remembering the high order of the duties the Council is called upon to exercise, and when you have elected them to give them that moral support without which it is impossible for them efficiently to represent you.

We are, gentlemen, your obedient servants,

C. G. WHEELHOUSE.
B. WALTER FOSTER.

June 12th, 1896.

THE CROYDON BOROUGH HOSPITAL, WADDON.

THE new buildings of the Croydon Borough Hospital were opened on Saturday, June 6th, and the municipality is to be congratulated on possessing a permanent isolation hospital of the most approved type. The triangular site on which the pavilions have been erected comprises eight acres of land moderately elevated and situated some two miles from the more populous portions of the district. Accommodation is provided for 116 patients. We have not space to describe in detail the various wards and administrative blocks which constitute the hospital, but there are one or two points specially worthy of notice to which we may refer. In the first place everything has been done to make the wards as comfortable and attractive as possible in order that patients requiring isolation may be induced to take advantage of the accommodation provided by the borough. With the same object in view a private block has been built for people of means consisting of four wards containing six beds. Each ward is aerially disconnected, so that more than one class of infectious disease can be treated at the same time. The interior furnishing has been carried out in the best possible style consistent with a sick chamber. Dr. Leonard Wilde, the visiting physician, who has superintended the internal arrangements of the buildings, has introduced a novel feature with regard to the clothing of the patients. On admission to hospital each patient is provided with a garment the colour of which indicates the nature of the disease from which he or she may be suffering. For instance, scarlet fever patients are clothed in pink or red, diphtheria patients in blue, and enteric fever patients in yellow. By this means the variously infected garments are readily distinguished for cleansing purposes, and as a day is set apart for each colour to be washed there is no danger of one set of garments becoming infected with the germs that may be contained in another set. The additional precaution of disinfecting the clothes before entering the washhouse is, of course, taken. Another desirable feature of the new hospital, which has been carried out by Dr. Wilde, is the bacteriological research laboratory. Besides the use which can be made of this department should a doubtful case present itself at the hospital, it is at the disposal of any medical practitioner who may wish to assure himself of the exact nature of a case coming under his notice. On application a culture outfit is forwarded to the medical man, who makes the culture and returns the tube in its case, and within twenty-four hours he receives a report from the hospital.

THE LATE DR. CHARLES RUMNEY ILLINGWORTH.

SOME of the friends of the late Dr. C. R. Illingworth have started a fund on behalf of his widow and children, the first list of subscriptions to which we have much pleasure in subjoining. Dr. Illingworth's early death under distressing circumstances deprived the profession of an ardent votary of the science of medicine, and we confidently recommend the case of his wife and children to the generous consideration of others who did not know him personally, and who will perhaps take our assurance that the money is sadly all wanted, and the case a thoroughly deserving one for benevolence.

FIRST LIST.

	£	s.	d.
Dr. F. Birtwhistle, Barton-on-Humber ...	1	1	0
Mr. J. N. Brown, Ealing	0	10	0
Mr. Edgar Duke, St. Leonards-on-Sea	1	1	0
Dr. Dundas Grant, London	5	5	0
Dr. W. E. Humble	0	10	6
Dr. A. Kershaw, Farmouth	1	0	0
Dr. George Kirkwood, Peterborough	5	0	0
Mr. F. Mansy, Tunbridge Wells...	1	1	0
Dr. E. J. Maclean, London	1	1	0
Dr. Peter McBride, Edinburgh	1	1	0
Dr. Thomas Milne, Aberdeen	2	2	0
Dr. J. Inglis Parsons, Mayfair	1	0	0
Mr. Frank Pearce, Brighton	1	1	0
Dr. Geo. W. Potter, London	5	5	0
Mr. W. A. Satchell, Ealing	1	1	0
Mr. J. Silverwood, Elton, Bury...	1	1	0
Mr. J. A. Erskine Stuart, Batley	0	10	6
Dr. J. W. Walker, Peterborough	5	5	0
Mr. Griffith Wilkin, London	1	1	0
Dr. G. Sims Woodhead ...	3	3	0
"A. B."	2	2	0
A. B.	3	3	0
F. F., London	0	10	6

HEALTH EFFICIENCY OF THE ENGLISH, FRENCH, ITALIAN, AND RUSSIAN ARMIES.

AT this moment, when the nation is called upon to make great sacrifices so as to increase our means of defence, all that concerns the efficiency of the army and navy is of more than usual importance and interest. It need scarcely be said that it does not suffice to enroll soldiers and sailors, but care must be taken to preserve them in sound bodily strength and health. In respect to general sanitation we may justly claim that the care taken of the health of the army and navy of Great Britain will compare favourably with the best organised

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forces of any foreign country. In one important phase of the question, however, we stand at a great disadvantage. The fighting efficiency of our land and sea forces is very considerably impaired by the prevalence of venereal disease among officers and men. Dr. O. Commenge, in a work recently published in Paris entitled "Les Maladies Vénériennes dans les Armées Anglaise, Française, et Russe," points this out in a very conclusive manner. Dr. Commenge states that the proportion of soldiers who during the four years 1889 to 1892 suffered from venereal disease in what he describes as the English army of the metropolis amounted to 217·1, 212·4, 197·4, and 201·2 per 1000. Thus it may be said in round numbers that one-fifth of the troops of the British army are incapacitated for service during the course of the year and this solely through contracting some form of venereal disease. Judging from our own investigations at Aldershot and elsewhere we may conclude that the case is not overdrawn. The figures vary somewhat, but, roughly speaking, a fifth is certainly no exaggeration, for at Aldershot we found that the proportion of soldiers suffering from venereal disease during the year was equal to a quarter of the entire force. The importance of these calculations will at once be understood when compared with similar figures given for the French and Russian armies. For France we find that during the four years in question the prevalence of venereal disease in the army was equal to 45 8, 43·8, 43·7, and 40 0 per 1000 soldiers. For Russia the figures are 40·7, 43·0, 41·5, and 44 6 per 1000 soldiers. Thus it will be seen that venereal disease is four or five times more prevalent in the English than in the French or Russian armies. For one French or Russian soldier who is incapacitated from service because he is suffering from venereal disease there are four or five English soldiers similarly incapacitated. Putting every other consideration aside, surely, as a mere matter of military defence, this is an evil that should not be neglected.

In dealing with the Contagious Diseases Act it has been shown that there is not to-day more venereal disease prevalent in the British Army than there was previously to the abolition of the Act, and there are figures that seem to confirm this theory. But we have, in answer, pointed out that the tone of the army has greatly improved, that a higher class of men now serve in the ranks, that great cleanliness is observed by both the men and the women, and that there is a more general use of antiseptics and a more widespread knowledge of the precautions that can be taken. All this has contributed to prevent matters being worse than they are, but surely they are bad enough. The argument that the Contagious Diseases Acts were of no use because the statistics of to-day show no very marked increase in the prevalence of venereal diseases as compared with what existed many years ago when the Act was in force loses all its significance when we put the British army by the side of the armies of France and Russia. In those countries the Contagious Diseases Act, or its equivalent, is in full operation, and we see by the figures given the enormous advantage that has resulted. But, just as we argue that matters would be even worse than they actually are in England had not the general tone and education of the army improved of late years, so it may be urged that the general tone of the continental armies is much superior to that of the English army. It may be maintained, with some semblance of reason, that if there is so little venereal disease in the French army it is because everybody must be a soldier and serve in the ranks; therefore, the whole social tone of the army is much higher, since men of elevated rank and the best education are to be found serving as common soldiers. Apart from the very doubtful question as to whether men of high rank are much more moral than men of low rank, these arguments as to the high social tone of the French rank-and-file certainly do not apply to the Russian rank-and-file, and we find that if there is any difference there is even less venereal disease in the Russian than in the French army. If we take an average of the four years mentioned above the prevalence of venereal disease among the English troops amounted to 207 per 1000 per annum, among the French soldiers to 44·3 per 1000, and among the Russians to 42·4 per 1000. Thus it cannot be said that it is the high social tone of the French army that reduces the proportion of venereal disease, for we have still less venereal disease among the unlettered peasants who in the main constitute the Russian army.

But to those persons who, by all manner of ingenious and roundabout arguments, try to prove that the Contagious Diseases Acts can do no good we may oppose the still more significative experience acquired in the Italian army. There the law which enforced the medical examination of women was abrogated. The prevalence of venereal disease in the Italian army was about the same as in the French and Russian armies. It varied from 4 to 5 per cent. per annum. No sooner was the law abolished than the prevalence increased and in a short time 10 per cent. of the troops contracted venereal disease in the course of a year. After three years of trial the Italian Government reversed its former decision and the law regulating prostitution was re-established. This is far more conclusive than any argument that can be derived from the experience acquired in England. As the English law was only enforced in a few towns it was very defective in its operation, and it is not surprising if its abolition failed to produce any very marked change. In Italy, as in all other continental countries, the law did not apply merely to garrison towns but to the entire country. It, therefore, did produce very great and beneficent results, as is shown by the fact that the prevalence of venereal disease was simply doubled when the law was abolished, and that after only three years of experience the Government and the country were glad to return to the old and successful methods of dealing with this dread disease. As for England, we have argued the question so often and from so many points of view that we do not propose to again travel over the well-worn ground on this occasion. We are simply anxious, at a moment when the public mind is preoccupied with the question of military armaments, to point out that one of the most practical means of increasing the fighting strength of both army and navy would be to protect our soldiers and sailors from venereal disease in the same manner as the armies and navies of continental countries are protected.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A MEETING of the committee of the Association of Fellows of the Royal College of Surgeons of England was held on the 10th inst. at 25, Grosvenor-street, W., Mr. George Pollock, President, being in the chair. The minutes of the last meeting were read and confirmed.

Mr. H. Percy Dunn, the honorary secretary, reported that he had received a letter from Mr. Victor Horsley in reply to the invitation of the committee that he should come forward in the interests of the Association as a candidate for a seat on the Council of the College at the forthcoming election. Mr. Victor Horsley replied in effect that the very nature of the request made it difficult for him to refuse, but he was so deeply committed to the furtherance and establishment of the principles of medical defence that he could not venture to accept fresh and what would unquestionably be grave responsibilities, and he hoped that the committee would accept his very grateful thanks for their confidence and kindness, understanding that it was only other professional work which rendered him unable to serve, as he should greatly like to do, the objects of the Association. Mr. Percy Dunn further reported that in accordance with the instructions of the committee he had communicated with the provincial Fellow whose name had been brought forward as a possible candidate to represent the Association at the College election and that a reply had been received from him to the effect that he would be willing to come forward if nominated by the Association.

At this stage a member of the committee mentioned that he had just heard that the President of the Association, Mr. George Pollock, had intimated to Mr. Holmes that if it were the desire of the committee that he should stand he would willingly do so.

On the motion of Dr. Robert Barnes and Mr. Gant it was unanimously agreed that the offer of Mr. Pollock should be accepted, and as it was felt to be undesirable to bring forward another candidate Mr. Percy Dunn was asked to communicate with the provincial Fellow above referred to upon this subject.

It was reported to the committee that Mr. Clement Lucas of Guy's Hospital was a candidate for the Council, and that in reply to certain questions addressed to him by Mr. Norton he had expressed views almost entirely in unison with those

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advocated by the Association. The hope was therefore expressed that Mr. Clement Lucas would be successful in securing one of the vacant seats; especially as with the exception of Mr. Pollock he was the only candidate who was known to have stated his intention to support a reforming policy including the resolution passed in favour of giving direct representation to the Members of the College by so large a majority of the Fellows at the last half-yearly meeting of Fellows held in January. It was decided to send a circular to the members of the Association in reference to the approaching elections.

A notice of motion which Mr. Holmes intended to send to the secretary of the College for the meeting of the Fellows in July was read. The terms of the motion are the following: "That the Council be requested to instruct its representative on the General Medical Council to forward in every way which seems feasible the objects of the Civil Rights Defence Committee in the case of Mr. R. B. Anderson."

A resolution was passed instructing the honorary secretary to ask Mr. Victor Horsley to second the motion of Mr. Holmes, and if he was unable to do so to secure the services of Mr. George Jackson of Plymouth for that purpose.

It was decided to hold another meeting of the committee before the election on July 2nd, and there being no other business the committee adjourned.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On the Pollution of the River Dee and its Tributaries, by Dr. BRUCE LOW.[1]—This is one of the most comprehensive reports which have been issued by the Medical Department of the Local Government Board on the question of river pollution, and it has the more interest and importance because the Dee forms in its lower reaches the water-supply for the city of Chester and because a Bill is now before Parliament for the erection of a dam across the river below Chester which, it is contended, will go materially to diminish the pollution to which the river is alleged to be subjected at the point of the water intake. For the moment, however, it will be convenient to refer to the pollutions that take place above the water intake. The Dee has its origin in the overflow waters of Bala Lake, and, receiving a number of tributaries, it flows on for some ninety miles to the sea. In this course it touches on five separate counties and with its affluents comes into relation with no less than twenty-one sanitary districts within the watershed of the river. A description of these numerous districts is given by Dr. Low in special relation with their influence on the water of the Dee, and the detailed attention given to this subject may be judged of when it is stated that the report covers no less than forty-five folio pages of printed matter, together with plates and illustrations. Anything more disturbing to the consumers of the Dee water can hardly be conceived, for the sewage and other filth, including manufacturing refuse, of nearly the entire area find their way untreated into the main river or its branches. Llangollen is a gross offender, and photographic plates are inserted in the report to show how sewer outfalls, watercloset soil-pipes, privies, &c., all open out directly into the bed of the river, the filth to be washed down in the direction of Chester at the next flush. Summarising this description of Llangollen Dr. Low says: "In a word, the liquid and solid excrement of nearly the entire population of Llangollen goes at once to the Dee"; and he recalls the fact that though the normal population of the place may not exceed 3000 it must be some 5000 at least when in the summer months the lodging-houses and the hotels are full of visitors. Indeed, the story which Dr. Low sets out from the beginnings of the streams until within a comparatively small distance of the point where the intake of the Chester Waterworks Company is placed is, as he pithily and forcibly puts it, an "almost endless catalogue of contaminations of the Dee and its affluents by the excrement of men and animals, by trade processes, and by other impurities." And he adds that amongst the principal offenders against the law in this matter are many authorities who are entrusted by the Legislature with the maintenance of public health. But this is not all. Chester itself grossly pollutes the river by its sewage effluent and otherwise below the city and the water intakes, some of the stuff being spoken of as a torrent of foul sewage, black as ink, suddenly forced into and blackening the river nearly half-way across. And the position of these pollutions below the point of intake unfortunately affords no safety, for at spring tides the water running in at the mouth of the river overtops the Dee weir from one to six feet, carrying with it filth, dead dogs, &c., and the tidal influence is felt as far as twelve miles above Chester. Some have contended that owing to the flow of fresh water from above—i.e., the water polluted as we have described—no returning filth can get up to the intakes; but a great effort is now being made to get Parliamentary powers to prevent this very pollution from below by the erection of another weir. It is to be hoped this action indicates that the authorities are now more alive to the necessities of the case than they were in 1892, when, on Dr. Ballard's report, a committee of the corporation decided that the water was of a "high standard of excellence," and yet in the same breath urged that power should be procured to stay the pollutions. But no stoppage of filth from below will get rid of the almost endless catalogue of pollutions from above, and no trust should be placed on mere filtration when the source of the supply is fouled with such a bulk of excremental and other filth as is here in question.

On the Sanitary Circumstances and Administration of Cowbridge, by Dr. BRUCE LOW.—This inquiry was instituted on a complaint by the Glamorganshire County Council to the effect that the corporation had not properly enforced the provisions of the Public Health Act. Cowbridge is little more than a village, but unhappily it is a separate entity for public health purposes by reason of its being a borough. The population at the last census was only 1377, occupying 263 houses, and it was more than usually populous at the time owing to an influx of railway navvies. The public water-supply is from six sources. One seems good and wholesome, a second may be so, but the four others vary from being derived from wells sunk close to cesspits or burial grounds down to supplies that are actually offensive to the nose and to taste. Private wells hardly differ from the public ones as to risk of pollution. With respect to sewerage Dr. Low reports that there is no proper system, that the town ditch receives the contents of highway drains which have been turned into sewers, and that cesspools soak into the surrounding soil, which is thereby greatly polluted. Privies and cesspits with overflows add to the mischief; or, where near the river bank, empty directly into the stream. A few earth-closets, however, have been provided. There is no public scavenging and some gross accumulations of refuse result. The slaughter-houses and most of the common lodging-houses are unsatisfactory, and by-laws are in some respects not enforced. House accommodation is in many respects bad, and formerly it was reported that much of the "wretched house property" belonged directly or indirectly to town councillors, a statement now quoted by Dr. Low. Money has been spent in the little town, but it has not been devoted to its most pressing needs; indeed, after discussing the administration and past history of the place in connexion with the present faulty conditions Dr. Low arrives definitely at the conclusion that the contention of the county council has been made out, and that the town council have been especially neglectful in not providing a proper water-supply and sewerage for their district. No other conclusion was possible; indeed, the difficulty is rather to detect what sanitary functions have been carried out by this authority.

[1] Eyre and Spottiswoode, East Harding-street, E.C.; John Menzies and Co., Edinburgh and Glasgow; Hodges, Figgis, and Co., Limited, Dublin. 1895. Price 2s. 3d.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6571 births and 3473 deaths were registered during the week ending June 13th. The annual rate of mortality in these towns, which had been 17·6 and 17·8 per 1000 in the two preceding weeks, declined again last week to 16·7. In London the rate was 16·5 per 1000, while it averaged 16·9 in the thirty-two provincial towns. The lowest rates in these towns were

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ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON—MAY, 1896.

(Specially compiled for THE LANCET.)

SANITARY AREAS.	Estimated population in the middle of 1896.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.										Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	4,435,955	12	1558	949	—	157	9	16	421	—	3122	9·2	—	464	58	179	354	—	24	—	42	1121	3·3	5837	17·2	132
West Districts.																										
Paddington	123,942	—	34	28	—	2	—	—	10	—	74	7·8	—	17	—	6	3	—	—	—	2	28	2·9	131	14·1	101
Kensington	167,993	2	53	17	—	4	—	1	14	—	91	7·1	—	37	2	5	15	—	1	—	2	62	4·8	237	18·4	186
Hammersmith	111,248	—	37	11	—	4	—	—	7	—	59	6·9	—	8	—	4	1	—	1	—	—	14	1·6	117	13·7	104
Fulham	124,029	—	46	28	—	2	1	1	5	—	83	8·7	—	9	1	4	5	—	—	—	1	20	2·1	135	14·2	140
Chelsea	100,815	—	37	30	—	2	—	—	11	—	80	10·3	—	22	1	6	10	—	—	—	—	39	5·0	146	18·9	152
St. George Hanover-square	73,054	—	21	9	—	1	—	—	7	—	38	6·8	—	2	1	1	3	—	—	—	—	7	1·2	63	11·2	80
Westminster	53,595	—	19	3	—	1	—	—	2	—	25	6·1	—	1	2	—	1	—	2	—	1	7	1·7	71	17·3	160
St. James Westminster	22,735	—	6	3	—	—	—	—	1	—	10	5·7	—	—	1	—	—	—	—	—	1	2	1·1	25	14·3	200
North Districts.																										
Marylebone	136,239	—	67	20	—	9	—	—	13	—	109	10·4	—	9	—	7	11	—	1	—	2	30	2·9	213	20·4	129
Hampstead	79,831	—	15	12	—	6	—	—	5	—	38	6·2	—	3	—	2	3	—	—	—	—	8	1·3	58	9·5	83
St. Pancras	233,347	1	53	41	—	2	—	—	26	—	123	6·9	—	10	3	6	11	—	2	—	2	32	1·8	313	17·5	145
Islington	340,007	2	143	100	—	16	—	5	26	—	292	11·2	—	20	5	30	26	—	2	—	3	86	3·3	464	15·5	115
Stoke Newington	86,329	—	11	10	—	2	—	—	6	—	29	10·4	—	2	1	2	6	—	1	—	—	12	4·3	42	15·1	66
Hackney	219,834	1	95	29	—	7	—	—	26	—	158	9·4	—	12	1	6	17	—	—	—	5	41	2·4	233	13·8	113
Central Districts.																										
St. Giles	37,170	—	12	10	—	2	—	—	4	—	28	9·8	—	10	—	—	3	—	—	—	—	13	4·6	51	17·9	181
St. Martin-in-the-Fields	13,294	—	4	3	—	—	—	—	—	—	7	6·9	—	6	—	2	—	—	—	—	1	9	8·8	25	24·5	333
Strand	22,008	—	7	2	—	—	—	—	1	—	10	6·9	—	9	—	1	1	—	—	—	—	11	6·5	47	27·8	306
Holborn	31,940	—	8	5	—	2	1	—	8	—	24	9·8	—	2	—	1	4	—	—	—	—	7	2·9	53	21·6	125
Clerkenwell	64,762	1	16	20	—	7	—	—	7	—	51	10·3	—	4	—	1	4	—	1	—	1	11	2·2	93	18·7	132
St. Luke	40,362	—	13	12	—	3	—	—	12	—	40	12·9	—	5	—	1	1	—	1	—	—	8	2·6	72	23·3	134
City of London	32,845	—	16	6	—	—	—	—	2	—	24	9·5	—	2	—	—	1	—	—	—	—	3	1·2	47	18·7	194
East Districts.																										
Shoreditch	122,678	—	28	14	—	6	1	—	19	—	68	7·2	—	15	2	3	11	—	1	—	1	33	3·5	178	18·9	142
Bethnal Green	130,282	2	85	36	—	6	1	—	26	—	156	15·6	—	14	4	8	21	—	2	—	1	50	5·0	194	19·4	107
Whitechapel	76,143	—	27	23	—	1	—	—	13	—	64	11·0	—	5	1	2	6	—	—	—	—	14	2·4	108	18·5	95
St. George-in-the-East	45,036	—	35	15	—	3	—	—	3	—	56	16·2	—	1	—	1	3	—	1	—	—	6	1·7	77	22·3	133
Limehouse	66,770	1	22	24	—	—	—	1	2	—	50	11·5	—	3	2	5	6	—	—	—	—	16	3·7	95	21·8	152
Mile End Old Town	108,645	—	40	38	—	4	—	1	10	—	93	11·2	—	12	2	6	6	—	—	—	—	26	3·1	129	15·5	94
Poplar	172,319	—	63	54	—	10	1	2	26	—	156	11·8	—	18	1	7	17	—	—	—	1	44	3·3	252	19·1	136
South Districts.																										
St. Saviour Southwark	26,429	—	4	3	—	—	—	—	1	—	8	3·9	—	—	—	2	2	—	—	—	—	4	2·0	50	21·7	105
St. George Southwark	60,276	—	11	15	—	2	—	—	3	—	31	6·7	—	8	1	2	4	—	—	—	1	16	3·5	95	20·5	148
Newington	120,211	—	34	15	—	8	—	1	11	—	69	7·5	—	9	3	4	11	—	1	—	1	29	3·1	178	19·3	165
St. Olave Southwark	13,147	—	9	1	—	—	—	—	2	—	12	11·9	—	1	—	—	1	—	—	—	—	2	2·0	17	16·8	158
Bermondsey	83,689	—	33	12	—	9	—	—	4	—	58	9·0	—	6	1	4	10	—	1	—	2	24	3·7	135	21·0	150
Rotherhithe	41,064	—	10	5	—	2	—	—	7	—	24	7·6	—	1	—	—	5	—	1	—	1	8	2·6	60	19·0	133
Lambeth	287,211	—	92	31	—	7	1	2	20	—	153	6·9	—	16	5	7	17	—	2	—	3	50	2·3	363	16·5	110
Battersea	168,825	—	68	32	—	3	—	—	10	—	113	8·7	—	46	2	7	28	—	—	—	1	84	6·5	254	19·6	166
Wandsworth	191,922	—	60	16	—	7	1	—	20	—	104	7·1	—	24	5	2	25	—	1	—	1	68	4·6	229	15·6	158
Camberwell	256,672	1	76	88	—	6	—	—	16	—	187	9·5	—	10	4	17	23	—	1	—	2	57	2·9	291	14·8	120
Greenwich	177,286	—	67	71	—	4	1	—	22	—	165	12·1	—	22	3	8	19	—	1	—	2	55	4·0	224	17·2	132
Lewisham (excluding Penge)	84,995	—	25	29	—	3	—	1	3	—	61	9·4	—	10	1	3	1	—	1	—	2	18	2·8	104	16·0	110
Woolwich	43,222	1	5	6	—	1	—	—	3	—	16	4·8	—	21	—	—	5	—	—	—	1	27	8·1	82	24·7	207
Lee	39,564	—	11	8	—	—	—	1	3	—	23	7·6	—	2	1	1	3	—	—	—	—	7	2·3	37	12·2	123
Plumstead	64,203	—	39	14	—	3	1	—	4	—	61	12·4	—	20	2	5	4	—	1	—	1	33	6·7	96	19·5	179
Port of London	—	—	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 43 cases of membranous croup.

† Including deaths from membranous croup.

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9·1 in Norwich, 11·3 in Derby, 12·1 in Plymouth, and 12·6 in Leicester; the highest rates were 20·4 in Oldham, 21·2 in Sunderland, 21·7 in Bolton, and 24·3 in Manchester. The 3473 deaths included 541 which were referred to the principal zymotic diseases, against 540 and 559 in the two preceding weeks; of these, 221 resulted from measles, 117 from whooping-cough, 69 from diphtheria, 65 from diarrhœa, 39 from scarlet fever, and 30 from "fever" (principally enteric). No fatal case of any of these diseases was recorded in Swansea; in the other towns they caused the lowest death-rates in Huddersfield, Bradford, Brighton, and Birmingham; and the highest rates in Salford, Halifax, Burnley, Manchester, and Hull. The greatest mortality from measles occurred in Croydon, Bristol, Manchester, Hull, and Gateshead; from whooping-cough in Cardiff, Burnley, Salford, Hull, and Halifax; from "fever" in Wolverhampton; and from diarrhœa in Leicester. The mortality from scarlet fever showed no marked excess in any of the large towns. The 69 deaths from diphtheria included 49 in London, 5 in Birmingham, 2 in Liverpool, and 2 in Leicester. No fatal case of small-pox was registered in any of the thirty-three large towns. There were 27 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 13th inst., against 22, 19, and 25 at the end of the three preceding weeks; 9 new cases were admitted during the week, against 5, 3, and 8 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2781, against numbers increasing from 2523 to 2717 on the six preceding Saturdays; 352 new cases were admitted during the week, against 305, 297, and 318 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 230 and 213 in the two preceding weeks, further declined to 183 last week, and were 53 below the corrected average. The causes of 55, or 1·6 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Oldham, Blackburn, Newcastle-upon-Tyne, and in ten other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Sheffield, and Hull.

HEALTH OF SCOTCH TOWNS

The annual rate of mortality in the eight Scotch towns, which had been 19·2 per 1000 in each of the three preceding weeks, declined again to 18·5 during the week ending June 13th, but exceeded by 1·8 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 12·0 in Perth and 14·7 in Edinburgh to 18·4 in Aberdeen and 21·2 in Glasgow. The 539 deaths in these towns included 23 which were referred to whooping-cough, 21 to measles, 16 to diarrhœa, 4 to scarlet fever, 4 to "fever," and 1 to diphtheria. In all, 69 deaths resulted from these principal zymotic diseases, against 83 and 81 in the two preceding weeks. These 69 deaths were equal to an annual rate of 2·4 per 1000, which was slightly below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had declined from 38 to 26 in the four preceding weeks, further fell to 23 last week, of which 17 occurred in Glasgow and 4 in Paisley. The deaths from measles, which had been 20 and 25 in the two preceding weeks, declined again to 21 last week, and included 20 in Glasgow. The 4 deaths referred to different forms of "fever," corresponded with the number in the preceding week, and were all recorded in Glasgow. The fatal cases of scarlet fever, which had increased from 3 to 8 in the four preceding weeks, declined to 4 last week, and included 2 in Glasgow. The deaths from diseases of the respiratory organs in these towns, which had been 97 and 93 in the two preceding weeks, further declined to 82 last week, and were slightly below the number in the corresponding week of last year. The causes of 32, or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 23·9 and 19·8 per 1000 in the two preceding weeks, rose again to 23·7 during the week ending June 13th. During the past eleven weeks of the current quarter the death-rate in the city has averaged 23·1 per 1000, the rate during the same period being 18·1 in London and 16·9 in Edinburgh. The 159 deaths registered in Dublin showed an increase of 26 upon the number in the preceding week, and included 10 which were referred to the principal zymotic diseases, against 9 and 8 in the two preceding weeks; of these, 4 resulted from whooping-cough, 3 from scarlet fever, 2 from "fever," 1 from diarrhœa, and not one either from small-pox, measles, or diphtheria. These 10 deaths were equal to an annual rate of 1·5 per 1000, the zymotic death-rate during the same period being 3·1 in London and 0·9 in Edinburgh. The 4 fatal cases of whooping-cough exceeded the number recorded in any week during the current year. The 3 deaths from scarlet fever showed a further increase upon recent weekly numbers, while the mortality from diarrhœa showed a decline. The deaths referred to different forms of "fever," which had been 5 and 3 in the two preceding weeks, further fell to 2 last week. The 159 deaths in Dublin last week included 31 of infants under one year of age, and 36 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons exceeded the numbers recorded in the preceding week. Two inquest cases and 2 deaths from violence were registered; and 54, or more than a third, of the deaths occurred in public institutions. The causes of 7, or more than 4 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING MAY, 1896.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during May in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 9·2 per 1000 of the estimated population. In the three preceding months the rates had been 8·8, 8·4, and 7·5 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in Westminster, St. James Westminster, Hampstead, Strand, St. Saviour Southwark, St. George Southwark, and Woolwich; while they showed the largest excess in St. Luke, Bethnal Green, St. George-in-the-East, Poplar, St. Olave Southwark, Greenwich, and Plumstead. The prevalence of small-pox in London during May showed a further decline from that recorded in recent months, only 12 cases being notified, including 2 in Kensington, 2 in Islington, and 2 in Bethnal Green sanitary areas. The Metropolitan Asylum Hospitals contained 15 small-pox patients at the end of May, against 45, 33, and 10 at the end of the three preceding months; the weekly admissions averaged 4, against 6, 7, and 4 in the three preceding months. The prevalence of scarlet fever in London showed a marked increase during May; this disease was proportionally most prevalent in Marylebone, Hackney, City of London, Bethnal Green, St. George-in-the-East, Limehouse, Battersea, and Plumstead sanitary areas. The Metropolitan Asylum Hospitals contained 2614 scarlet fever patients at the end of May, against 2867, 2688, and 2464 at the end of the three preceding months; the weekly admissions averaged 273, against 258, 234, and 208 in the three preceding months. The prevalence of diphtheria in London during May showed an increase upon that recorded in the preceding month; among the various sanitary areas this disease showed the highest proportional prevalence in Clerkenwell, Whitechapel, St. George-in-the-East, Limehouse, Mile End Old Town, Poplar, Camberwell, Greenwich, and Lewisham. There were 703 diphtheria patients under treatment in the Metropolitan Asylum Hospitals at the end of May, against 715, 704, and 713 at the end the three preceding months; the weekly admissions averaged 95, against 99 and 89 in the two preceding months. The prevalence of enteric fever in London showed a slight decline from that recorded in the preceding month; this disease was proportionally most prevalent in Hampstead, Clerkenwell, Newington, and Bermondsey sanitary areas. Erysipelas was proportionally most prevalent in Holborn, St. Luke, Bethnal Green, Whitechapel, and Poplar sanitary areas. The 16 cases of puerperal fever notified during May included 5 in Islington, 2 in Poplar, and 2 in Lambeth sanitary areas.

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The mortality statistics in the table relate to the deaths of persons actually belonging to the various sanitary areas, the deaths occurring in the institutions of London having been distributed among the different sanitary areas in which the patients had previously resided. During the four weeks ending Saturday, May 30th, the deaths of 5837 persons belonging to London were registered, equal to an annual rate of 17·2 per 1000, against 20·0, 19·4, and 18·7 in the three preceding months. The lowest death-rates during May in the various sanitary areas were 9·5 in Hampstead, 11·2 in St. George Hanover-square, 12·2 in Lee, 13·7 in Hammersmith, 14·1 in Paddington, 14·2 in Fulham, and 14·3 in St. James Westminster; the highest rates were 21·6 in Holborn, 21·8 in Limehouse, 22·3 in St. George-in-the-East, 23·3 in St. Luke, 24·5 in St. Martin-in-the-Fields, 24·7 in St. Saviour Southwark and in Woolwich, and 27·8 in Strand. During the four weeks of May 1121 deaths were referred to the principal zymotic diseases in London; of these, 464 resulted from measles, 354 from whooping-cough, 179 from diphtheria, 58 from scarlet fever, 42 from diarrhœa, 24 from enteric fever, and not one from small-pox. These 1121 deaths were equal to an annual rate of 3·3 per 1000; among the various sanitary areas the lowest death-rates from these diseases were recorded in Hammersmith, St. George Hanover-square, St. James Westminster, Hampstead, and City of London, and the highest rates in Chelsea, St. Martin-in-the-Fields, Strand, Bethnal Green, Battersea, Woolwich, and Plumstead. The 464 deaths referred to measles were 176 above the corrected average number in the corresponding periods of the ten preceding years; among the various sanitary areas this disease showed the highest proportional fatality in Kensington, Chelsea, St. Giles, St. Martin-in-the-Fields, Strand, Battersea, Woolwich, and Plumstead. The 58 fatal cases of scarlet fever were within 4 of the corrected average number; the mortality from this disease showed no marked excess in any of the sanitary areas. The 179 deaths from diphtheria were 56 above the corrected average number; among the various sanitary areas this disease was proportionally most fatal in Chelsea, Marylebone, St. Martin-in-the-Felds, Bethnal Green, Limehouse, Mile End Old Town, Camberwell, Greenwich, and Plumstead. The 354 fatal cases of whooping-cough were as many as 126 above the corrected average number; this disease showed the highest proportional fatality in Stoke Newington, Holborn, Bethnal Green, Limehouse, Bermondsey, Rotherhithe, Battersea, and Wandsworth sanitary areas. The 24 deaths referred to enteric fever were 11 below the corrected average number; there was no marked excess of enteric fever mortality in any of the sanitary areas. The 42 fatal cases of diarrhœa were 17 below the corrected average number. In conclusion, it may be stated that the mortality in London during May from these principal zymotic diseases were nearly 40 per cent. above the average.

Infant mortality in London during May, measured by the proportion of deaths under one year of age to births registered, was equal to 132 per 1000. Among the various sanitary areas the lowest rates of infant mortality were recorded in Paddington, St. George Hanover-square, Hampstead, Stoke Newington, Whitechapel, and Mile End Old Town; and the highest rates in Kensington, St. James Westminster, St. Giles, St. Martin-in-the-Fields, Strand, City of London, and Woolwich.

THE SERVICES.

ARMY MEDICAL STAFF.

Surgeon-Lieutenant John Herbert Whitehead resigns his commission.

INDIA AND THE INDIAN MEDICAL SERVICES.

Brigade-Surgeon-Lieutenant-Colonel G. Hutcheson, M.D., re-appointed to be Sanitary Commissioner, North-Western Provinces and Oudh. The following promotions are made in the Madras Medical Establishment:—Surgeon-Lieutenant-Colonels to be Brigade-Surgeon-Lieutenant-Colonels: W. E. Johnson, M.D., vice Brigade-Surgeon-Lieutenant-Colonel T. J. McGann, promoted; G. F. Bevan, vice Brigade-Surgeon-Lieutenant-Colonel A. L. Hackett, who has retired; A. F. Dobson, M.B., vice Brigade-Surgeon-Lieutenant-Colonel P. R. Martin, who has retired; C. Little, M.D., vice Brigade-Surgeon-Lieutenant-Colonel J. F. Sargent, deceased; A. N. Rogers Harrison, vice Brigade-Surgeon-Lieutenant-Colonel W. Price, M.D., who has retired.

NAVAL MEDICAL SERVICE.

Deputy Inspector-General of Hospitals and Fleets Alexander Turnbull, M.D., has been promoted to the rank of Inspector-General of Hospitals and Fleets in Her Majesty's Fleet. Fleet-Surgeon Richard William Coppinger, M.D., has been promoted to the rank of Deputy Inspector-General of Hospitals and Fleets in Her Majesty's Fleet. The following appointments are announced. Deputy Inspectors-General of Hospitals and Fleets: H. Macdonnell to Chatham Hospital; R. W. Coppinger to Haslar Hospital; J. H. Martin, D.S.O., to Malta Hospital. Fleet-Surgeon T. D. Gimlette to Haslar Hospital. Staff-Surgeon S. W. Vasey to the *Caledonia*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain Josiah Telfer Thomas, 1st Volunteer Battalion the Duke of Cornwall's Light Infantry, to be Surgeon-Captain.

VOLUNTEER CORPS.

Rifle: 3rd Volunteer Battalion the Northumberland Fusiliers: William George Richardson, M.B., to be Surgeon-Lieutenant. 2nd (Prince of Wales's) Volunteer Battalion the Devonshire Regiment: John Harley Gough, gent., to be Surgeon-Lieutenant. 1st Volunteer Battalion the Leicestershire Regiment: William Pemberton Peake, gent., to be Surgeon-Lieutenant. 1st Volunteer Battalion the Royal Welsh Fusiliers: John Edward Henry Davies, gent., to be Surgeon-Lieutenant. 5th Volunteer Battalion the Cameronians (Scottish Rifles): Surgeon-Captain H. Arthur, M.D., to be Surgeon-Major. 1st Volunteer Battalion the Sherwood Foresters (Derbyshire Regiment): Lieutenant R. H. Luce, M.B., from the 2nd Volunteer Battalion the Wiltshire Regiment, to be Surgeon-Lieutenant.

DEATHS IN THE SERVICES.

Fleet-Surgeon William Gordon James Ayre, R.N. (retired), at Cheltenham on the 9th inst., in his seventieth year. He was appointed a Surgeon in the Navy in 1851, and was Assistant-surgeon of the *Penelope* on the West Coast of Africa. He served in the *Recruit* during the Russian War in the Black Sea, 1855, and was present at the expedition to Keitch and the operations in the Sea of Azov (Crimean and Turkish medals and clasp for Azov).

VOLUNTEER MEDICAL ASSOCIATION AMBULANCE CHALLENGE SHIELD.

The sub-committee appointed by the council of the association have decided that the annual competition for the shield shall take place on Saturday, July 18th. The competition will be held at Wellington Barracks, by kind permission of the officer commanding, and squads intending to compete must be on the ground at four o'clock. The annual mess dinner of the Volunteer medical officers will take place at Limmer's Hotel at 7.30 on the same evening. Further particulars can be obtained on application to the honorary secretaries, 20, Hanover-square, London, W.

THE SOUDAN CAMPAIGN.

There is reason to believe that the highly successful attacks that have been recently made upon the Dervishes and the capture of Firket, followed by the taking of Suarda, will have far-reaching results. The Anglo-Egyptian force continues to enjoy good health. At Wady Halfa the sick recently numbered only 5·6 per cent. The hospitals are working very satisfactorily. The wounded and the prisoners captured from the Dervish force are well cared for.

JAPANESE LOSSES IN FORMOSA.

The following statistics, published in several Japanese newspapers, are apparently derived from official sources:—From May 26th to Nov. 15th, 1895, the average strength of the Japanese Army of occupation in Formosa was 95,000 of all ranks; killed in action, or died from wounds during the period, 195; died from disease in the various hospitals, 4447; invalided, 21,748; remaining under treatment, 5246; discharged to duty, 7162.

THE GARRISON IN EGYPT.

We are very glad to learn that the British troops in Egypt have not suffered from the cholera epidemic that has recently prevailed in Alexandria, Cairo, and other places. One fatal attack occurred in the person of a soldier stationed at the

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citadel in Cairo, but no other cases have since arisen among the troops. Their health is stated to be excellent.

Deputy-Surgeon-General G. S. Ryerson, M.D., Canadian Militia, Toronto, who has recently been through a course at the Volunteer Ambulance School of Instruction, obtained a certificate of proficiency at an examination held before a special board of Army medical officers on June 2nd at the Station Hospital, Rochester-row, S.W.

The Rev. Sir Borradaile Savory, Bart., M.A., son of the late Sir William Savory, has accepted the acting chaplaincy to the Volunteer Medical Staff Corps (the London companies).

Surgeon-Lieutenant-Colonel W. Campbell, of the Grenadier Guards, has been again selected for the post of Principal Medical Officer at the Bisley Rifle meeting.

The Hampshire Militia Medical Staff Corps will be encamped at the Royal Victoria Hospital, Netley, from the 3rd to 29th prox.

Correspondence.

"Audi alteram partem."

"ISOLATION AND THE PUBLIC HEALTH ACT."

To the Editors of THE LANCET.

SIRS,—Dr. Benham, in your issue of the 13th inst., calls attention to the important subject of isolation in infectious diseases. No two opinions can exist as to the importance of early diagnosis and the wisdom of removal to an isolation hospital of cases of small-pox and typhus fever; yet in cases of scarlet fever, diphtheria, and enteric fever something may be said against indiscriminate removal. I believe the practice of removal to hospital after the receipt of the notification certificate differs almost in every district according to the opinions held by the medical officer of health or sanitary authority. I know that some medical officers of health believe that every case of infectious disease should be removed to hospital for isolation and treatment, so that I am pleased that Dr. Benham has received a reply from the Local Government Board which leaves one to imply that the consent of the medical attendant should be sought before removal. The Notification Act, 1889, was not passed for the purpose of enabling the sanitary authority to effect removal of *all* cases but to enable the medical officer of health to early become acquainted with outbreaks of epidemic disease. As an old sanitarian and a general practitioner but a young medical officer of health, I agree with many of Dr. Benham's reasons for allowing the treatment of infectious cases such as scarlet fever and diphtheria at home, although I do not believe that patients are longer in recovering when taken to hospital or that they have a better chance of recovery when left at home, and I cannot subscribe to the statement that it is an easy matter to isolate cases of scarlet fever or diphtheria completely in an ordinary dwelling house; but I do believe it can be done sufficiently, and this meets the requirements of the case. I have had as a private practitioner my own little "grievances" in reference to the removal of cases, and now as a medical officer of health have to do my duty and prevent the spread of infectious diseases among the ratepayers. Now unless my fellow practitioners give me a loyal support I cannot hope to do this. A short experience which I will relate I have every reason to be satisfied with, and as my sanitary committee are desirous of keeping down the expenses of the infectious disease hospital from a ratepayer's point of view I must do what I can to encourage my medical brethren to treat as many cases as they can outside, providing sufficient isolation is possible, only removing such cases as they request. When I took office small-pox and typhus fever were rampant, and scarlet fever was prevalent in different parts of the town. I called my *confrères* together and laid down a line of action which I intended to follow—namely, to take into hospital only cases of small-pox and typhus fever, and till these no longer occured other infectious cases would require to be treated at their own homes, and I trusted my *confrères* would assist me, especially in regard to isolation in the patient's own homes. Expressions of opinion were given, and some thought isolation in a cottage impossible, but all agreed to assist me as far as they could. I was willing to see all doubtful cases of typhus fever or small-pox with them and to ensure early removal. One of my sanitary inspectors was given the extra duty of visiting periodically and systematically all houses in which scarlet fever was present in order to see that everything was being carried out as far as could be under the circumstances, and supplying an abundance of disinfectants. In four months I was enabled to report to my committee that small-pox was stamped out and typhus fever had disappeared, scarlet fever being kept within bounds. The only cases of infection spreading was in the same house, just as we have had since even after early removal to hospital, where the other children had been allowed to associate with the patient; but we had some good cases of sufficient isolation in very poor homes and in insanitary houses where the mother nursed the patient in a separate room and carried out all our instructions. Now that I have my scarlet fever block ready for cases I find that mild cases of this disease are difficult of diagnosis, and that it is better to leave the patient under the medical attendant till all doubt disappears rather than expose the child to infection in the hospital, and put the landlord and sanitary authorities to needless expense in stoving and cleansing the house if the previous diagnosis is not confirmed. If all private practitioners were like Dr. Benham and would take the trouble to insist on the "necessary precautions" being taken, they would lighten the hearts and lessen the responsibilities of medical officers of health in preventing the spread of these infectious diseases and would retain their own private cases as well as teach parents and guardians that they have a duty towards those entrusted to their charge. The importance of the subject is my apology for the length of this communication.

I am, Sirs, yours, faithfully,

WM. BERRY, F.R.C.S.Irel., D.P.H.,
Medical Officer of Health of Wigan.

Wigan, June 15th, 1896.

POINTS IN THE NEW LONDON UNIVERSITY QUESTION.

To the Editors of THE LANCET.

SIRS,—I crave space to consider the proposed enlargement of the present London University for the reasons that it will affect and revolutionise the position of a large portion of medical practitioners who are merely London diplomates as compared to those holding London degrees. It is an epoch-moving reform, which will or ought to give us all our proper degreed status as Doctor, as in most other countries, to be definitely grasped and respected by the public, and giving all members of the profession an equal chance of soaring in the estimation of their own ranks or attaining the highest positions of merit and importance, which under the present invidious restrictions is a galling impossibility. The common name "diploma" is now the equivalent of many a low distinction obtained by, say, plumbers from the Institute of Hygiene, or given to trade fitters at exhibitions, or even received by the *officiers de santé* in comparison to the higher grade French degrees. This is all apt to rankle, though borne with benign toleration. The adoption of the Lord Cowper Commission's proposals would tend to alter, ameliorate, and heighten our general professional status, and it would at last make the capital of England a university centre, which I venture to say is none too soon, though it is quite English to be behind the times. It would also combine the enormous and especially medical-teaching capacities of this metropolis into a real and complete London University, which would likely achieve for itself a world-wide and hereditary reputation, especially if from the start it should be under munificent and Governmental endowment.

The high principle and faithful devotion of some of our leaders in the just cause of reform of the London University shows, from their very status, that the isolated monopoly of the present class of degree holders will not be encroached upon by the movement, and the quality and facility for passing future brimful examinations without specially practical study is speciously safeguarded and assured to those to whom it appeals. It is to be hoped that now the scheme has actually been brought forward in the House of Commons the noble efforts of our able leaders will not tire or despair of moving all their ingenuities to convince those in Council and of our able Parliament of the necessity of this advance; and if they need any voice or action from members of our London medical colleges it would be not only our interest and advantage, but a high-toned duty on

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our part to help with our support. In the comparative study of the European universities I find that they have been chiefly founded in one faculty—e.g., Paris, divinity; Bologna, law, &c.—so on this score it will not be out of the way for medicine to play an absorbing and an important *rôle* in the present proposed reformation.

It is also important to realise that women will be largely admitted if the present scheme be carried through. I have generally heard expressed that woman's late and prominent efforts in the universities were quite a new phase of pretty and probably fleeting activity; but my information now goes to prove that this is not so, and I hope that in this connexion it may be worth recording that in the very first universities ever formed in Europe they were allowed equal entrance with men, and for the immediate period success attended their impulsive energy. In the case of Salerno "Trotula" is a distinguished example, for she wrote (circa A.D. 1059[1]) a treatise on "Medicine and Diseases of Women," introducing as a new feature the work of Latin and Greek writers, for the nonce discarded in the great Salerno medical school in favour of their own particular hygienic methods. In Paris Héloïse was an early and a brilliant student of the university which was founded by Abélard to whom she wrote her well-known letters. I also venture to cite below extempore lines written by her (A.D. 1122) on a unique vellum funereal roll about the Abbot of Savigny, Vital, with grief and its futility as the difficult theme. Other great women writers since those lapsed days were debarred from university distinctions, but in all probability in the new university their work, beside that of the men, may be fraught with the most momentous importance and renown to themselves, and prove an honourable distinction to have freely permitted their admission. In conclusion, I would press upon our great leaders the important claims of the diplomates of the London Colleges of Surgeons and Physicians, and trust that the ultimate university authorities will have pointed out to them the justice of the claims of the Members and Licentiates to participate in a retrospective clause, which will entitle them to proceed to the Doctorate degree, either by an original thesis or by a final examination, for clearly the movement for a medical faculty at any rate arose in great part out of their disabilities. In fact, it will hardly be fair if this point be not acceded to, for it will allow similarly trained men to obtain degrees in medicine over and above the former titles.

I am, Sirs, yours faithfully,

Upper Woburn-place, W.C. H. ELLIOT-BLAKE.

(Copied from the original in Paris.)

"Flet pastore pio grex desolatus adempto,
Soletur miseras turba fidelis oves.
Proh dolor! hunc morsu sublatum mortis edaci.
Non dolor aut gemitus vivicare queunt,
Ergo quid lacrime, quid tot tantique dolores
Prosunt? Nil prodest hic dolor imo nocet.
Sed licet utilitas ex fletu nulla sequatur,
Est tamen humanum morte doloris patris.
Est etiam gaudere pium; si vis rationis
Tristicie vires ad nichilare queat.
Mors etenim talis, non mors sed vita putatur;
Non moritur mundo, vivitet ipse Deo.
Oret pro nobis; omnes oremus et ipse Christum
Et nos ad vitam perveniamus. Amen."

A blank translation running:—

"The vanished shepherd of his flock is mourned,
Let faithful throng console your deepened sorrow.
Oh, cruel fate! him, seized by the grasping jaws of death,
But neither grief nor groaning can avail that life
Nor tears; why, therefore, great and many wails?
'Tis useless, rather sore distress.
But though no usefulness is gained from sobs,
'Tis but a human phase to grieve a father's loss.
In pious duty may we yet rejoice; for if the mind
Can bridge the tide of sadness
We view a death like this as yet a life esteemed;
And, dying in this world, his resurrection is in God.
Pray he for us and pray we all that he as
Well as we may come to life. Amen."

THE DEGREES OF THE UNIVERSITY OF LONDON.

To the Editors of THE LANCET.

SIRS,—From papers sent to me by the clerk I observe that at Convocation, to be held on June 23rd, the resolution as under is to be moved by Mr. Spratling:—

"That the excessively high standard maintained by this University in conferring its highest degrees has worked an injustice to many of its graduates and is the main cause of the agitation from which the University is at present suffering. That steps be therefore taken to co-ordinate these degrees with those conferred by the other British universities: 1. That for this purpose powers be obtained to confer the title of 'Fellow of the University' upon all graduates who up to the present have attained, or shall in the future attain, to the highest degree in their several faculties, according to the present high standard. 2. That the degree of Master or Doctor be conferred upon all Bachelors in the several faculties who have reached, or shall hereafter reach, such a standard in Honours in their final examination as the Senate may deem adequate."

Some years ago Convocation discussed the same subject very fully at a large meeting and rejected a similar resolution, and I myself travelled a long way and at considerable inconvenience to vote against it. I object to the resolution above on the following grounds. First, I do not wish to be credited with or have attached to my name any title I have not earned by hard study and a legitimate and searching examination; and it is just "the excessively high standard maintained by this University in conferring its highest degrees" which renders them, in my estimation, of supreme value, and places them above all others in this or any other country. Secondly, I object to gentlemen, Bachelors of the University, obtaining the higher degree without having undergone the like study and the like examination, for I look upon such a proceeding as unjust to myself and my *confrères* in the medical faculty. I trust, therefore, that the proposition No. 5, to be moved at Convocation next Tuesday, will meet general and successful opposition.

I am, Sirs, yours faithfully,

Truro, Cornwall, June 16th, 1896. WM. DALE, M.D. Lond.

CHOLERA IN EGYPT.

To the Editors of THE LANCET.

SIRS,—From the spring of 1884 to the autumn of 1895 Egypt remained perfectly free from malignant or Asiatic cholera. During this period of eleven and a half years not one single death was attributable to the disease throughout the length and breadth of the land. In September, 1895, suspicious cases occurred at Menzaleh, but it was not until Oct. 12th that cholera was unmistakably recognised. Writing on Jan. 28th, 1896, Dr. Rogers Pasha says: "I have no doubt that when the full report of the present epidemic comes to be written the probability, if not the certainty, of the introduction by pilgrims will be fully established." The disease rapidly spread over the Delta and even reached Cairo, but by the end of January, 1896, one place alone remained infected. For a period of ten or eleven weeks there was absolutely no cholera in Egypt except at Alexandria, where fresh cases continued to occur at short intervals. It was not until the latter part of April that the provinces became re-infected, the contagium this time appearing to be more virulent than at first, probably on account of the increasing stagnation of the water-supply. For the sake of brevity I have stated my argument in dogmatic fashion, but writing at a distance and with necessarily imperfect knowledge I am quite prepared to accept correction. My suggestion is that cholera, having been imported in the first instance from the Hedjas, was successfully dealt with except in Alexandria, where it continued to smoulder for close on three months after it had been extinguished elsewhere, and that re-infection of the rest of Egypt subsequently took place from this secondary focus.

Alexandria has the misfortune to be very badly sewered, and it is in this wealthy town also that the rights conferred by the capitulations especially hamper all efforts at sanitary reform. To the best of my recollection the cholera epidemic of 1883-84 lingered in Alexandria long after it had worn itself out in the country generally, but unfortunately I have no means of verifying my impression. The money loss to Egypt from an epidemic of cholera is very great, but if the sanitary department were adequately financed (to use the expression of a recent writer in the *Pall Mall Gazette*) it should be possible in this respect to safeguard the national treasury. Perhaps in this connexion you will allow me to quote from a paper of mine which saw the light in 1892:—

"From a cosmopolitan point of view it is evidently high time that one of two things should be done in the interests of the health of the world. The pilgrimage should either be abolished or else subjected to efficient sanitary control. Till one or other of these measures is adopted Europe can never be safe from the attacks of the most deadly of pestilences. The present epidemic at Hamburg and elsewhere most unquestionably owes its origin to the Meccan pilgrimage. The Hadjis on their return along the various caravan routes have spread the germs of the disease broadcast, and though for this year the virulence of the outbreak

[1] Darenberg: Ackermann.

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eems now to have abated, yet who will answer for what may appen in the immediate future. One thing is certain: if cholera hould again reach Egypt let the bondholders beware. Dervishes and nundations are not the only enemies to be repelled at the cost of a nillion per annum. Let them spend something also on sanitary ssurance. The sanitary administration possesses a most efficient irector, but he lacks the means to execute his designs. He is comelled to make bricks without straw, and often the very clay is refused o him. Allow him the necessary funds and before long the country, urged of its sins against hygiene, will, with its glorious and life-giving limate, be second to none in the world for salubrity."

I am, Sirs, yours faithfully,

St. John's, Woking, June 15th, 1896. H. R. GREENE.

THE CAUTERY IN OVARIOTOMY.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of May 16th Mr. Tait claims that ıe has discovered the true principle of the cautery as used ıy Mr. Baker Brown and Dr. Keith. This shows such a ant of memory of his own writings, and want of knowledge f the writings of others, that it seems almost beyond belief. n 1883 Mr. Tait wrote: "When he (Dr. Keith) removes he clamp, that part of the pedicle which has been embraced ıy it is shrivelled and translucent like parchment." Mr. Tait ıad therefore either seen the cautery applied or had had its node of application explained to him. He has evidently orgotten this and also the method of application, for he peaks of great physical exertion and of the time required ıeing twenty or thirty minutes. There is no special exerion, and when we used the cautery irons at a dull red, never black, heat seven or eight minutes was the average time; ıow, by using them at a white heat three minutes are suffiient. In Dr. Skene's work on "Diseases of Women," pubished in 1888, the principle of action is described in the ollowing words: "The object is to desiccate at least half an nch of the stump and to avoid charring it." In a paper ın the Cautery in THE LANCET of April 30th, 1892, I said 'the compressed part of the pedicle will, if all be satisfacory, have the appearance of a piece of horn. ..... Bleeding ıever occurs after the abdomen has been closed, and to preent it at the time of operation the two essential points are he screwing up tight and the heating of the blades of the lamp." The amusing part is that Dr. Keith found out the xplanation only after performing several operations on ınimals, and now Mr. Tait, having partially forgotten or erhaps not thoroughly understood what he described hirteen years ago, tells us that operations on animals are nnecessary. I am, Sirs, yours faithfully,

Charles-street, W., June 10th, 1896. SKENE KEITH.

"ANTERIOR COLPOTOMY."

To the Editors of THE LANCET.

SIRS,—I should be glad if you would allow me to record in THE LANCET my remarks on Dr. John Phillips' paper on 'Anterior Colpotomy" read at the last meeting of the Obstetrical Society. They were not forwarded owing to a ailure of the post-office arrangements.

I said that the difficulty of making and keeping the vagina ıseptic as set forth by Dr. Phillips seemed to me a very erious objection to the removal of intra-peritoneal disease ıy anterior colpotomy; and that another important objection vas the fact that, when small tumours or inflamed ovaries equired operation, their removal was frequently so difficult hat it was not possible to operate with any safety by nterior colpotomy, whilst the easier cases should have no nortality, except from purely accidental causes, if done by bdominal section. Under these circumstances it seemed to me hat to operate on intra-peritoneal pelvic conditions through he vagina must add to the risks in all cases in which this plan night be contemplated. I should like to add that the cases n which the ablation of inflamed ovaries and tubes is required, ut in which it is almost or quite impossible to completely emove these organs even when the parts have been fully xposed, are sufficiently numerous already without the perator handicapping himself by the difficulties and dangers f working through a strictly limited space of doubtful sepcticity. It seems to me certain that the plan of operating ıy anterior colpotomy must not only cause greater danger to he patient but that it must also lead to an increase in the umber of imperfect operations. The evils of these imperect operations do not appear in statistical tables. They can e discovered only by the study of the after-histories of cases. Personally I have performed few operations which could have been done by anterior colpotomy. I have not performed any operation in which I can believe that the slightest advantage could have been gained by adopting this method, and I have done many successfully in which an attempt to operate through the pelvic outlet would have ended inevitably in failure.

I am, Sirs, yours faithfully,

Portman-street, June 15th, 1896. JOHN D. MALCOLM.

THE ST. JOHN AMBULANCE ASSOCIATION AND ITS LECTURERS.

To the Editors of THE LANCET.

SIRS,—The St. John Ambulance Association has, with the coöperation of the medical profession, accomplished much that is excellent, and I, like other medical men, have taken great pleasure in the work done for it. Consequently, I was not merely surprised but sorry to find this Association taking up a position in regard to the profession which has compelled me to resign my honorary membership. The matter will probably be a surprise to most if not all of the ambulance lecturers, and it seems to me of such importance that I venture to give it publicity in your columns. The facts need occupy but little space. The authorities of the local Young Women's Christian Association requested me to give them lectures on nursing. They gave me various reasons why they did not propose to form a class in connexion with the St. John Ambulance Association, among others that the pupils did not wish to enter for any examination. The request was only for two lectures, and it was at my own suggestion that the number was increased to six. A lady who is one of the Ambulance Brigade nurses promised both the superintendent of the Young Women's Christian Association and myself independently that she would give assistance in her private capacity. The hour of the lectures was such as not to interfere with any brigade work. To my astonishment this lady informed me later that she must withdraw from her promise because the ambulance authorities "could not give their sanction." Wishing to avoid any unpleasantness, I accepted the position and gave additional time and work to make up for the loss of her friendly assistance. Much to my annoyance, a few days later I was informed by a medical neighbour that the ambulance authorities were criticising my conduct in giving such lectures as unfriendly and even shabby. A letter to, and interview with, the local honorary secretary, Mrs. Colegrave, showed me that her part in the matter had merely been to carry out instructions from headquarters, so I wrote asking that I should be informed from headquarters: "1. Whether they consider the fact of a doctor having delivered lectures under their auspices should preclude him from doing any similar work at the request of others? 2. On what grounds they used their influence to prevent a lady who was willing in her private capacity to give me some assistance with a nursing class from carrying out her intention?" The following reply was communicated to me. (The italics, &c., are Sir Herbert Perrott's.)

"St. John Ambulance Association, May 23rd, 1896.

"DEAR MRS. COLEGRAVE,—With reference to Dr. Carruthers' letter which you have submitted to me, my opinion is, while in the abstract there is nothing to prevent a medical man from lecturing in accordance with the syllabus of the association whenever and wherever he pleases, the fact that he has accepted the position of honorary life member offered him in recognition of his services on behalf of the Association *should tend to induce him not to give lectures on the lines of the Association except under its auspices.* As superintendent of the Norwood Nursing Division you are fully within your right in forbidding one of your enrolled nursing sisters to assist in any way at lectures on the subject of first aid or nursing, whether in connexion with the Association or not. In so doing she cannot be said to be acting in her private capacity.

"Yours faithfully,

"HERBERT C. PERROTT.

"If Dr. Carruthers and the nursing sister wish to instruct classes on their own account it would be more honourable in them to resign honourable life membership and membership of the nursing division respectively. By not doing so they are leading people to infer that they are acting under the auspices of the Association, and as their pupils will not be examined by our examiners, or get our certificates, it is very hard on them—that is, the pupils. H. C. P."

While this letter skilfully evades a categorical reply to either of my questions, it left only one course open to me, for the postscript to all intents and purposes called upon me to resign because I had lectured to the Young Women's Christian Association class. My reply is subjoined.

"44, Central-hill, Norwood, S.E., June 11th, 1896.

"DEAR SIR,—I am much obliged for the information contained in your letter of May 23rd to Mrs. Colegrave (of which I have this day

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received a copy). As I cannot allow myself to be prevented from giving help to other people when asked, I beg herewith to return my diploma of honorary life membership and to resign that position. It might have been better if you had taken some steps to ascertain the facts before writing your postscript, as the statement (implying a somewhat serious charge) that in taking this class I was 'leading people to infer that I was acting under the auspices of the Association' is entirely erroneous and unfounded. I was specially requested to take it as a class independent of the St. John Ambulance Association, sufficient reasons being given me to justify my acceding to such a request, and its independence was perfectly well known to all concerned. You also seem to assume that the lectures in question were 'in accordance with the syllabus of the Association.' This was not the case, as there were considerable additions and not a few omissions as compared with the contents of that syllabus. I informed Mrs. Colegrave when I asked for a copy of your letter that I intended to send the correspondence to the medical press. "I am, faithfully yours,

"S. WM. CARRUTHERS.

"Lt.-Col. Sir Herbert Perrott, Bart."

I am, Sirs, faithfully yours,

Norwood, June 12th, 1896. S. WM. CARRUTHERS.

THE REMUNERATION OF MEDICAL MEN.

To the Editors of THE LANCET.

SIRS,—It is very noticeable that there are marked signs in the profession of discontent and dissatisfaction at the rate of remuneration and treatment received by the general practitioner. There is also ample proof that this feeling is gaining force like a rolling snowball, and that members of the profession are beginning to recognise—tardily enough, but surely—that combination for their general interests is the only way in which they can hope for relief. It is much to be regretted that the forces cannot be arranged under one banner. We have more than one medical defence society, many "associations," and a body of medical men working somewhat after the fashion of the Incorporated Law Society. All of them do useful and honourable work. It is perfectly obvious, however, to any thinking mind that the very number of these institutions means disunion in its worst form. Scattered forces, apathetic leaders, petty jealousies and bickerings, the result of attempts at personal advancement under the guise of disinterested work for the profession,—all these and similar causes hinder, and very seriously hinder, that universal cohesion so essential to the success of any great movement. One important matter concerning which members of the profession as a whole are singularly indifferent is the benefit which would almost certainly result from our parliamentary representatives taking an interest in the question. There can be no question that an amendment of the Medical Acts dealing with unqualified practice is urgently needed and is only to be obtained by political pressure. The influence brought to bear by the united action of our profession, exercised directly or indirectly, would be enormous if properly used at election times, and our cry should be a reform of the Medical Acts. Surely it is a monstrous injustice to medical men that when they have conformed with the law of the land by obtaining degrees or other qualifications at the expense of much labour and pecuniary sacrifice they should have to compete against charlatans of all kinds. Is it not an anomaly strange and ridiculous that the General Medical Council can remove a man's name from the Register for nefarious or criminal conduct, and yet that he continues to thrive and practise, though he cannot recover fees at law or sign a death certificate? There are instances of this strange state of affairs now in London well known to many members of the profession.

Overcrowding in the ranks of the medical profession is so notorious that allusion to it is superfluous. The number of ways in which a young man may obtain a diploma, the comparative cheapness of the minimum education for the minimum legal qualification, and the exaggerated ideas possessed by the public of the emoluments of successful medical men—all induce the middle-class parent to regard the profession of medicine as the key to solve that most thorny problem, "What are we to do with our sons?" It is certainly true that in any walk of life attended with competition everyone cannot succeed. The qualities of integrity, steadiness, thrift, tact, common sense, and indomitable perseverance are as essential to success in medicine as in law or in mercantile pursuits. Excellent and complete professional knowledge is of the first importance, although this is probably less essential in medicine than in many other occupations or professions. It is a common and every-day fact that it is not men of the highest professional attainments in medicine who of necessity obtain the highest professional success from a pecuniary point of view. A remarkable fact regarding medical education may well be pondered. We instruct our young men in what can be acquired during five or six years of a knowledge of the most recondite problems ever presented to man in the study of the phenomena of disease. At the end of this time a clever and industrious student may, especially if he has held hospital appointments, be well practised in the principles of his profession and trained in accuracy of thought and powers of close observation and reasoning. But he will be ignorant regarding what may be termed, without offence, the business side of his profession. Among the many curious doctrines which have survived regarding the practice of medicine there is one which is not to be spoken of with contempt, since it has been held and promulgated by some of the leading men of the profession. To put it plainly, parents who have expended large sums of money to give their son a medical and university education will be surprised to hear that he has been told by some of his teachers that medicine is a noble profession, that it has rewards not to be measured by money, and that no one who practises it in a proper spirit should regard the question of fees. These phrases, or similar ones, commonly form the stock-in-trade of some of the introductory addresses at our medical schools, and as they are often delivered by men of light and learning they merit some attention and examination. No one can deny the first two propositions, but the last requires very serious consideration at the hands of the profession and the public. This platitude, which has probably descended directly from remote periods, when medicine was in the hands of the priesthood, has long held ground. It is remarkable, however, that any critical observer who closely watches the practice of some of those who most strongly denounce the question of fees will soon be able to formulate doubts as to the sincerity of their actions. Either it is right for a physician, surgeon, or practitioner to be paid for his services, or it is not, and, if a man holds that it is not, then he should refuse to receive pecuniary emoluments at all and practise as a pure philanthropist. Through a mistaken kindness many of the most excellent and large-hearted men of our profession, possessed of good private means, give away their services freely, and the damage they do to the pecuniary position of their less fortunate and poorer brethren is incalculable. There can be no doubt that it should be a thought on the part of our teachers in the larger schools, not only what is to become of their students while they are under their immediate care, but what is to become of them afterwards. Every man will find his level in the struggle of life, but there can be no question that the sympathy and aid of the leading men of the profession should be extended to the rank and file far more than is at present the case. The younger race of consultants, and especially the students, must never overlook the natural law that increase in the supply of any commodity leads to diminution of its price. It is a well-established fact that a superabundance of any kind of skilled workmen will lead to a cheaper rate of wages for that particular class of individual. Every man, professional or otherwise, has a right to work for what reward he chooses, and the forcible methods of dealing with "blacklegs" advocated and employed by some of the more ardent disciples of our labour leaders can hardly be extended to professions the members of which are agitating for reform.

Dr. Kehlman, speaking at the meeting of the San Francisco Medical Society on Oct. 8th, 1895, said "be was ready to defend the cause of the practitioners with sword, bullet, or pen." We are less truculent in this country, and the latter weapon is, perhaps, less potent for sudden reforms than the two former. Great changes and great improvements are seldom to be wrought in a day, and more can be effected by slow and sure progress than by sudden revolution. Behind the story of six-penny clubs and cheap medical associations comes the tale of overcrowding in the profession, and this is directly fostered by the competition of medical schools and by qualifying examinations which demand a minimum of practical knowledge. These and similar reflections show how vast is the subject of medical reform, and what an urgent need there exists for a universal association of medical men for the protection of their own interests. The lines upon which the coming generation should work are clear enough. We should

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endeavour to raise the professional knowledge and status of medical men and make them worthy of proper professional emoluments; and we should, by all means in our power, induce our students to combine, wherever they are, against cheap clubs and similar abuses. All hospital staffs, especially in country towns, may well take to heart the excellent example which was set them at Swansea. They should definitely take up the line that a hospital exists for charity in the first place and for medical education and progress in the second. The "sixpenny doctors" will still exist; they will, however, become fewer, and be recruited from the inferior grades in the profession. The public will in time become educated to the danger and uselessness of such modes of obtaining professional advice. There are many meetings for purely professional purposes held in our larger cities and towns. The thought of an annual congress for the discussion of matters of professional reform and political combination may well engage the attention of all our associations of medical men during the present year.

I am, Sirs, yours faithfully,

June 15th, 1896. M.D.

MEDICAL BULLETINS, PROFESSIONAL ETHICS, AND COMMERCIAL SPECULATION.

To the Editors of THE LANCET.

SIRS,—During the past few weeks there must have been many like myself who have been vainly waiting and expecting some one in the higher ranks of the profession to utter a protest or ask for an explanation of the unedifying spectacle which the illness of the distinguished President of our Royal Academy has been the means of placing before us. One cannot recollect a case where the constant reiteration of the medical attendant's name has been carried to a greater length than in the sad illness of this illustrious man. For some weeks now the public has been daily (often twice) treated, not merely to information about the progress of the sufferer himself, in which, of course, we all have a sympathetic interest, but also to the important fact that his medical adviser, whose name is each time given, visited him at such and such an hour. What, Sirs, is the purpose of these details? The public may want to be constantly informed of the distinguished patient's condition, it may also interest them to know who is in charge of the case, but after having given the latter information on two or three occasions, what can be the purpose of its constant appearance unless it is to keep the attendant's name before the public? It may be said that the practitioner is not responsible for the mistaken pressman who is desirous of every detail of information for "copy," but such an excuse is too feeble to bear investigation. Undoubtedly it is almost impossible for a practitioner to avoid the publication of his name in the early days of the illness of any distinguished person, but every medical man must and does know that the profession to which he belongs, and of whose honour he should be jealous, strongly disapproves of anything that could be interpreted as an advertisement, in which the attendant acquiesces. A few polite lines to the editors of the papers in which such objectionable statements had repeatedly appeared, requesting them only to give the substance of the bulletins without time after time mentioning the attendant's name, would be certain to have the desired effect.

In spite of our so-called professional ethics (surely rapidly becoming a name only) this form of abuse has become so frequent of late that I would not have considered the present instance anything more than a particularly fine specimen of its kind were it not that a more serious offence has within the last three weeks been added to it. We have been informed and startled by announcements made at various times in at least two of the morning papers that the improvement which fortunately had taken place in the President's condition had been fairly maintained and that this was attributed to inhalation of ozone introduced into the treatment by the practitioner in charge of the case whose name is each time given. Then, Sirs, one felt surprised that no voice was raised to ask if such announcements were in keeping with the traditions of our profession, and, if not, were we to congratulate ourselves on the innovation? But the climax was yet to come. Last week I, in common, no doubt, with many others and thousands of the lay public, received the enclosed prospectus from a commercial ozone company in which you will find the following passages: "In addition to the uses for industrial purposes to which ozone may be put it is probable that in future it will play a very prominent part in medical practice, and the following extracts from London newspapers are cited in support of its value. From the *Times*, May 26th, 1896: "Sir John Millais' condition was reported last night to be satisfactory. It is stated that to meet certain complications which arose in the condition of Sir John Millais Dr. Hames, who has been in constant attendance since the operation, decided on the application of constant inhalations of ozone. This was immediately followed by beneficial results which have since continued." From the *Standard*, June 1st, 1896: "The marked improvement in the condition of the President of the Royal Academy noted on Saturday morning has been fairly maintained, and this is attributed to the ozone inhalations introduced into the treatment by Dr. Hames." This prospectus was followed by the *Standard* bulletin: "The ozone treatment introduced into the case of the President of the Royal Academy continues to give most beneficial results, enabling the patient to obtain a considerable amount of good rest. On Saturday morning Dr. Hames was able to issue an exceedingly favourable statement as follows," &c. Alas! Sirs, to what have we come! Well may men often smile when professional ethics are mentioned, and rapidly turn conversation to a subject where their words have some pretence of meaning in them. One is pained to think that the illness of a distinguished man should be made capital of for a commercial puff, and humiliated when one sees the name of a member of our profession appear in the latter. I presume, of course, queer though the matter looks, that this prospectus has been issued without the knowledge and consent of Sir John Millais' medical attendant. Anyhow, I think he owes it to his profession to clear the question up without delay. Should he be unwilling to do so it seems high time that the authorities of the Colleges to which he and I belong should take the matter in hand. I enclose my card, and remain, Sirs,

Yours faithfully,

June 16th. M.D., M.R.C.S. & L.R.C.P., &c.

THE BATTLE OF THE CLUBS.—XXXIII.

(Continued from p. 1675.)

THE GENERAL MEDICAL COUNCIL AND THE MEDICAL AID ASSOCIATIONS.

AT the meeting of the Executive Committee of the General Medical Council of June 1st the following letter was read:—

Friendly Societies' Medical Alliance Council,
April 21st, 1896.

DEAR SIR,—At the annual conference of the above, held at Wednesbury on Easter Monday, Mr. S. Pride of Luton, Mr. Dickinson of Lincoln, and Mr. M. J. Williment of Norwich, were appointed a deputation to wait on the General Medical Council at their next meeting for the purpose of laying before them the present attitude of some members of the medical profession towards friendly societies' medical associations. If you will arrange the day and hour most convenient to the Council to receive the deputation and acquaint me, I will then arrange for the deputation to be there at the appointed time and place.

Yours most respectfully,

W. J. C. Miller, Esq. JOHN BROWN, 26, Markham-street, York.

It was resolved "that Mr. Brown be informed that the executive committee cannot recommend the General Medical Council to receive the deputation referred to."

It may be that the executive committee was within its powers when it intercepted a communication of this character and deprived the representatives of the Friendly Societies' Medical Alliance of an opportunity of stating their grievances as to the attitude of "some members of the medical profession" towards their associations. No doubt they base themselves on the conclusion of the Council that such matters are not within their jurisdiction. All the same we somewhat regret that the deputation was not received. These associations are sadly ignorant of the feeling of the medical profession—not "some of its members," as the letter would have us believe—on the subject of such associations and of the part they have tried to play in trying to degrade medical practice and medical practitioners. They are even more misinformed if they think that the Council would be willing to force medical men to alter their attitude of hostility to such a system. A few minutes' interview with the General Medical Council might have undeceived them on both points. They will at any rate realise that they have nothing to

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expect from the General Medical Council. The associations will receive more and more proof that the profession as a whole is against them, and will do well to come to terms with it confining the privileges of their associations to working men and their families and paying them properly as they are well able to do.

If the General Medical Council is so restricted in its disciplinary functions the medical corporations and the voluntary associations of the profession are not so restricted and may make their power felt. If the voluntary associations of the profession can be moved to a full discharge of their duties in this matter there will be little need for the use of the disciplinary power of the bodies.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Jubilee of the Swinton Schools.

THE report of the Poor-law Schools Committee on the barrack schools of London has drawn attention to some of the workhouse schools in the provinces. Now those at Swinton, about four miles from the city, under the management of the Manchester guardians, are among the largest in the country, and their jubilee has just been celebrated. They were opened in February, 1846, and provide accommodation for about 760 in the main building and 110 in the hospital and receiving wards. When they were built there was no controversy about the "barrack" system, the "cottage home," and "boarding-out." The chief aim was to get the children away from the workhouse with its degrading and vicious influence, and as there were many of them it seemed obvious that a large house was required to hold them. There are now about 750 boys and girls there, chiefly Manchester children, but a few are boarders from the Barton and Wigan unions. Though schools would not now be built as in 1846, it must be allowed that these have been well and humanely managed. The children may be divided into two classes—those who spend all or the greater part of their school life in the school, and those who come and go, entering and perhaps leaving in the same quarter and almost certainly in the year, for the guardians, of course, have no power to detain a child against the will of the parents or legal protectors. Of 700 in the school a year or two ago about 600 were liable to sudden removal, so that it is easy to understand that with this shifting population the maintenance of discipline and "character" is no easy task, and yet we read "that there is no record at the Manchester workhouse—at least, for the last sixteen years—of any boy who had gone through the school entering the workhouse to live there. Many have worked themselves into good positions and they and others speak kindly of their early life." Besides the scholastic work the boys learn various trades—as tailoring, shoemaking, gardening, &c. There is a good swimming-bath, which is very popular, and many of the lads would do credit to any swimming club. A short time since an article appeared in the *Manchester Guardian* containing some severe criticisms of the London schools, in which the Swinton schools were incidentally mentioned as being the largest in the country, and this article was thought likely by the guardians to make the public believe the Swinton schools were deserving of the same condemnation. Mr. McDougall, chairman of the schools committee, thought it necessary, therefore, to refer to the matter at the meeting of the guardians. The *Guardian* said that the "barrack" schools were: "(1) directly injurious to the health of the children; (2) detrimental to their mental development; (3) harmful to their morals; and (4) more costly and more difficult to maintain in proper working order than smaller institutions would be." Mr. McDougall said they were almost free from ophthalmia, though many years ago it was prevalent, but was got rid of by simple means. The children no longer used common wash-bowls; each one had a jet of clean water to wash with and had three clean towels a day. It was said that "eczema and other skin diseases are always prevalent" in "barrack" schools, but it was not so at Swinton. And as to their physical development, he said that the remark that the boys were "stunted and narrow-chested" and most of the girls "below the normal height, and the appalling monotony of their lives makes them tend to become dull, sullen, and mechanical, and to lose interest alike in work and play," was certainly not the case at Swinton; "if there was one thing on which they prided themselves it was that when the children played they were merry, and when they were working they felt their work had some purpose. ..... The guardians sought to make their lives bright and to fit both boys and girls to earn their living." The cost per week is a little over 5*s*., and the guardians are not anxious to make it less, for they wish the children to have good food and clothing. Of course, when one knows the places from which most of the children come, the character and physical condition of the parents and the lives led by a large proportion of them, it would be marvellous if the signs of degeneration marking the parents did not descend to their offspring. The short period during which the majority are in the school is not sufficient to overcome the disadvantages of their start in life, but where more time is given both boys and girls improve physically in a remarkable manner. It is said that the headmaster has many applications for any of the girls who will go into domestic service, which, however, is not always popular with them. Many go to factory work or are apprenticed. On the whole I may say that if the metropolitan "barrack" schools had been as intelligently managed as the schools at Swinton the report concerning them would have read somewhat differently.

The Coronership.

At the last meeting of the City Council Mr. Smelt, barrister, who had been for many years deputy coroner, was appointed coroner in the place of the late Mr. Herford at a salary of £800 a year. The late coroner had been non-existent — so far as the performance of the duties of the office was concerned — for at least fourteen or fifteen years, with the exception of what he no doubt considered the important duty of receiving the fees. By the conditions of his appointment he was paid by fees and was irremovable, and he retained his office to the end. He was a man of strong will and some pugnacity and in his active days was usually in antagonism with the medical profession of Manchester. However, nothing but good should be said of the departed, and as the retention of his office long after he was incapacitated was no doubt legal he perhaps considered—for his opinions on many matters would by most people be thought eccentric—that it would be illegal to resign. At the council meeting Professor Sinclair made some observations criticising Mr. Smelt's proceedings so far as they related to medical evidence and post-mortem examinations, and said that one of the objects of a coroner's inquest was to ascertain the cause of death. On taking his seat for the first time as coroner for the city, Mr. Smelt "made some remarks on the position and duties of coroners" and wished "to brush away" a good deal of misunderstanding. He said inquests were held for the benefit and protection of the public. "It was the duty of the coroner's court to ascertain the cause of death, not for statistical, medical, or scientific purposes, but to find out whether any person was responsible. ..... So long as he presided in that court he should never order a post-mortem examination unless he believed it to be absolutely necessary." His reasoning seems peculiar, for after stating it to be a duty to ascertain the cause of death he goes on as follows: "If the jury were satisfied that a case was a perfectly straightforward one and that nobody was to blame, why go to the trouble of ascertaining the *exact* cause of death?" It is a duty, therefore, to ascertain the cause of death, but not the exact cause; it need only be known inexactly as it is merely for the benefit of the public, though it is not clear how inaccuracy is for the public benefit. Is this view in exact accord with common sense? In a subsequent part of his address Mr. Smelt said that where it was possible he obtained the evidence of gentlemen who were in the habit of making post-mortem examinations and of giving evidence in courts, because he thought it better that they should have the evidence of experts. This is a wise proceeding and will be generally approved, especially when it is wished to ascertain the exact, and not the inexact, cause of death. No doubt the original intention of the court was to learn if death had been the result of foul play, but it is notorious that even "intelligent" juries often fail to return correct verdicts, especially where the coroner is a lawyer and not a medical man; but even if this were not so there is no reason why the coroner's court should not aid in rendering the Registrar-General's returns

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ccurate instead of misleading by giving the exact, and not he inexact, cause of death. In concluding his address ie said that "he had had practically very little difficulty vith jurors and medical men, and no trouble at all with he legal profession, during the eighteen years he had acted s deputy-coroner, and he had not a regret to express for his ction in relation to them, or as another report gives it, "in onnexion with those people." However, he bears no malice owards the "medical people," for he hoped their good elations would continue. He concludes by wishing "to mpress upon the public" (including, of course, the "medical eople") that the institution of the court was for the pro-ection of the public alone, and not for medical or scientific urposes. It would always be his duty to protect the public, nd save the time and money of the jury and ratepayers.

June 16th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Harveian Oration of the Harveian Society of Edinburgh.

DR. PEEL RITCHIE (Fellow and Past President of the Royal College of Physicians of Edinburgh, Fellow of he Royal Society of Edinburgh, &c.), the President f the year, chose for the subject of his Harveian ration the Early Days and First Knights of the Royal College of Physicians of Edinburgh. He endeavoured to how—first describing the state of scant medical teaching nd medical examinations in Harvey's time, the want of nfirmaries and of opportunities for meetings for conference pon medical subjects, not only in England, but in Scotland—he great good done by the establishment of the Edinburgh College of Physicians in contributing to the inauguration of hose necessary reforms, and also as regards Scotland in reparing and publishing a pharmacopœia. Four attempts ad been made to erect a College subsequently to Harvey's irst lecturing, and each of the first three he associated with Harvey. The fourth attempt was made (the causes which ad led to it being described) in July, 1681, chiefly at the nstigation of Dr. Robert Sibbald. To bring influence to ear on King Charles II. and his brother the Duke of York, hen in Edinburgh, at Holyrood, as the King's Commissioner, he influence of their physician, Sir Charles Scarborough, as sought and at once obtained. Very powerful opposi-ion was made to the scheme by the same four oppo-ents upon all the four occasions. Great efforts had to e exerted, therefore, to conciliate them by modifying he demands in the Charter. The opposition arose rom the archbishops and clergy who were associated vith the universities as Chancellors, &c.; the universities, vho feared their prerogative, would be interfered with; and he town council, who were the patrons of the University of Edinburgh, and by the chirurgeons, whose rights would be disturbed. On the fourth occasion the nobility also objected. The aid of the Earl of Perth and Lord Melfort was sought to essen their opposition, whilst Scarborough secured the good vill of the king and the duke. Of the physicians associated vith Sibbald, Dr. Andrew Balfour had been a pupil of Harvey and an intimate acquaintance of Scarborough; Archibald Pitcairn was one of the strongest supporters of Harvey's views in the country; Thomas Burnett was known by he importance of his works; and Sibbald seems to have known Scarborough when in London previously. On St. Andrew's Day, 1681, the Charter of Constitution was obtained, and mmediately the College set to work to carry out the reforms required for the improvement of the profession so far as the College had power and jurisdiction. The first reform was he compilation of the Edinburgh Pharmacopœia, and although this was done within two years the opposition of some of the Fellows prevented it being published for six-teen years. The second effort at reform was the establishment of a dispensary for the benefit of the sick poor in the city and suburbs. This was carried on very constantly, and from t ultimately was developed the Royal Infirmary, towards the origination of which the College largely contributed, and undertook to give attendance upon the patients without fee or reward, the Fellows attending in rotation two weeks at a time. The third great effort on the part of the College was instituting an examination for the Licence required by all physicians practising in Edinburgh or joining the College. One annoyance the Fellows had to tolerate was that they had no power to examine Scotch graduates, and from the nature of the degrees granted by some of the universities the examination of their graduates was very necessary, more so than in the case of those applicants who were Continental Doctors of Medicine. The latter had all previously "laureated" and studied abroad for years. The examination introduced consisted of three stages—(1) theoretical on the institutions of medicine; (2) on two "Aphorisms" of Hippocrates; and (3) on two practical cases. One use of the dispensary seems to have been to supply "practical cases" for these examinations. This form was regularly used, and the examinations conducted by two specially appointed examiners, and they were carried on in the presence of the sederunt of the College, the assembled Fellows being the judges, whether the applicant was to pass or not. These examinations, or "tryalls," were continued for many years. At the request of the University authorities, when the first applicants for the Edinburgh degree of Doctor of Medicine applied, these examinations were undertaken by the College of Physicians, and at first conducted in their place of meeting and with the dispensary patients. The only charge made by the College was a contribution to the funds of the dispensary, which were distinct from those of the College itself. When a professor of physic was appointed the examiners met with him in the library of the University and there conducted the examinations. When another of the physicians was appointed professor of the institutes a faculty was formed and they conducted their own examinations thereafter. The fourth great effort on the part of the College was the instituting of the rudimentary medical society conferences, previously commenced by Sibbald in his own "lodging." The President, Dr. Archibald Stevenson, delivered the address at the first College conference, the subject being Polypus of the Heart. These conferences were continued for twenty-five years and were stopped by the action of Dr. Archibald Pitcairn. They seemed to have paved the way for ultimate development of the societies of the present day, starting with the Royal Medical Society of Edinburgh in 1734. The orator then narrated to whom the merit of these important reforms was to be assigned, and showed that the chief acting spirits of the early days were nine. He also indicated that his reason for his title of "the early days" was that from the origination of the College on St. Andrew's Day, 1681, to December, 1684, represented a period of two years and eleven months, during which the minutes of the College were kept, and that it was within that short time that the four great reforms were introduced. To distinguish that short period, from the minutes of the College business kept, after a hiatus of ten years, from 1694 to the present time he had designated it the "early days." Of the nine acting Fellows he showed the parts each had performed, and concluded that the honour of inaugurating the reforms are chiefly due to Dr. Archibald Pitcairn and four senior Fellows, who were knighted—Sir Archibald Stevenson, the first president; Sir Robert Sibbald, the second; Sir Andrew Balfour, the third; and Sir Thomas Burnett, who was not elected president till 1696; Dr. Ritchie concluded by an account of these four knights, especially Stevenson, Balfour, and Sibbald, the day of whose death and place of burial he had ascertained.

Proposed New Pauper Lunatic Asylum for Edinburgh.

As the result of conferences which have lately been held between the city parish council and the managers of the Edinburgh Royal Asylum to consider the question of erecting a new asylum for the accommodation of pauper lunatics it has been agreed that application should be made to the General Board of Lunacy to have the city parish constituted a separate lunacy district under the provisions of the Lunacy Districts (Scotland) Act, 1887, and for authority to erect an asylum in the new district for the housing of not less than 400 pauper lunatics. Pauper lunatics belonging to Edinburgh have been accommodated in the Royal Asylum at Morningside since the years 1842 and 1844, when the managers of the asylum received the sum of £3210, in consideration of which they became obliged to maintain in the Royal Asylum at their lowest rate of board all insane pauper patients belonging to Edinburgh, whatever their number might be. It was expected at that time that such patients would never exceed 105 in number, but lately there were as many as 365 pauper lunatics accommodated in the asylum. This resulted in such an overcrowding of the asylum that the managers have had to refuse applications for admission of private patients and have been obliged to apply to the Edinburgh parish council for a modification of the agreement,

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and to that the council consented. 105 pauper patients are to be accommodated at Morningside until the end of the year 1914 in order to wipe out the debt incurred by building additions to the asylum for the accommodation of these patients.

Royal Society of Edinburgh.

At a meeting of the Royal Society a paper by Mr. Frank J. Cole was read by Professor Cossar Ewart on the Cranial Nerves of Chimæra Monstrosa, with discussion of the Lateral Line System and of the Comparative Anatomy of the Chorda Tympani Nerve.

Edinburgh Royal Infirmary.

At the meeting of managers held this week the plans for the new gynæcological department were laid before the board, as well as a report on the subject by the architects. The new pavilion is to be built on the site of the old Sick Children's Hospital. It is proposed that the basement be used as a bathing department, the first floor as an ordinary ward, and the second and third floors for gynæcological patients, while additional accommodation for the nurses would be provided on an upper floor, to which the main staircase would be carried. The plans were approved and the architects were instructed to prepare a bathing scheme.

Lord Kelvin's Jubilee.

The Corporation and the University of Glasgow have during the present week made common cause in their desire to celebrate with appropriate honours the professorial jubilee of the celebrated professor of natural philosophy. Lord Kelvin, then plain William Thomson, was appointed to the chair which he still holds in 1846, being then only twenty-two years of age. Since then his capacity for the most advanced scientific speculation and research and his powerful inventive genius have made his name and reputation world-wide. Probably to the general public his fame is most closely associated with the successful laying of the Atlantic cable, upon returning from which in 1866 he received the honour of knighthood. He was raised to the peerage as Baron Kelvin of Largs in 1892. The list of academic and other honours conferred upon him would fill a column or more; it is sufficient to mention that in 1871 he was President of the British Association, and that from 1890 to 1895 he occupied the chair of the Royal Society. It is no wonder that both town and gown should unite to mark in a becoming manner so interesting an event as the jubilee of so renowned a professor. Upwards of 200 delegates, representing British and foreign universities and learned societies, are at present the guests of the University, and congratulatory telegrams are pouring in from all parts of the globe. Yesterday the local jubilee committee sent their congratulations to Lord Kelvin by a cable message passing over the Anglo-American telegraph system, thus traversing a distance of 20,000 miles. The time occupied was seven and a-half minutes. In the evening the University gave a conversazione in the Bute Hall, the guests, numbering fully 2500, being received by the professors and passing on to offer their congratulations to Lord and Lady Kelvin. The exhibits included specimens of Lord Kelvin's numerous inventions and the diplomas, medals, addresses, &c., presented to him by various scientific and other learned societies. The various submarine telegraph companies had wires laid on to the Bute Hall and numerous telegrams were received and despatched during the evening. At the close of the conversazione the students held a "Gaudeamus" in the Union, and welcomed various foreign delegates in true undergraduate fashion. This morning was devoted to the presentation of addresses to Lord Kelvin and to the conferring of various honorary degrees. Lord Kelvin himself was "capped" LL.D., the cap being placed on his head by the senior professor, Dr. Gairdner. Amongst other messages received was a special letter of congratulation to Lord Kelvin from the Prince of Wales. To-night a banquet is to be given by the Corporation, and to-morrow there are to be excursions down the Firth of Clyde.

Medical Resignations.

Dr. James Stirton has retired from the position of physician for diseases of women in the Glasgow Royal Infirmary. Dr. Duncan Macartney has resigned his appointment as one of the surgeons to the Glasgow Training Home for Nurses.

Sudden Death of a Medical Man.

Dr. George R. Allan of Glasgow was found dead in his consulting-room chair on the morning of the 13th inst. He had been in his usual good health and entirely without cause for complaint, and was, indeed, proceeding with his usual daily professional duties. It is understood that the cause of death has been determined to have been disease of the coronary arteries, leading to degeneration of the cardiac muscle. Dr. Allan was one of the physicians to the Glasgow Hospital for Diseases Peculiar to Women. He was much respected and undoubtedly possessed the goodwill of all his professional brethren.

Enteric Fever at Kirkcaldy.

The spread of enteric fever in Kirkcaldy is exciting some alarm. The cases notified now exceed 100, and the local hospital being full it has been necessary to fit up one of the public schools for the reception of patients. Dr. Littlejohn has instituted an inquiry on behalf of the Local Government Board.

A Geological Excursion

A geological excursion from Aberdeen to Penrith, Cumberland, will take place next month. The party will leave Aberdeen on Monday, July 20th, and under the guidance of Professor Alleyne Nicholson (natural history), University of Aberdeen, visit the most interesting localities in the Lake District, returning on Saturday, July 25th.

Aberdeen University Court.

At the last meeting of this body regulations for the lectureship in Comparative Psychology under Dr. William Anderson's bequest were fixed. There is to be an annual honours course of not fewer than fifty lectures; the lectureship is to be tenable for five years; the appointment is to date from Sept. 15th next; the lecturer is to receive a free income of bequest (£350 per annum); and a fee of £3 3*s.* is to be charged for the course. An appointment will be made at the next meeting. It was reported that arrangements had been made for instruction of women in all medical subjects in mixed classes, but that in certain classes separate provision (covering a few lectures) would have to be made for the ladies. In surgery there will be "mixed systematic class, but women to be excluded from certain limited parts of the course." Principal Sir W. D. Geddes called attention to the throwing wide open of the doors of the university medical classes and the provision now made for the graduation of women. Professor Stephenson (Midwifery) observed that Aberdeen was the only university where ladies could enter and have the full privileges as enjoyed by male students. The Universities Commission have declined to sanction the imposition of an annual fee of 5*s.* upon students for the maintenance of a students' union, recreation ground, and similar purposes.

June 16th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Army Medical Deadlock.

SINCE the date of my allusion to the above matter last week considerable interest has been aroused in public as well as in medical circles here by a series of letters which have appeared in all the morning papers in reference to the subject. Sir Thornley Stoker, Professor Cunningham, and Professor Ball of Trinity College, Professor Heuston of the Royal College of Surgeons in Ireland, and Professor Birmingham of the (Roman) Catholic University, claim to write as responsible representatives of the medical schools of Dublin, and are unanimous in condemning the problematical efforts of some individual supposed to be connected with medical teaching in Dublin, "to bargain," as has been hinted, "with the War Office in reference to examinerships in such a manner as to hinder the promulgation of the new warrant." The writers say: "If it be true that individual effort is being directed in the manner that is feared it is not necessary to characterise the want of judgment, or worse, that prompt it." Is there, however, any real truth in the rumour? It seems more than doubtful. Professor Heuston, many of whose former pupils are to be found in the ranks of the Army Medical Service, states that "he cannot hear of a single candidate being prepared in Dublin for the coming examination." They doubtless hold back in expectation of the new warrant, which, as was remarked in THE LANCET of last week, may not be very long delayed, seeing that Lord Lansdowne is the present War Minister, that we have a new

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Commander-in-Chief, and a newly appointed Director-General.

The Connswater River.

The condition of this river, which is in the eastern side of the city of Belfast, is at present the subject of considerable public discussion. This stream, alongside of which 2500 operatives are employed daily, is flanked on both banks by factories and receives sewerage matters both from the rural and city sides. The smell from it at present is intolerable, and the Board of Guardians some time ago spent £12,000 for the purpose of abating the nuisance caused by the river outside the city. The Board of Guardians are inclined to think the major amount of the nuisance now comes from the city side, and they passed a resolution on June 9th at their meeting, calling upon the public health committee to take such immediate steps as will prevent the discharge of offensive matter into the river from the city side. The most likely way out of the difficulty would be for the harbour commissioners, the Corporation, and the Board of Guardians to take joint action to stop the nuisance occasioned by this stream. At the public health committee of the corporation the executive sanitary officer reported on June 11th that the nuisance at the Connswater arises from three causes—the discharge of sewage spirit wash (from the distillery there) and large quantities of hot water into the river; these discharges, the present hot weather, and the extent of the mudbank at low tide being sufficient to account for the present insanitary state of the river. Communications are to be made to the guardians, the Rope Works Company, and the Distillery Company to bring about a more desirable state of affairs.

The Training of Imbecile Children.

A memorial and resolution on this subject has been recently approved by the Armagh Lunatic Asylum Board, and they directed that it should be forwarded to the Lord-Lieutenant and to all the asylum governors in Ireland requesting their coöperation. The memorial points out that there is no public institution in Ireland for the training and education of idiot and imbecile children. By the census of 1891 there were 6245 idiots and imbeciles, of whom 996 were in lunatic asylums, 1170 in workhouses, and 4079 were at large. In England there are three and in Scotland two institutions for the training and education of imbecile children. Workhouses are the only public institutions in Ireland where pauper idiot children can be sent, and these places are quite unfitted for their proper training and care. It was further pointed out that differences have recently arisen between Poor-law guardians and asylum governors as to their responsibilities for the care of pauper idiots. The Lord-Lieutenant was asked to cause inquiry to be made to define more clearly with whom lies the responsibility and to direct steps to be taken to make provision for the treatment of idiot children in a separate institution.

The New Derry Lunatic Asylum.

The board of control in Dublin has written to the governors of the Derry Asylum informing them that the time has arrived for considering the preliminary arrangements which it is necessary to make for building a new asylum at Gransha. A deputation from the board (consisting of the inspectors and the consulting architect) are to have a conference with the asylum governors on July 9th with a view to consider the arrangements which it is necessary to make.

The Proposed Sewage Scheme for Portadown.

There seems to be great difficulty in planning a sewerage scheme for Portadown. The town commissioners, who have had the matter under consideration for some time, were compelled to abandon a scheme they submitted owing to certain ratepayers objecting to the sewage being drained into the River Bann, which is contrary to the provisions of the River Pollutions Act. Recently they decided to empty the sewage into the Corcrain River, and against this plan a petition, signed by 500 ratepayers, has been forwarded to the Local Government Board.

Lord Kelvin's Jubilee.

The jubilee celebrations this week in Glasgow in Lord Kelvin's honour have caused the greatest satisfaction in Belfast, where the distinguished physicist was born, in College-square in 1824, his father, Dr. James Thomson, being at the time professor of mathematics in the Belfast College. Lord Kelvin's father was descended from a family of Scottish farmers who settled in Ulster, and he was born on a small farm at Ballynahinch, in co. Down. He became a teacher near his birthplace and taught during the summer at home, while in winter he studied at Glasgow. After graduating he received an appointment in Belfast and soon afterwards married. He had a family of five sons and three daughters. One of the sons was the future Lord Kelvin, who was eight years old when his father was appointed Professor of Mathematics in Glasgow University. Another brother of Lord Kelvin, Dr. James Thomson, was Professor of Engineering in Belfast Queen's College before being removed to the same post in Glasgow. "Thomson's Arithmetic," a book formerly much used in Ulster, was written by Lord Kelvin's father, and Professor James Thomson was the author of numerous original papers on the currents of atmospheric circulation, &c. President Hamilton and Professor Purser, D.Sc., represented Queen's College, Belfast, at Lord Kelvin's jubilee.

June 17th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Foreign Students in France and Protectionist Measures.

THE tide of *chauvinisme* still flows in a steady and strong stream, and culminated the other day in an interpellation at the Chamber of Deputies, the spokesman being no less a personage than Professor Lannelongue, who is a member of that sapient assembly. The appended cutting will inform the readers of THE LANCET how the question now stands:—

"Dans la séance d'hier de la Chambre des Députés, à la suite d'une question qui lui a été adressée par M. G. Berry à propos des étudiants en médecine étrangers, le ministre de l'instruction publique a fait une réponse conçue en ce sens:

"La loi du 30 Novembre, 1892, sur l'exercice de la médecine en France ayant donné lieu à quelques abus en ce qui concerne l'obtention du diplôme de docteur en médecine par des étudiants étrangers, le gouvernement a pris certaines mesures pour y remédier. Toutefois, il importe de respecter les conventions internationales relatives à cette question.

"On compte actuellement dans les facultés de médecine de France 1054 étudiants étrangers, soit 12 pour cent du nombre total des étudiants en médecine. La majeure partie de ces étudiants étrangers appartiennent à la Russie, à la Roumanie, à la Bulgarie, et à la Grèce, c'est-à-dire à des pays nés plus récemment que le nôtre soit à la vie politique, soit à la vie scientifique. La présence de ces étrangers dans les facultés françaises est la preuve évidente de la hauteur de notre enseignement. Leur fermer la porte de nos établissements serait une faute, car la plupart ne viennent chez nous que pour y étudier et retournent ensuite dans leur pays une fois leurs études terminées.

"Le ministre annonce en terminant qu'il étudie le moyen de délivrer aux étudiants étrangers non pourvus des titres français et ayant terminé leurs études médicales un diplôme spécial de docteur en médecine ne donnant pas le droit de pratiquer en France.

"Après cette réponse du ministre, la question, sur la demande de M. Lannelongue, est transformée en interpellation, et finalement la Chambre adopte un ordre du jour, accepté par le gouvernement, 'invitant le ministre de l'instruction publique à déposer un projet de loi sur la situation des médecins et des étudiants étrangers en France.'"

Let us hope that the matter is buried for the present, and that France will after due reflection deem it wise not to insist on a measure which will have the effect of driving remunerative British and American visitors into Italy, whose Government is far too sensible to do other than welcome foreign medical men and the patients they bring in their train.

Vulvo-vaginitis of Infants.

Considerable divergence of opinion existing as to the true nature of the above-named disease so frequently met with in young female children M. Veillon and M. Hallé have recently made researches thereon in the laboratory of Professor Grancher, the subjects being twenty-one children affected with a vaginal discharge and six apparently healthy children. The clinical study of these cases has led the writers[1] to divide vulvo-vaginitis into two groups. The first variety affects neglected children suffering simultaneously from skin diseases such as impetigo, phthiriasis, and eczema. Here we find in the genito-crural fold, around the clitoridean prepuce and behind the inferior commissure of the vulva, a whitish smegma mixed with a small quantity of turbid serous discharge. On separating the labia majora no secretion is observed to escape from the vulva even when efforts at defecation are made. This slight discharge does not stiffen linen and disappears readily under ordinary cleansing treatment. In the second and most

[1] Archives de Médecine Experimentale et d'Anatomie Pathologique, May, 1896.

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common category we have to deal with vulvitis accompanied by purulent discharge staining linen of a green colour. This green discharge is seen on the labia majora and around the clitoris. When the discharge is profuse the pus dries on the labia majora, the inguinal fold, and the surrounding skin as thick crusts. Separation of the labia brings to view a quantity of pus in the neighbourhood of the meatus, the edges of which are inflamed. On depressing the falciform fold that conceals the vaginal orifice the hymen is seen to be red and inflamed. Often a drop of pus obstructs the vaginal entrance; if not, efforts at defecation suffice to expel a certain quantity of green, viscid pus resembling that of acute gonorrhœa. This discharge is persistent, simple measures of cleanliness being incapable of curing it. It is strange, however, that the children suffering from this variety of vulvo-vaginitis utter no complaint. The majority of these latter cases are undoubtedly of gonorrhœal origin, M. Veillon and M. Hallé having almost invariably discovered in the pus Neisser's gonococcus. The usual complications of gonorrhœa may therefore ensue, and appropriate treatment is necessary. In very acute cases the microbe was found in the pure state. In other instances it was associated with the non-virulent micro-organisms normally found in the vagina of young female children. These are, according to the writers, in their order of frequency, the common pseudo-diphtheria bacillus, the club-shaped pseudo-diphtheria bacillus of Weeks, the non-pathogenic streptococcus, and the staphylococcus epidermidis albus. The existence in the vagina in health as well as under pathological conditions of organisms liable to be confounded with Löffler's true diphtheria bacillus should not be lost sight of if an erroneous diagnosis of vulvar diphtheria is to be avoided. The presence of the gonococcus in a vulvar discharge occurring in a child does not necessarily mean that the patient has been subjected to violence, the infection being generally indirect. I myself had occasion to report on a case of vulvitis where the only alterations discernible were a slight swelling and the presence of the smegma referred to above. The mother was persuaded that her child had been tampered with by a man who had been previously convicted of such an offence.

June 17th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Direct Observation by means of the "x" Rays.

THE striking results of Professor Buka which I reported in my last letter[1] have been confirmed by Dr. Levy in a paper read before the Berlin Physiological Society. Dr. Levy, in collaboration with Professor Grunmach, has, moreover, extended the method of direct observation to pathological conditions of the internal organs. In a patient who formerly suffered from pulmonary tuberculosis but had now apparently recovered the calcified tubercles became perceptible as dark-coloured areas in the apices of the lungs, and in a case of arterio-sclerosis the calcified coronary arteries appeared as black stripes in the shadow cast on the screen by the heart.

A New Hypnotic.

In a paper read before the Verein für Innere Medicin, Professor Jolly has given an account of a new hypnotic called pellotin, which is not prepared by chemical synthesis, like the other sleep-inducing medicaments of the present day, but is an alkaloid discovered in a species of Mexican cactus called anhalonium. The natives of Mexico are reported to swallow slices of this plant to which they give the name of "Pellote," and Dr. Hefter of Leipsig has now succeeded in isolating its soporific alkaloid. Pellotin itself is not soluble in water, but its hydrochlorate is extremely soluble. Its physiological action was first tried on frogs and then on mammals, which very soon became unable to stand or perform spontaneous movements, and shortly afterwards an increase of the reflexes was observed, followed by tetanic convulsions. This action of the drug on animals was not identical with that which Dr. Hefter observed in himself, for after taking five centigrammes (three quarters of a grain), he became very drowsy and ultimately fell asleep. The drug was then given by Professor Jolly to a number of patients in the neurological wards of the Charité Hospital in Berlin. The first case was that of a man suffering from alcoholic neuritis who, after an injection of four centigrammes became very drowsy, and one hour afterwards he fell into a sleep which lasted for four hours. Dr. Hefter had observed in himself a diminished pulse-rate and the same symptom was perceptible in this patient, during the first hour of whose sleep the pulse fell to 56 per minute, rising again to 76 before the man awoke. Another patient with multiple sclerosis took five centigrammes during the afternoon, and after half an hour he also slept soundly for several hours. Similar results were obtained in a series of other cases. In patients suffering from tabes the soporific action was equally satisfactory, but the pains returned after they woke. In delirium tremens the effect was less prompt; in one instance twelve centigrammes (equal to one and three-quarter grain) were needed only to tranquillise an excited patient, but no sleep ensued. In twenty cases of different kinds the remedy was given as a hypnotic in the evening. Two centigrammes had no effect, but from four to six were efficacious in producing sleep and no injurious consequences of any kind were observed. Some patients complained of giddiness and declined to take the medicine, but the greater number did not suffer in this way. Professor Jolly says that six centigrammes (equal to about one grain) of pellotin are equal to one gramme (equal to 15½ grains) of trional, or two grammes (equal to 31 grains) of hydrate of chloral. The number of cases is as yet too small to justify the formation of a definite opinion as to the new remedy, but it undoubtedly deserves further trial.

The Sequel of the Langerhans Case.

In THE LANCET of June 6th (p. 1596) I gave an account of the microscopical and chemical analysis of the antitoxin administered to the child of Professor Langerhans, and after a long delay the official report of the post-mortem examination has been published in the *Berliner Klinische Wochenschrift*. The examination was performed by Professor Strassmann and Dr. Mittenzweig, medical officers to the Berlin law courts. Previously to the fatal injection the child had taken his dinner, followed shortly afterwards by some milk and cake. Death took place during a severe fit of coughing, and the necropsy showed that the trachea and bronchi were entirely filled by a grey substance, which by microscopical examination was proved to consist of particles of food, a good deal of the same being still present in the stomach. The uvula was swollen. The medical experts, therefore, declare that the child died from suffocation. They are of opinion that the boy vomited after the injection; and being in a fainting state from the pain of the injection, he was not able to get rid of the vomited matter, but drew it into his larynx in the act of inspiration. They did not find any embolism of air in the pulmonary artery, as was suggested, nor was there any confirmation of the opinion that death had occurred from syncope, and they advised the court not to hold anyone responsible for the child's death. According to the statement of the Control Office the serum was of normal quality and the injection was in their opinion justified by the present state of medical knowledge. The matter is thus at last entirely cleared up, and the unfortunate father will probably now regret that he unnecessarily alarmed the public and aroused a prejudice against a mode of treatment which has proved a blessing to a great many sufferers.

June 16th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

A Study in Social Criminology.

IN spite of the "Index Expurgatorius" the nexus between physical organisation and moral responsibility attracts successive relays of students in Italy which, for the attention it has bestowed on it throughout, may almost claim the subject as its own. The last and not the least penetrating and practical of the studies in question is that of Signor G. Ciraolo—a barrister by profession and a physiologist by predilection—whose volume entitled "Delitti Femminili a Napoli: Studio di Sociologia Criminale" (Milan: Kantorowicz, 1896) exemplifies skilfully and effectively the advantages of a legal supplemented by a purely scientific training. His researches were chiefly pursued in Naples—in some respects the most depraved city in Europe, rich in types of racial

[1] THE LANCET, June 13th, p. 1769.

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legeneracy and prolific in the crimes to which each type is prone. The book abounds in illustrative examples of these—narrated with the analytic power of a pleader and the dramatic force of an artist; and if the author sins occasionally in too facile resort to generalisation, which sometimes indeed looks rather like a trick, he may plead in excuse that his classifications are provisional only—meant to aid the student in grasping an otherwise bewildering wealth of detail. With his qualification the reader will find much in the book that is suggestive, more that is interesting, and most of all that it behoves the student of social science to know, whether it conflicts or harmonises with his preconceived notions.

Balneo-Therapeutics.

The season of hydrological congresses, as it may be called, began on Sunday, the 14th inst., at the Bagni di Porretta, that well-known thermal resort on the Milan-Bologna-Florence line of railway. These gatherings increase annually in importance for the profession as well as the public, concentrating a larger amount of attention on Italy's undeveloped resources in natural mineral waters and showing the leeway she has yet to make if she is to compete advantageously with the frequently less rich but almost invariably better appointed establishments beyond the Alps.

The New Sanitary Works at Naples.

"See Naples and die," says the proverb—true till quite lately in a sanitary even more than in an artistic sense. The fairest city of Southern Europe, bears[1] "the reproach of concentrating in itself nearly every vice of which the sanitary reformer can take cognisance, whether as to water-supply, as to drainage, or as to dwelling-house accommodation." But in the following week you reported at length King Humbert's memorable visit to the work of sanitary rehabilitation already begun, and described the elaborate operations then in progress for supplying the city with pure "acqua potabile," with adequate drains, and with wholesome and attractive dwellings. Since that day, in spite of interruptions and postponements, without which no Italian undertaking can proceed, the beneficent work has been carried forward and another mighty advance in the right direction has scored on the 7th inst., when, in presence of the authorities—legislative, municipal, and sanitary—gathered round the colossal "vasca di raccolta" excavated under Posilipo, was inaugurated the new network for draining the upper and central quarters of the city. This splendid achievement in sanitary construction was primarily the design of the philanthropic citizen Nicola Amore, Syndic of Naples, who did not survive to witness the realisation of his dream, while the engineer Minozzi, guided by the municipal engineer, Gaetano Bruno, conducted it to completion. By it all the effete matters of the city—the refuse and sewage of every kind—are drawn away and from the "vasca di raccolta" (tank of collection), under Posilipo, are conveyed far beyond the suburbs to the desert shore of Cuma. Upper and middle Naples are the quarters thus relieved by the network which runs its channels throughout all the city, the lower quarters of Porto, Pendino, and Mercato excepted. Converging in the main collectors, they all meet finally in the "vasca" aforementioned, whence the "liquid foulness" drags its slow length along, a distance of nearly eight miles, to disembogue at Cuma. At the ceremony of inauguration a brief but lucid description of the works was given by the engineer, Bruno, after which the Royal Commissioner made a short address, and then with three blasts of the trumpet the signal was given to let loose the pent-up sewage. In ten minutes the "fiumana cloacale" (the river of Cloacina) was in motion, carrying with it the *materies* of those maladies which for centuries have put Naples in evil odour even among Mediterranean seaports, and restoring her (let it be hoped) to her earlier and purer self when she was the resort of whatever was most refined and civilised in Imperial Rome.

Italian Surgery at Berlin.

One of the collateral benefits to be derived from congresses is the opportunity they afford the foreign delegates of comparing other institutions and other methods with their own—a benefit of which Italian teachers and consultants have freely and cordially availed themselves. At the jubilee gathering of surgeons lately held in Berlin, Italy was mainly represented by Professor Bottini of Pavia and Professor Antona of Naples, names familiar to the profession in the British Isles, particularly that of Bottini for his original monograph[2] on Cavernous Angioma of the Cheek; its Surgical Cure. These eminent clinicians have just conveyed to their countrymen, through the *Corriere* of Milan, their impressions of the Teutonic as compared with the Italian schools, and, so far as teaching is concerned, especially clinical teaching, the note they strike is one of self-humiliation, the prelude (it is to be hoped) of speedy and root-and-branch reform. Take hospitals as an instance in point. At Heidelberg Professor Czerny's clinique includes 300 students and 220 beds. At Naples the analogous clinique of Professor Gallozzi numbers 2000 students and only thirty beds. The other two parallel cliniques at Heidelberg, with some sixty students, have over 200 beds, and at Naples Professor d'Antona, addressing about 500 students, has for purposes of clinical illustration not more than twenty beds. Even in more modest schools the superiority of Germany to her Latin sister is not less overwhelming. Göttingen, in the surgical clinique of Professor Franz König, has 130 beds for some eighty students, and Professor Bottini, in the school of Scarpa and de' Porta, gives lectures to 250 students of the fifth and sixth course with but thirty-seven beds. *Mancanza di quattrini* (want of money), which in Italy explains most things, is not wholly responsible for the clinical inadequacy of her schools. For one thing, such funds as she possesses are too often misapplied, marble and granite absorbing in hospital construction the resources which should be expended on the multiplication of wards and their appropriate equipment. In Berlin the Urban Hospital accommodates 600 patients provided with every hygienic and clinical requisite, and all for two and a half million lire (£100,000). At Genoa, on the other hand, the Galliera Hospital, at a cost of seventeen millions (£680,000), is a splendid palace with but 200 beds "esposti," says Professor Bottini, "da un lato ai venti del mare, dall' altro ai venticelli ..... delle latrine" (exposed on one side to the sea breezes, on the other to the fumes of the ..... privies). Even the Policlinico at Rome (the creation of Baccelli) is not exempt from the criticism that on its fine artistic *ensemble* there has been lavished an amount of money which should have had its appropriate destination in wards and other clinical appointments worthy of the chief hospital of the capital of United Italy. It is to be hoped that Professor Bottini will follow up his "confronti" (contrasts) between German and Italian medical education, if only to convince the rather apathetic public, and thereafter the legislature, that exceptionally fine medical aptitudes and the highest aspirations towards professional efficiency will not attain their end without the object-lessons and the experience which Germany, and still more the British Empire, afford in their hospitals.

The Mediterranean Squadron in Italian Waters.

THE LANCET is known and appreciated in the British navy for its vindication of the best interests of the service, primarily, of course, the medical and sanitary interests, and secondarily those interests indissolubly associated with the prestige of the British flag. From foreign capitals (which might have been expected to have been better inspired) there have returned to us the messages of correspondents representing them in Italian seaports, messages reflecting on the conduct of the visitors from the Mediterranean squadron. The *Popolo Romano*, an authoritative Roman journal well entitled to speak for the name it bears, in drawing attention to these messages, takes occasion to characterise them as the "solite esaggerazioni di corrispondenti" (the usual exaggerations of correspondents), and gives a very different impression of the conduct in question as produced in Rome especially. That impression, I may add from personal knowledge, is shared by Italians of all ranks and creeds, from the humbler strata of society up to the Quirinal and the Vatican.

The Italian Red Cross.

By Royal decree there has just been nominated a commission to settle, if possible, in an affirmative sense, the following proposals: (1) the admission of military men, on unlimited leave (*congedo illimitato*), into the *personnel* of the Red Cross; (2) that the said *personnel* shall have a military discipline and jurisdiction; (3) that the same *personnel* shall be entitled to pensions on the ground of wounds or infirmities incurred in time of war or even in time of peace on occasions of exercises (autumn manœuvres and such like); (4) that measures be adopted to prevent the abuse of the

[1] THE LANCET, June 22nd, 1889, p. 1261.

[2] THE LANCET, Sept. 20th, 1890, pp. 612-14.

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emblem and the name of the Red Cross; and (5) that the various societies of aid to the sick and wounded shall, in time of war, be dependent on the Red Cross Association. The commission is a strong one, including a highly competent representative of the medical arm.

June 15th.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

The Coronation Festivities and the Disaster at the Popular Fête.

THE series of elaborate festivities with which Russia has marked the advent to the throne of her new Emperor are now drawing to a close. As all the world by this time knows, the State entry into Moscow on May 9th (21st) and the Coronation itself on the 14th (26th) have been followed by nearly a fortnight's general rejoicing. The ancient city has decked herself in all her best, and with street decorations and illuminations of quite extraordinary beauty has made a brave show, and has provided such a background for the pageants that have been enacted within her walls as probably few other cities could provide. With one exception the whole series of ceremonials, the more popular of which have been witnessed by hundreds of thousands of spectators, Russian and foreign, have passed without serious accident. It was inevitable that many of these ceremonials should have caused extreme fatigue to the principal actors. The most trying of all was the Coronation service itself. A service lasting some three hours was followed by the formal reception of congratulations and an Imperial banquet in the old dining hall of the Kremlin Palace. When it is remembered that the Emperor and Empress had been fasting since the previous midnight, in obedience to the injunctions of the Church, and that the banqueting-hall was not reached until nearly three o'clock; when it is further remembered that they had for many hours been standing under the enormous weight of the Imperial robes of gold tissue and ermine, it is scarcely surprising that their Majesties showed clear signs of physical exhaustion, to which the mental strain and the extraordinarily impressive and significant nature of the ceremonial they had passed through must have contributed in no slight degree. Fortunately, however, no serious results followed, and the Emperor and Empress, though looking tired, appear to be in excellent health and have borne their share in the never-ending festivities of the past fortnight with a quiet dignity and grace which have delighted everybody. The one exception to the success of all these *fêtes*, to which I have already referred, was, unfortunately, a very terrible one. It is not easy yet to write quite calmly about the catastrophe of last Saturday, details of which will have already appeared in the English papers. The dreadful sight in the field itself, which in parts was literally heaped with dead bodies, the gruesome string of firemen's carts laden with corpses which met one on the way to the *fête*, and were the first intimation one had of any disaster having occurred, and subsequently the painful scenes at the cemetery when the victims were buried, of necessity made such an impression upon all who beheld these scenes as to for the moment blot out the recollection of the previous scenes of brilliant gaiety and to replace the bright sunshine with a most hideous and depressing gloom. It is perhaps too early yet to apportion blame for this disaster, but it is clear to the most superficial observer that "some one had blundered." To build a long string of wooden huts (from which the Emperor's presents of an enamelled mug and a handkerchief full of eatables were to be distributed to the people) within a stone's throw of a long ditch, the bottom of which was dug out into deep holes from eight to twelve feet deep,—to do this when it was expected that at least 400,000 peasants would flock to the field from Moscow, and consequently have to cross this ditch, which was on the city side of the field, was to court disaster. When at about seven o'clock in the morning a sudden rush was made towards the huts, and a clamour arose that the gifts should be given out, what might have been foreseen happened. Those near the ditch fell into it. Hundreds of thousands pressed on over them. For those who fell to rise again was impossible, and it was even impossible for others to help them. Peasants themselves told me they could feel they were trampling over a field of struggling human beings, but so tightly were they themselves packed that they were unable to move a finger. A second death-trap existed in an old disused well, which had been dug in 1891 for the French Exhibition, which was held on the same plain. It had been boarded over and the boards covered with sand, but the boards were not strong enough to bear the dense crowds, and some half hundred unfortunate peasants met with a horrible death in this pit. The total number of victims is between 2500 and 3000. The terrible disaster is doubly regrettable, not only for itself, but for the fact that it has led many to blame those who are in no sense to blame. The Emperor himself is held responsible by the common people, who are accustomed to lay everything "upon the king." Even a better educated class are murmuring loudly and deeply, and the impression the disaster has made will take a very long time to efface, if, indeed, it will ever be effaced. It is the more unfortunate as the police and military arrangements at all the other functions at some of which the crowds must have been nearly as great as those of last Saturday, have been admirable, and the good nature on both sides quite striking. But for this one dreadful exception the festivities marking the Coronation of Nicholas II., for the success of which everything, the weather included, seemed to have coöperated, would have been one unbroken memory of delight and enjoyment.

The International Medical Congress.

The programmes of the different sections are now in preparation, and the letters of invitation to those who will be asked to read papers are being printed. All the foreign committees have now been formed with the exception of the English. The executive committee have invited Sir James Paget to undertake the formation of the English committee, but his reply has not yet been received.

Moscow, May 24th (June 5th).

BUDAPEST.

(FROM OUR OWN CORRESPONDENT.)

Chronic Endometritis as a Precursor of Carcinoma Uteri.

DR. BACKER, after having examined the notes of 78 cases of uterine cancer which have been under the care of Professor Kézmarszky at the Budapest I Maternity, was able to infer that women suffering from chronic endometritis were specially liable to contract carcinoma of the uterus. He pointed out that the occurrence of this disease was apparently in connexion with such forms of chronic endometritis as could most frequently be traced to troubles of the puerperium. In corroboration of this view he draws attention to the well-known facts that uterine cancer is more frequent with women who had borne children previously, and that it is often to be found among the poor, who are more likely to neglect uterine troubles. Moreover, uterine catarrhs of old standing figure nearly always in the history of the case. A good lesson to be derived from Dr. Bäcker's able paper is that chronic endometritis should never be neglected, as its thorough and effective treatment might lead to the prevention of the dreaded disease.

Public Health in Hungary during 1893.

The official annual report on public health has just been issued by the Home Office. It shows that the condition of the country from a health point of view was satisfactory as compared with former years. In 1895 162,660 men suffered from zymotic diseases, of whom 15·7 per cent. died; while in 1894 166,424 infectious cases had been notified, with a death-rate of 22 per cent. This amelioration was due partly to the steady spread of sanitary measures and partly to the improved methods of combating the diseases. An increase of morbidity and mortality from small-pox must be noted. It is very interesting to record that of 4762 vaccinated persons who were attacked by small-pox 548 (11·5 per cent.) died, whereas of 2212 non-vaccinated persons 923 (47·7 per cent.) succumbed to the disease. The number of vaccinations exceeded by 30,448 the total of the preceding year, this surplus being chiefly due to re-vaccination. Vaccination was generally effected with fresh animal lymph, humanised lymph having been used in 7·2 per cent. only. As regards diphtheria the average mortality showed 35·5 per cent., against 53·1 per cent. in 1894 and 43·04 per cent. in 1893. An institution for the production of antitoxic serum has been created under the direction of Professor Preisz and yielded 350,000 doses of serum. Serum of Hungarian and foreign make has been distributed gratuitously among the poorer

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class and consequently employed on a large scale. The results of this treatment obtained throughout the whole country are not ready yet for publication, but will be shortly.

The Housing of the Working Classes.

This question, which has been much neglected in the Hungarian metropolis, was recently made the subject of careful study and consideration by Dr. J. Farkas. He showed the inefficacy of the spare measures which had been adopted by the State Government and the town council of Budapest in comparing the alleged results with those obtained in Great Britain, France, Belgium, and the United States. His paper gives a full account of the methods which ought to be employed with a view of improving the state of affairs and is well worthy of perusal by those concerned.

June 9th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Adelaide Medical School and Hospital.

MATTERS have reached a climax in the affairs of the Adelaide Medical School and Hospital and the result is that the students are betaking themselves to Sydney and Melbourne for the clinical instruction which they despair of getting in their own city. First of all the South Australian Government withdrew the annual grant to the school and now the honorary staff at the hospital has resigned in a body so that no clinical teaching is possible. The work at the hospital is carried on by the resident staff with some assistance from a few practitioners who are in the Government service. Patients naturally refuse to go into the hospital and such as are able are leaving. It was hoped that some arrangement would be possible and matters might be smoothed over, so that the members of the honorary staff could withdraw their resignation, but the Government has remained obdurate and is endeavouring to meet the difficulty as far as the hospital is concerned by advertising for a resident surgeon at £400 per annum, who is to be capable of undertaking all the surgical and gynæcological work, and a resident medical officer at £300. No one in South Australia will apply, the whole profession supporting the staff, but the Government hopes that in some other country, where the facts are not so well known, some practitioners may be found so destitute of *esprit de corps* as to take these appointments. All right-thinking members of the profession in the colonies now regard the differences between the Government and the staff—originating in a small question of nursing discipline, as already described—as a fight of might against right, and trust that whatever may be thought as to the expediency of the somewhat Quixotic action of the members of the staff in the first instance they will now receive the support of the profession universally in their self-sacrificing struggle against the ignorant and insulting tyranny of the Government.

Women as Resident Medical Officers at the Melbourne Hospital.

According to the rules of the Melbourne Hospital the resident medical officers are appointed annually from the students of the hospital, according to their place in the class lists of the Melbourne University. A few years ago a woman was among the first in the class lists and applied for the position but was ruled ineligible as she was not a full student of the hospital, having done some of her clinical work at the Alfred Hospital. This year two ladies, Miss Gamble and Miss Greig, are eligible according to the rule, and, notwithstanding much opposition, have just been appointed to the positions. The honorary staff, strange to say, was not consulted in the matter. The new medical officers will certainly find plenty of difficulties, as many of the honorary staff, the matron and most of the nurses, and the students are opposed to them. Miss Greig has been placed in charge of the casualty room, and had a lively experience the first night she was on duty, treating cases of alcoholism and assault, &c., and many doubt whether she will be able to stand the strain of the position under the circumstances.

Prevalence of Typhoid Fever: the Cold Bath Treatment.

Typhoid fever continues to be very prevalent both in Sydney and Melbourne. In the former metropolis the cases have chiefly occurred in the thickly populated but low-lying districts which are not yet sewered, while those parts connected with the sewerage have escaped. MR. Kendall, medical officer to the Sydney Water and Sewerage Board, attributes the outbreak in part to the fact that in the districts where it is most rife the houses are built on made soil contaminated by leakage from cesspits and pan-closets; in addition the rainfall has decreased, only amounting to nine inches as compared with sixteen inches for the corresponding quarter of last year, and the average range of temperature has been much higher. The suburbs along the Illawarra line, which are very low-lying, with no drainage, are most affected. In Melbourne sewerage work is in progress, and many attribute the prevalence of typhoid fever to the stirring up of the contaminated soil by the excavations for the drains. Public attention has been forcibly directed to the cold bath treatment of typhoid fever by a correspondence on the subject in the Melbourne daily press, a correspondence deprecated by many as affording a means of cheap advertisement to such practitioners as chose to make use of it and as also likely to do more harm than good from a public point of view. The physicians of the Melbourne Hospital in particular have been blamed for not using the Brand method more largely, and their results have been contrasted with those obtained in the Brisbane Hospital where it is used in every case. It has been pointed out, in reply, that the comparison is unfair, the Melbourne Hospital receiving a large number of patients in the last stages of the disease, when death is almost inevitable under any treatment and the Brand method is inapplicable. It has also been stated that the improvement in the mortality at Brisbane Hospital since the introduction of the bath treatment cannot fairly be said to be due entirely to the use of that method, as the mortality in private cases not so treated has also improved, and the type of the disease has been much milder since 1887, when assisted immigration ceased, the acclimatised population apparently suffering much less severely than did the newly arrived immigrants.

Annual Meeting of the New South Wales Branch of the British Medical Association.

The annual meeting of the New South Wales Branch of the British Medical Association was held on March 27th, and the following were elected as office-bearers for the ensuing year. President: Dr. Sydney Jones. Vice-President: Mr. Clubbe. Councillors: Dr. Thring, Dr. Knaggs, Dr. Jenkins, Dr. Scot-Skirving, Dr. Crago, Dr. Worrall, Dr. Coutie, Dr. Quaife, Dr. Fiaschi, Dr. Chisholm, Mr. Newmarch, and Dr. Mullins. The retiring President, Dr. E. J. Jenkins, read an address, in which, after feelingly alluding to the death of Dr. Huxtable, the late secretary of the branch, he referred to the relation of the profession to friendly and medical aid societies, and congratulated the profession in New South Wales on the successful stand it had taken. The proposal to register midwives was strongly condemned, and the proposal of Dr. Sydney Jones to establish farm hospitals in the country for cases of phthisis was warmly approved. The need for an Inebriates Act was noted and also of some means of preventing the indecent advertisements of abortionists with which the newspapers abound.

Scurvy in Infants.

From an interesting paper read before the Medical Society of Victoria by Dr. A. J. Wood it would appear that scurvy is not at all an uncommon affection of Australian children, though not always recognised as such. He records seven cases in his own practice and in most the food was either condensed milk or concentrated or sterilised milk. In one case fresh milk was given, but in a very diluted form. The prolonged heating of condensed, concentrated, and sterilised milk destroys its anti-scorbutic properties. All the cases quickly recovered when given fresh foods, fresh milk, and meat juices.

Obituary.

CHARLES PAGET BLAKE, M.D. EDIN., F.R.C.P. LOND.

WE regret to announce the death of Dr. Paget Blake, R.N., which occurred at his residence, Alverstoke Vale, St. Mary-church, on June 12th. The deceased was born at Alverstoke, Hampshire, in 1819, and was the son of Admiral G. C. Blake, naval gentleman usher to the late Prince Consort. He was educated at Bishop's Waltham School and Edinburgh University, where he graduated M.D. in 1840. In the same

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year he entered the navy and as assistant-surgeon on H.M.S. *Cornwallis* served in the operations on the coast of China and up the River Yang-tse-Kiang, landing with the naval brigade at the capture of Woosung, Chappos, and Chin-Kiang-Foo, for which he received the China medal. In 1856 he retired from the navy and settled in Torquay, where he was in practice for a considerable period. He will be best remembered in Torquay for his gift of curiosities from all parts of the world to the town. He was on St. Marychurch local board and for two years had been a guardian of the poor and chairman of the Moretonhampstead Convalescent Home. He took an active interest in the various charitable and philanthropic societies of the town. He was one of the original trustees of St. John's Masonic Lodge, Torquay, of which he was one of the oldest members. In 1874 he was elected a Fellow of the Royal College of Physicians of London. The funeral took place upon June 16th.

THOMAS ALEXANDER MITCHELL, L.R.C.P., L.R.C.S. IREL.

MR. T. A. MITCHELL, who died on May 5th from the effects of a fall while running to catch a train, was a well-known practitioner at Southend, where he resided, and possessed a reputation as a skilful surgeon. He received his medical education at Dr. Steevens' Hospital, and previously to taking up his residence at Southend had for many years a large practice at Catford, near Lewisham, and was much respected by all his patients. Mr. Mitchell held several assurance appointments and under the Contagious Diseases Act, 1879–80, was surgeon for Woolwich. His contributions to medical literature included "Early Escape of Liquor Amnii," "The Growth of Hair after Death," and "Secretion of Milk in the Male," the latter appearing in the columns of THE LANCET in 1885. Always a kind-hearted and amiable man, with a strong sense of duty, the death of Mr. Mitchell in his forty-eighth year will be lamented by a large circle of friends and patients.

SIR THOMAS GALBRAITH LOGAN, K.C.B., M.D. GLASG., F.R.C.P. LOND.,

HONORARY PHYSICIAN TO THE QUEEN.

THE Army Medical Department has lost in Sir T. Galbraith Logan a former Director-General and an officer of long and distinguished service. Sir T. G. Logan died on the 11th inst. at the advanced age of eighty-seven years. He was a man of singularly kind and courteous manner and much beloved. He was the eldest son of an army surgeon and was born in 1808, educated at York and Ayr, and graduated as M.D. Glasg. He entered the Army Medical Department after taking his degree at Glasgow and was appointed an assistant surgeon in 1830. As a surgeon, which rank he obtained in 1842, he served in the Sutlej Campaign of 1845–6 with the 53rd Regiment, and was present at the affair of Buddiwal, and took part in the actions of Aliwal and Sobraon, for which he had the medal and one clasp. Appointed a Surgeon-Major in 1852 he went out to the Crimea in 1855, serving at the Siege of Sebastopol, and was present at the taking of the Quarries on June 7th, at the assault a few days later, and, as principal medical officer of the Highland Division, at the final assault on Sept. 8th. For these services he was awarded the medal with clasp, the Fifth Class of the Medjidie, and the Turkish medal. He reached the rank of Inspector-General in 1859, was Director-General of the Army Medical Department from 1867 to 1874, being created a K.C.B. (Military Division) in 1869, and was placed on the retired list in April, 1874. He had been honorary physician to the Queen from 1859, and he was a Fellow of the Royal College of Physicians of London, from 1867 and hon. Fellow of the Royal College of Surgeons in Ireland. Sir Thomas Logan, who married in 1858, was also a Fellow of the Royal Geographical Society, and on the Royal Patriotic Fund Commission. The deceased officer was a well-read man, an excellent linguist, and a very genial, pleasant companion. He had travelled a great deal and seen much of the world, and of the European continent in particular. It is recorded of him that he won a prize instituted by the officers of his regiment in a spirit of comradeship and pleasantry for never having lost his temper during a stipulated time mutually agreed upon. In spite of his personal predilections being in favour of the regimental system, of which he had such a long and pleasant experience, he became convinced that the so-called unification or general system was the right, as well as the only practicable, one for modern warfare, and he consequently became a strong advocate for the present system. His courteous bearing and manner in official life and on committees, with a strong dash of common sense, gave him a good deal of influence with those with whom he came in contact and he was almost universally and deservedly liked.

Medical News.

FOREIGN UNIVERSITY INTELLIGENCE.—*Leipsig:* Dr. O. Fischer has been appointed Extraordinary Professor of Medical Physics. Dr. E. Krückmann has been recognised as *privat-docent* in Ophthalmology.—*Prague* (German University): Dr. P. J. Pick has been promoted to the Professorship of Dermatology.—*Rome:* Dr. S. de Sanctis has been recognised as *privat-docent* in Mental Diseases, Dr. Faraci as *privat-docent* in Otology and Laryngology, and Drs. Albanese and Dutto in Physiology.—*Turin:* Dr. L. C. de Martüs has been recognised as *privat-docent* in Mental Diseases. *Vienna:* Dr. Lott has been recognised as *privat-docent* in Midwifery and Gynæcology, and Dr. Mracek as *privat-docent* in Dermatology.

MR. and MRS. LEOPOLD DE ROTHSCHILD have sent a cheque for £20 towards the charitable work of Ings House Nurses' Coöperation, 81, New Bond-street, W.

THE Nursing Exhibition at St. Martin's Town Hall was closed on Saturday evening by the presentation to Mrs. Bedford Fenwick of an album containing press notices concerning the exhibition.

ROYAL METEOROLOGICAL SOCIETY. — The last meeting of this society for the present session was held on Wednesday evening, the 17th inst., at the Institution of Civil Engineers, Westminster, Mr. E. Mawley, F.R.H.S., President, in the chair, when Mr. H. Harries read a paper on Arctic Hail and Thunderstorms.

NEUROLOGICAL SOCIETY OF LONDON.—A meeting will be held at Dr. Waller's Laboratory, Weston Lodge, 16, Grove End-road, N.W. (opposite the end of Abbey-road), on June 25th, at 8.30 P.M., when Dr. Waller will give a demonstration of the Action upon Isolated Nerve of Anæsthetics, Sedatives, and Narcotics.

AT a general court of the Governors of Addenbrooke's Hospital, Cambridge, held on Wednesday last, Professor Clifford Allbutt was elected a lecturer on clinical medicine and Sir George Humphry was elected a lecturer on clinical surgery, the object of this being to bring the medical teaching in the University into closer relations with the clinical teaching at the hospital.

LITERARY INTELLIGENCE. — Messrs. Baillière, Tindall, and Cox will publish shortly a new work on "Gout and Goutiness," by Dr. Wm. Ewart; "The Objects and Limits of Operations for Cancer," by Professor Watson Cheyne; a translation of the forthcoming "Atlas of Pathological Histology," by the leading German professors, edited by Dr. Arnold Brass; this work will be illustrated with over 1000 fresh microscopical specimens in colours, the translator being Dr. Robert A. Young of the Middlesex Hospital. They also announce Professor Jakob's "Hand Atlas of the Nervous System," translated by Dr. Collins, with seventy-eight coloured plates; and Professor Lehmann and Professor Neumann's "Hand Atlas of Bacteriology," illustrated with sixty-three coloured plates.—Messrs. P. S. King and Son, King-street, Westminster, will publish shortly, providing a sufficient number of subscribers is obtained, a general index to Hansard's Parliamentary Debates from 1830 to 1891. The plan on which the index is to be constructed is an excellent one, giving the names of speakers and the debates they took part in, together with the subjects of debates, Bills, motions, &c., with dates and numerous cross references. An exceedingly useful feature of the work will be the part of the index relating to historical declarations and phrases. The complete index will be supplied according to binding from £10 10s. to £11 10s.

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MR. GEORGE STEVENS of Norton, Bury St. Edmunds, will receive for the eleventh time the vaccination grant from the Local Government Board for successful vaccination in the third district of the Stow Union.

THE annual meeting of the Association for the Oral Instruction of the Deaf and Dumb will be held at 11, Fitzroy-square, W., on Thursday, June 25th, at 3.30 P.M., when a short illustration of the system will be given and the prizes will be distributed.

PRESENTATIONS TO MEDICAL PRACTITIONERS.—Mr. John Powell, L.R.C.P., L.R.C.S.Edin., of Barry, near Cardiff, has received from the Barry Railway ambulance class in connexion with the St. John Ambulance Association a silver-mounted walking-stick for his gratuitous services as lecturer.—Dr. George Middlemiss of Darlington has been the recipient of a handsome silver-mounted ebony walking stick, suitably inscribed, from the members of the Darlington District Class of the North-Eastern Centre of the St. John Ambulance Association, as a slight recognition of his services as the Class Instructor.

THE DIFFUSION OF SMALL-POX.—The occurrences of small-pox in and around the metropolis continue to be very trifling at the moment, and in the home counties the disease shows but little evidence of spreading. The guardians of the Maidstone Union have been led by the occurrence of small-pox on a small scale in the district to adopt a resolution to the effect that all the children attending the public and private schools in the town of Maidstone shall be examined during school hours by the public vaccinator to ascertain whether they have been vaccinated. It will be interesting to hear what the school authorities have to say to the resolution in view of the attitude taken at some other places on the same subject. Members of the board took exception to the motion on the ground that the public vaccinator would have no power to carry out the wishes of the guardians without the consent of parents.. Moreover, the question of entry upon school premises would be not unlikely to arise. It is a great pity that vaccination should have been so long neglected in the union, for it is said that there are now 3000 unvaccinated children in Maidstone alone. Examination of children under these circumstances and in face of these facts will avail little unless the guardians supplement their present motion by a determined attitude towards defaulters. The small-pox data coming from Gloucester show that the cases are falling off again in amount in that city. Last week the new cases recorded were only 25, as compared with numbers for the preceding four weeks reaching 84, 47, 42, and 56. Up to Thursday, June 11th, the total of small-pox cases during the present epidemic was 1936. In the week ended last Saturday the registered deaths from the disease of persons belonging to Gloucester were 8 in number, as compared with 17 in each of the two preceding weeks. In the seven days ended the 11th inst., the discharges from the small-pox hospitals were 38, and the admissions 10 in the same period. All round, therefore, the city is in brighter case than for a long time past. Much interest was manifested locally last week by reason of the proceedings against Mr. E. H. Spring, pastor of the East End Tabernacle, in respect of his having wilfully exposed himself in a public vehicle whilst in an infectious condition consequent upon a mild attack of small-pox. The decision of the Bench was against the pastor, who was fined £5 and costs, a second charge of wilful exposure of himself whilst suffering from small-pox being withdrawn on payment of costs. The evidence forthcoming as to the period of infectivity of small-pox attacks was very diverse, but strongly against the defence set up that the defendant was in a condition to mix with others without danger of spread of infection. More proceedings were last week taken against defaulters under the Vaccination Acts at Gloucester, and a case was also before the court in which a man had failed to notify cases of small-pox in his house. Six cases of small-pox have occurred in one household at Kerne Bridge, near Ross, comprising a man, his wife, three children, and a male lodger. The cases are supposed to have been imported from Gloucester. There is no isolation hospital accommodation and a special nurse has been engaged to look after the patients, the house being isolated and every precaution taken to prevent the spread of the disease. A fresh case of small-pox has quite recently developed at Bridgend, just as the medical officer of health had hoped to be able to certify that the town was free from the disease.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Factory and Workshop Legislation.

THE Home Secretary has had prepared a Bill consolidating the various Factory and Workshop Acts which at present give rise to so much perplexity and uncertainty, and his hope is to be able to introduce it early next session.

Lamp Accidents.

The Select Committee of the House of Commons on petroleum and petroleum lamp accidents is still pursuing its inquiry. It has been at work during two sessions of Parliament, and so great is the pressure of evidence that it is doubtful whether the inquiry can be completed and the report of the Committee prepared before the end of the present session. Most interesting evidence was given at a recent sitting by Professor Mendeleeff of the University of St. Petersburg, who, of course, is a recognised authority on all matters relating to petroleum. He attributed the danger of fire and explosion to the presence of too much benzine in the oil, and said that by the separation of it a mineral oil could be produced which would be no more dangerous than vegetable oil, the benzine separated being sufficiently valuable to cover the cost of the process. In Russia, he explained, the Government are most anxious to raise the flashing point, and with that view a heavier excise duty is put upon low than upon high flash oil. Not only so, but the Government have offered a premium for a lamp which will burn satisfactorily with oil of a high flashing point and have succeeded in getting one which so burns with oil of a flashing point of 200° F. Professor Mendeleeff admitted that high flash oil in ordinary lamps smokes badly, throws off an evil smell, and does not give a good light: but at the same time he expressed the opinion that the statutory flashing point, which in this country is 73° F., should be raised to at least 100°.

Food Products Adulteration.

The Select Committee of the House of Commons on this subject has arranged to meet next week to begin the consideration of a report which has been drafted by the Chairman, Mr. T. W. Russell.

HOUSE OF COMMONS.

THURSDAY, JUNE 11TH.

Treatment of Imbeciles in Ireland.

Mr. Engledew asked the Chief Secretary to the Lord Lieutenant of Ireland whether the Government had decided what steps they intend taking with regard to the recommendation made by the Inspectors of Lunatics and Commissioners of Control in the report dated Lunacy Offices, Dublin Castle, Jan. 8th, 1896, as to the great want existing in Ireland of a national institution for the training and education of idiots and imbecile children, in order that these classes might be removed from what the report of the Commission describes as the neglect and poverty of their own homes and from the contaminating influence of association with the adult inmates of asylums and workhouses.—Mr. Gerald Balfour replied that he was aware of the views expressed by the inspectors of lunatic asylums on the subject of providing State aid towards the establishment of an institution for the training and education of idiots and imbeciles in Ireland. The matter was one which had his sympathetic consideration, and he hoped to be able at some time to introduce legislation dealing with it.

The Dangers of Factory Labour.

Mr. Schwann asked the Secretary of State for the Home Department whether his attention had been called to the statements of various inspectors (in the recent report of Her Majesty's Chief Inspector of Factories and Workshops) that proper precautions were still not taken in indiarubber works to protect the workers, often women and girls, from the pernicious effects of sulphurous fumes, which cause various illnesses, nausea, and even paralysis; and also to the statement in the same report as to the absence in some manufactories of hats, of suitable fans, and other means of ventilation, to prevent the entry into the lungs of the workers of particles of fur and dust given off in the fur-blowing processes; and whether he had power, and would exercise it with renewed energy, to cause the proprietors in both industries to take every precaution to obviate the highly deleterious effects of these operations.—Sir Matthew White Ridley said he had seen the statements of Her Majesty's inspectors. Both points were now under the consideration of the Committees on Dangerous Trades, and when he received their reports he would consider what further precautions might be necessary.

FRIDAY, JUNE 12TH.

Salvation Army Shelters.

Dr. M'Donnell asked the President of the Local Government Board whether his attention had been drawn to the reports of Dr. F. J. Waldo, medical officer of health to St. George-the-Martyr, Southwark, which stated, besides other matters, that on the occasion of a night visit to the Blackfriars Salvation Army Shelter, the air therein was not only dangerous to health but also to life itself; and whether the Government would make provision so that Salvation Army and other night refuges of a similar nature be placed within the purview of the Common Lodging Houses Act.—Mr. Chaplin replied that he was aware of the report of Dr. Waldo with reference to the Blackfriars Salvation Army shelter. On the night in question, when Dr. Waldo reported that the shelter was overcrowded so as to be dangerous to health and to life itself, there were 1031 inmates of the shelter. Proceedings in consequence were taken by the vestry of the parish and an order of prohibition of the overcrowding was made by the magistrate, who considered that 550 should be regarded as the limit of accommodation. Subsequently, an application was made to the High Court, with a view to the order of prohibition being quashed. A rule *nisi* for a *certiorari* was granted, but after argument the rule was discharged. The decision

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of the High Court showed that the shelters were subject to the provisions of the Public Health (London) Act as regards overcrowding, and that those provisions could be enforced in the case of a shelter in like manner as in the case of overcrowding in a dwelling-house. The existing law was, therefore, adequate to meet the case of overcrowding in these shelters, and it was not necessary for this purpose that it should be provided by legislation that the shelters should be common lodging houses.

MONDAY, JUNE 15TH.

Village Water-supply.

Mr. Jeffreys asked the President of the Local Government Board whether the parish council of any parish had power to clean out or enlarge the public pond in the village in order to obtain a better supply of water for the parish, and whether the parish rates could be applied for this purpose; and if the parish council had not the power to do this what authority had that power.—Mr. Chaplin replied that a parish council had power to utilise any well, spring, or stream within the parish and to provide facilities for obtaining water therefrom if they did not interfere with the rights of any corporation or person, but whether this power would enable them to execute works of the kind referred to in the question must depend on the circumstances of the particular case. A rural district council had full power to do any necessary acts to provide a supply of water proper and sufficient for public and private purposes, and in order to obtain a better supply of water for a parish in their district they might clean out and enlarge a public pond if they did not interfere with the rights of others.

Sanitary Accommodation in Mills.

Mr. Schwann asked the Secretary of State for the Home Department (1) whether his attention had been drawn to the statement by the women inspectors (in the recent report of Her Majesty's Chief Inspector of Factories and Workshops) that they criticise most unfavourably the sanitary accommodation provided in Lancashire and Yorkshire in many mills, and complain that the inspectors had no power to enforce a standard of decency as well as of cleanliness, sanitary arrangements being often without regard to privacy or propriety; (2) whether he was aware that England was the only great industrial country in Europe which had no clause in its factory legislation requiring general propriety as well as health in these arrangements; and (3) if he would undertake that in any future factory legislation to be undertaken by the present Government special regard would be paid to this point.—Sir Matthew White Ridley replied: I have seen the statements referred to in the question; but at the same time the inspectors state that in many cases, on the defects being pointed out, improvements have been effected. With regard to the second and third paragraphs of the question, the hon. member appears to have overlooked the provision made by Section 35 of the Act of last year that factories and workshops shall be provided with suitable as well as sufficient accommodation. It is too soon at present to judge of the effect of that section, which only came into force at the beginning of this year, but it appears to me to be adequate for the purpose, and in view of it I cannot agree that England is behind other countries in its legislation in these matters.

The Grant for Lunatics.

Mr. Chaplin, in reply to Mr. Ashton, said he had received a large number of communications on the subject of extending to workhouses the 4*s.* grant per week for lunatics now given to lunatic asylums and had given careful consideration to the matter. Nothing, however, could be done without an alteration in the law, and at present he was not prepared to propose legislation with regard to it.

TUESDAY, JUNE 16TH.

The Army Medical Department.

Dr. Farquharson asked the Under Secretary of State for War whether having regard to the paucity of candidates at the last examinations for commissions in the Army Medical Department, it was proposed to issue a new warrant remedying the grievances of the officers of that Department and, if so, whether the promulgation of such new warrant might be expected before the next examination in August.—Mr. Powell Williams replied on behalf of the Under Secretary, saying that the Secretary of State had the whole question of the paucity of candidates for the medical staff under his consideration. Whether it would result in the issue of a new warrant and, if so, when that warrant would be issued he could not at present say, but the matter would not be lost sight of.

BOOKS, ETC., RECEIVED.

ALCAN, FÉLIX, Paris.
Recherches sur l'Épilepsie, l'Hystérie et l'Idiotie. Compte-Rendu de 1895. Par Dr. Bourneville. Vol. XVI. 1896.

BAILLIÈRE, J. B., ET FILS, Paris.
L'Antisepsie dans la Pratique de la Chirurgie Journalière. Par Dr. E. Nicaise. 1896.
Traité de Chirurgie Clinique et Opératoire. Par A. le Dentu et P. Delbet. Tome deuxième. 1896.

BAILLIÈRE, TINDALL, AND COX, London.
Chemical Notes and Equations, Inorganic and Organic. By G. H. Gemmell, F.I.C., F.C.S. 1896. Price 5*s.*
Aids to Medicine. Parts I., II., III., IV. By Norman Dalton, M.D. Lond., F.R.C.P. 1896. Price 4*s.* 6*d.*

BATTAILLE ET CIE, Paris.
Travaux de Neurologie Chirurgicale, 1895. Par A. Chipault. 1896.

BLACK, ADAM AND CHARLES, Soho-square, London, W.
Strathpeffer Spa, its Waters and Climate. By R. Fortescue Fox, M.D. Lond. Third Edition. 1896. Price 2*s.* 6*d.*

CHURCHILL, J. & A., Great Marlborough-street, London, W.
A Manual of Botany. By J. R. Green, Sc.D., F.R.S., F.L.S. Vol. II., Classification and Physiology. 1896. Price 10*s.*
The Pathology of the Contracted Granular Kidney and the Associated Cardio-Arterial Changes. By Sir George Johnson, M.D. Lond., F.R.C.P. Illustrated. 1896. Price 4*s.*

DOWNEY AND CO., York-street, Covent Garden, London, W.C.
The Great Famine in Ireland and a Retrospect of the Fifty Years 1845-95. By W. P. O'Brien, C.B. 1896.

DOIN, OCTAVE, Paris.
Statistique et Observations de Chirurgie Hospitalière. Par Dr. Polaillon. 1896.

GREVEL, H., AND CO., King-street, Covent-garden, London, W.C.
Chemistry in Daily Life. By Dr. Lassar-Cohn. Translated by M. M. P. Muir, M.A. Camb. Illustrated. 1896. Price 6*s.*

KEGAN PAUL, TRENCH, TRÜBNER, AND CO., Paternoster House, Charing-cross-road, London, W.C.
B. Bradshaw's Dictionary of Bathing-places and Climatic Health Resorts. With Maps. Price 3*s.* 6*d.*
The Etiology, Symptoms, and Treatment of Gall-stones. By Dr. J. Keraus, Senr, of Carlsbad. With Additional Remarks on Operative Treatment. By H. Morris, M.A., M.B. Lond., F.R.C.S. 1896. Price 5*s.*

LEWIS, H. K, Gower-street, London, W.C.
The Hydro-Electric Methods in Medicine. By W. S. Hedley, M.D. Illustrated. Second Edition. 1896. Price 4*s.* 6*d.*

MACMILLAN AND BOWES, Cambridge.
Alpine Notes and the Climbing Foot. By George Wherry, M.A., M.B. Cantab., F.R.C.S. 1896.

PENTLAND, YOUNG J., Edinburgh and London.
Manual of Practical Anatomy. By D. J. Cunningham. Vol. II. Thorax, Head, and Neck. Second Edition. Illustrated. 1896.
Atlas of the Diseases of the Skin. By H. Radcliffe Crocker, M.D., F.R.C.P. Fasciculus 16. Price One Guinea net.

PHILIP, G., AND SON, Fleet-street, London, E.C.
French Series, No. 1: The Facts of Life. Part 1: Home Life—The School—Travelling—Plants. By Victor Betis and Howard Swan. 1896. Price 3*s.*

SAMPSON LOW, MARSTON, AND CO., Fetter-lane, Fleet-street, London, E.C.
Twentieth Century Practice: An International Encyclopædia of Modern Medical Science Edited by F. L. Stedman, M.D., New York City. In 20 vols. Vol. V. Diseases of the Skin. 1896.

SMITH, ELDER, AND CO., Waterloo-place, London, S.W.
The Spas and Mineral Waters of Europe. By H. Weber, M.D., F.R.C.P., and F. P. Weber, M.D., M.R.C.P. 1893. Price 6*s.*

SPRINGER, JULIUS, Berlin.
Lehrbuch der Geburtshülfe. Von Dr. Max Runge. Dritte Auflage. 1896.

THE SCIENTIFIC PRESS, 428 Strand, London, W.C.
Clinical Diagnosis. By W. G. Aitchison Robertson, M.D., D.Sc., F.R.C.P.E. 1896. Price 6*s.*

WHITTAKER AND CO., White Hart-street, Paternoster-square, London, E.C.
Modern Optical Instruments and their Construction. By Henry Orford. 1896.
Stuttering, and How to Cure It. By L. Klindworth. Illustrated. 1896.

WRIGHT, JOHN, AND CO., Stone Bridge, Bristol.
A Text-book of Histology, Descriptive and Practical. By A. Clarkson, M.B., C.M. Edin. Illustrated. 1896. Price 21*s.* net.

Lewis's Diet Charts: A Suggestive Set of Diet Tables for the Use of Physicians for Handing to Patients; price 5*s.* per packet of 100 charts, post free (H. K. Lewis, Gower-street, London, W.C.).—The Countess of Dufferin's Fund: Eleventh Annual Report of the National Association for supplying Female Medical Aid to the Women of India for the Year 1895 (Office of the Superintendent of Government Printing, India, Calcutta, 1896).—The Journal of Physiology, vol. xx., No. 1 (C. J. Clay and Sons, London, 1896); price 6*s.*—Contribution à l'Étude du Psidium Pomiferum L.; par Jos. Khouri (Les Bigot Frères, Lille, 1895).—The Statistics and Distribution of Hydatid Disease in the Australian Colonies; by Æneas J. McDonnell, M.D., Ch.M. Syd. (J. E. Stone, Ruthven-street, Toowoomba).

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ALDOUS, GEORGE FREDERICK, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Assistant Surgeon to the South Devon and East Cornwall Hospital.

ALEXANDER, ADOLPHUS B., L.D.S. R.C.S. Eng., has been appointed Dental Surgeon to the Western Skin Hospital, Great Portland-street, London.

ANDERTON, W., F.R.C.S., M.R.C.P. Edin., has been re-appointed Medical Officer by the Ormskirk District Council.

CLARK, W. T. M., L.R.C.P. Lond., M.R.C.S., D.P.H., has been re-appointed Medical Officer of Health by the Twickenham District Council.

CODD, A. F. G., M.B. Durh., F.R.C.S., L.R.C.P. Lond., has been re-appointed Medical Officer of Health by the Bromley Urban District Council.

DAVIDSON, ANDREW, M.B. and C.M., Aberd., has been appointed Senior Assistant Medical Officer to the County Asylum, Dorchester, vice Ewan, resigned.

DAVIES, HOWARD, M.R.C.S., has been re-appointed Medical Officer by the Pontypridd District Council.

DAVISON, R. T., M.D. Aberd., M.R.C.S., has been re-appointed Medical Officer of Health by the Battle Urban District Council.

EBERLE, EMILY E., M.B., B.Ch. Irel., has been appointed Surgeon (out-patients' department) to the Bristol Hospital for Sick Children and Women.

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FERNIE, E., M.D. St. And., M.R.C.S., has been re-appointed Medical Officer of Health by the Birkenshaw District Council.
FORSYTH, ROBERT, M.D. Glasg., has been re-appointed Medical Officer of Health by the Birkenshaw District Council.
FOXWELL, ARTHUR, M.D., F.R.C.P., has been appointed Examiner in Medicine in Cambridge University.
GALLOWAY, P., M.B., M.S. Aberd., has been appointed Medical Officer for the Willingham Sanitary District of the Gainsborough Union.
GOODHUE, FRED. W. J., B.A. Cantab., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant House Physician to the Hospital for Women, Soho-square, W.
GRIFFITHS, A. V., M.R.C.S., has been re-appointed Medical Officer of Health by the Fenton Urban District Council.
HEAD, HENRY, M.A., M.D. Camb., M.R.C.P. Lond., M.R.C.S. Eng., has been appointed Medical Registrar to the London Hospital.
HIND, A., L.R.C.S., L.M Edin., has been re-appointed Medical Officer of Health by the Southampton Town Council.
HUGHES, R. T., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer for the Workhouse and Schools of the Birkenhead Union.
KENDALL, H. W., L.R.C.P. Lond., M.R.C.S., has been appointed Surgeon to the Bristol Hospital for Sick Children and Women.
LING, C. A. S., M.R.C.S., has been re-appointed Port Medical Officer, Colchester.
LITTLEJOHN, T. H., has been appointed Analyst for the Borough of Scarborough, vice H G. H. Monk, resigned.
MACLEOD, D. J. A., L.R.C.S. Edin., has been re-appointed Parochial Medical Officer by the Hawick Town Council.
MATHER, R. O., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Billinge Sanitary District of the Wigan Union.
MILNER, E. A., M.B., M.Ch. Edin., has been appointed Medical Officer for the Sixth Sanitary District of the Bodmin Union.
MORGAN, WM. L., M.A. Exeter College, L.R.C.P. Lond., M.R.C.S., has been appointed Lichfield Clinical Lecturer in Surgery, Oxford University.
MORTON, C. A., F.R.C.S. Eng., L.R.C.P. Lond., has been appointed Surgeon to the Bristol Hospital for Sick Children and Women.
POCKLINGTON, E., M.R.C.S., has been re-appointed Medical Officer of Health by the Wimbledon District Council.
RANKIN, PETER, M.B., M.S. Glasg., has been appointed Medical Officer for the Third Sanitary District of the First Division of Greystoke, Penrith Union.
ROBERTS, E. C., M.R.C.S., has been re-appointed Medical Officer of Health by the Southgate District Council.
ROBERTSON, D. W., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer for the Pickering Sanitary District.
ROBERTSON, J., M.D. Edin., B.Sc. (Public Health), has been re-appointed Medical Officer for St. Helens, Lancs.
ROBERTSON, WM., M.D., C.M., Glasg., D.P.H., has been appointed Medical Officer of Health for the Burgh of Auchterarder, vice Thom, resigned.
ROBINSON, E. S., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Stourport Urban District Council.
SCOTT, W. R., M.D., M.Ch. Dubl., has been appointed Medical Officer of Health for Bloemfontein Orange Free State.
SEARLE, GEO. C., M.R.C.S., has been appointed Public Vaccinator for the Brixham and Churston Districts of the Totnes Union.
SEYLER, C. A., has been appointed Public Analyst for the Swansea County Borough, vice W. Morgan.
STARKIE, E. G. B., M.B., C.M. Edin., has been appointed Medical Officer for the Fylde Rural Sanitary District, vice J. Winn.
SWAYNE, E. H. W., M.D. St. And., M.R.C.S., D.P.H. Camb., has been re-appointed Medical Officer of Health by the Droitwich Rural District Council.
TAYLOR, W. J., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer of Health for the Ampthill Sanitary District.
THURSFIELD, W. N., M.D. Edin., M.R.C.S., D.P.H. Camb., has been re-appointed Medical Officer by the Bridgnorth Rural District Council.
WEIR, A. M., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health by the Malvern Link Urban District Council.
WILSON, GEO. J., M.A. Oxon., M.D. Dubl., M.R.C.S., has been appointed Lichfield Clinical Lecturer in Medicine, Oxford University.
WINTLE, COLSTON, L.R.C.P. Lond., M.R.C.S., has been appointed Surgeon (out-patients' department) to the Bristol Hospital for Sick Children and Women.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRIGHTON AND HOVE LYING-IN INSTITUTION AND HOSPITAL FOR WOMEN, Brighton.—House Surgeon, unmarried. Salary £80 per annum, with furnished apartments, board, gas, coals, and attendance.
CENTRAL LONDON OPHTHALMIC HOSPITAL, 238, Gray's-Inn-road, W.C.—House Surgeon.
CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY, Chesterfield.—Resident Junior House Surgeon and Dispenser. Salary £50 per annum, with board, apartments, and laundress.
CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Clinical Assistants.
CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY, Wakefield. Junior House Surgeon, unmarried. Honorarium £40 per annum, with board, lodging, and washing.
COUNTY BOROUGH OF HUDDERSFIELD.—Medical Officer of Health for the Borough and Urban Sanitary District of Huddersfield. Salary £400 per annum, with actual disbursements. Applications to the Town Clerk, Town Hall, Huddersfield.
GLAMORGANSHIRE AND MONMOUTHSHIRE INFIRMARY, Cardiff.—Assistant Resident Medical Officer for six months. Board, washing, and apartments provided.
HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians.
KENSINGTON DISPENSARY.—Resident Medical Officer, unmarried. Salary £125 per annum, with furnished rooms, coals, gas, and attendance. Applications to the Hon. Secretary, 7, Stamford-road, Kensington-square.
NEW HOSPITAL FOR WOMEN, 144, Euston-road, London.—Two Medical Women as Clinical Assistants for the Out-patient Department.
NEWPORT AND MONMOUTHSHIRE HOSPITAL.—House Surgeon. Salary £100 per annum, with board and residence (no stimulants provided). Applications to the Secretary, Newport, Mon.
PADDINGTON-GREEN CHILDREN'S HOSPITAL, London, W.—Ophthalmic Surgeon.
SEAMAN'S HOSPITAL SOCIETY (*Dreadnought*).—House Surgeon for Branch Hospital, Royal Victoria and Albert Docks, E. Salary £75 per annum, with board and residence.—Applications to the Secretary, Greenwich, S.E.
STOCKPORT INFIRMARY.—Assistant House and Visiting Surgeon. Salary £70 a year, with board, washing, and residence.
TAUNTON AND SOMERSET HOSPITAL, Taunton.—House Surgeon for three years. Salary £100 per annum, with board, lodging, and washing in the hospital.
UNIVERSITY COLLEGE, London.—Resident Medical Officer.
UNIVERSITY OF ABERDEEN.—Examiners for Graduation.
WESTERN GENERAL DISPENSARY, Marylebone-road, London.—House Surgeon, unmarried. Salary £60 a year, with board and residence.
WEST HAM HOSPITAL, Stratford, E.—House Surgeon for one year.
WILLITON UNION, Somerset.—Medical Officer and Public Vaccinator for the Stogursey District of the Union. Salary £80 per annum, with certain extra fees. Applications to the Clerk, Williton, Somerset.
WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—Resident Medical Assistant for six months. Board, lodging, and washing provided.

Births, Marriages, and Deaths.

BIRTHS.

BELL.—On June 13th, at Upgate, Louth, Lincolnshire, the wife of Charles W. J. Bell, M.R.C.S. Eng., of a daughter.
KEYWORTH.—On June 6th, at Wem, Shropshire, the wife of George Hawson Keyworth, M.B., of a son.
POWELL.—On June 12th, at Upper Clapton, N.E., the wife of Herbert E. Powell, M.R.C.S., L.S.A., of a son.
PRATT.—On June 11th, at Rugby, the wife of W. Sutton Pratt, M.D., L.R.C.P. Lond., of a daughter.
ROSE.—On June 11th, at Harvey-road, Leytonstone, Essex, the wife of Percy Rose, L.R.C.P. Lond., of a daughter.
RICHARDS.—On June 13th, at 47, Churnet-street, Manchester, the wife of Arthur Izod Richards, M.R.C.S., L.S.A., of a son.

MARRIAGES.

AINSWORTH—BRYDEN.—At St. Paul's Church, Shipley, on June 11th, by the Rev. A. Cribb, Vicar of Shipley, assisted by the Rev. C. Strong, Vicar of Windhill, W. T. Ainsworth, M.B., C.M., Marjoribanks, Windhill, to Jessie, second daughter of the late Robert Bryden, Esq., of Cross Banks, Shipley.
BATESON—DURHAM.—On June 16th, at St. Paul's Church, South Hampstead, by the Rev. T. Field, assisted by the Rev. J. W. Bennett, William Bateson, Fellow of St. John's College, Cambridge, son of the late Rev. W. H. Bateson, D.D., Master of St. John's College, to Caroline Beatrice Durham, daughter of the late Arthur Edward Durham, F.R.C.S., Consulting Surgeon to Guy's Hospital, Member of the Council and Past Vice-President of the Royal College of Surgeons, England.
BROCK—BUTLER.—On June 11th, at St. George's, Wrotham, Kent, by the Rev. Canon Erskine Knollys, George Sandison Brock, M.D., C.M., F.R.S.E., of Rome, to Lily Maria, youngest child of J. Hampden Butler, of Ashford, Middlesex. (South African papers please copy.)
BRAUND—SHEARME.—On June 10th, at St. Matthias's Church, Plymouth, Arthur Robert Mather Braund, M.R.C.S., L.R.C.P. Lond., of Hill-side, Stratton, to Margaret Jane Shearme, daughter of the late Edward Shearme, of Stowe, Kilkhampton.
BUCHANAN—ATKINSON.—On June 15th, at the British Consulate, Lausanne, and at Christ Church, George Seaton Buchanan, M.D., of London, son of the late Sir George Buchanan, M.D., F.R.S., to Rhoda Atkinson, daughter of the late Thomas Atkinson, of Windermere.
GIVEN—GARNETT.—On June 10th, at St. Ann's Church, Turton, Lancashire, John Cecil Mackmurdo Given, M.D. Lond., of Mossley-hill, Liverpool, to May, eldest daughter of J. Garnett, of Bromley-cross, near Bolton.
HOARE—GOWLAND.—On June 10th, at Holy Trinity Church, Eastbourne, by the Rev. W. A. Bathurst, Edwin Stanley Hoare, M.R.C.S., L.R.C.P., son of the late Joseph J. Hoare, and grandson of the late S. P. Low, J.P., of Round Hill Villa, Sydenham, to Jessie May, only daughter of Thomas Stafford Gowland, of Eastbourne.

DEATHS.

ARMITAGE.—On June 4th, at Greenhithe, Kent, Alice, the dearly-loved wife of S. H. Tatham Armitage, M.D., 39, Grosvenor-street, W., aged 63 years. Funeral took place at Scarborough, June 8th. Friends will please accept this intimation.
AYRE.—On June 9th, at Cheltenham, William Gordon James Ayre, Fleet Surgeon R.N., in the 70th year of his age.
KIRBY.—On June 15th, at Cambridge-terrace, Hyde-park, Thomas Charles Kirby, M.D., in the 63rd year of his age.
PAGET-BLAKE.—On June 12th, at Alverstoke Vale, St. Marychurch, Torquay, Charles Paget-Blake, M.D., F.R.C.P., Retired Surgeon R.N., aged 76.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 18th, 1896.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
June 12	30·08	N.W.	65	61	120	81	58	...	Hazy
,, 13	30·07	S.E.	71	64	128	84	61	...	Hazy
,, 14	30·09	E.	64	61	118	84	60	...	Overcast
,, 15	29·93	E.	65	62	128	86	60	...	Fine
,, 16	29·73	S.W.	74	68	128	85	65	...	Fine
,, 17	29·68	S.W.	69	62	121	69	62	...	Cloudy
,, 18	30·02	N.W.	65	59	120	72	54	0·06	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (22nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.).

TUESDAY (23rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (24th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY (25th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Great Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.) Gt. Northern Central (2.30 P.M.).

SATURDAY (27th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (22nd).—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Mr. W. R. H. Stewart: Some complications of Middle Ear Suppuration.

TUESDAY (23rd).—HOME FOR TREATMENT OF WOUNDS AND ULCERS BY OXYGEN (35, St. George's-sq.).—4 to 5.30 P.M. Demonstrations of Treatment, Apparatus, and Cases.

WEDNESDAY (24th).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Gowers.

LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Payne: Selected Cases.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. W. Hunter: Pathological Demonstrations.

THURSDAY (25th).—LONDON POST-GRADUATE COURSE.—Brit. Inst. of Preventive Medicine, Gt. Russell-st., W.C., 3.30 P.M., Dr. Allan Macfadyen and Mr. A. G. Foulerton: Detection of Drugs in Urine.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. J. Hopkins: Clinical Lecture.

VICTORIA HOSPITAL FOR CHILDREN (Tite-street, S.W.).—4 P.M. Mr. Waterhouse: Adenoid Vegetations in the Naso-Pharynx and their Treatment.

HOME FOR TREATMENT OF WOUNDS AND ULCERS BY OXYGEN (35, St. George's-sq.).—4 to 5.30 P.M. Demonstrations of Treatment, Apparatus, and Cases.

FRIDAY (26th).—LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Tetanus, Rabies, and Cholera.

SATURDAY (27th).—HOME FOR TREATMENT OF WOUNDS AND ULCERS BY OXYGEN (35, St. George's-sq.).—4 to 5.30 P.M. Demonstrations of Treatment, Apparatus, and Cases.

Notes, Short Comments, and Answers to Correspondents.

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IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

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THE HEAT.

To the Editors of THE LANCET.

SIRS,—To the medical man next in importance to the study of his patient's constitution is the study of what Sydenham called the "constitution of the season." Without any pretensions to extra foresight we may assume that we have got to deal with a hot season. For some weeks past—though we are now only in the middle of June—we have had summer weather with scarcely any rain till the beneficent fall of last week. One morning this week at 8 o'clock the outside thermometer in the shady side of the house was 70° F., and the underground thermometer, four feet deep, recorded a heat of over 55°—a temperature which, as Dr. Ballard tells us, has warnings for those concerned with the public health. It becomes a public question how to reduce the risks of such an extreme of temperature, to which, coming so seldom in our somewhat dull climate, we are apt to be inattentive. Apart from risks of sunstroke, with its head congestion and high temperature, dyspnœa, and heart failure, we may expect to see various degrees of "heat-exhaustion," characterised by great prostration and low temperature, and liability to summer catarrhs. Epidemic diarrhœa is not seen now on such a scale as was common before the sanitary era initiated by Chadwick, Simon, and others, and which made summer a busy season for medical men. But it is still serious enough to figure largely in the public bills of mortality of the season. It has never yet been shown exactly how much of the influence of the sun, as we have it, is due to its direct effect on the human body, and how much to its effect on food, drink, &c. To be forewarned is to be forearmed. Insolation with us is a much more preventable accident than in most countries. We have only to practise a few of the most obvious precautions to escape its risk in any serious form. One of these is to do most of our work in the cooler periods of the day, early and late, while the sun is not putting forth all his power. Another point is to make much of the night by cooling down bedrooms, and by a window open a little top and bottom to secure fresh air to favour sleep. The regulation of food is another chief security. Animal food cannot be dispensed with, but it should be in light forms and moderate quantities, often cold with salad, instead of hot with questionable new potatoes. Above all things in hot seasons care is necessary in the use of alcohol. Beer and spirits are recognised as dangerous in hot countries. Light wine well diluted and, at the proper time, tea, or coffee, are sustaining.

I am, Sirs, yours truly,

June 15th, 1896. M.D.

Mr. Richmond Leigh.—We agree with our correspondent to a certain extent, but he must remember that the addresses were delivered not to specially scientific audiences, but to the members of the medical corporations.

Vaccination must send us full particulars before we can answer his question. Where were the diplomas obtained and when?

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"AN INSURANCE OFFICE AND A MEDICAL REFEREE."

To the Editors of THE LANCET.

SIRS,—In the issue of THE LANCET of May 2nd you kindly inserted under this heading a summary of some correspondence between the manager of the Sickness and Accident Association of Edinburgh and myself, and this summary was absolutely correct, but the manager directly contradicts my statement that they offered me 5*s.* for the examination. My only desire in forwarding the correspondence was to point out the unsatisfactory basis of insurance fees, with the hope that some more reasonable basis might ultimately be suggested, but I did not wish to introduce in any way personal considerations, and therefore asked him to correct the mis-statement which he had made, but apparently he prefers that I should be regarded as a perverter of the truth. I now enclose letters from him and from his agent acknowledging that the offer of 5*s.* was made, although they now say that it was made "in error," and that the magnificent sum of 7*s.* 6*d.* should have been stated instead. I do not wish to comment upon this behaviour, but I trust that you will insert this letter in fairness to me and also in order that your readers may form their own estimate of the office. I have withdrawn my own policy.

I am, Sirs, yours truly,

Great Berkhamsted, June 8th. SIDNEY A. BONTOR.

*** Dr. Bontor encloses two letters, one from the manager of the Sickness and Accident Assurance Association, Limited, and the other from Mr. P. F. Maples, St. John's Vicarage, Mansfield, an agent for the same Association. The manager states that the offer of 5*s.* was not made by the authority of the Association, though he adds "that it was made I do not for a moment dispute." The agent says that he made a mistake in offering 5*s.*, and he appears to think that Dr. Bontor ought to have detected that he was new at his work. It is quite clear that Dr. Bontor's statement, upon which we founded our remarks on May 2nd, 1896, was entirely exact, and that the manager's contradiction, which we inserted on May 16th, was incorrect. The offer which the manager says was not made was made, and by an agent of the association.—ED. L.

T. L. H.—Our correspondent does not specify for what object he wishes to consult the works about which he enquires. The best book of reference is not necessarily the best manual for an examination. Fagge's, Bristowe's, Osler's, Taylor's, and Roberts's treatises on Medicine, Erichsen's, Holmes's, and Treves's on Surgery, are household words, and Quain's Dictionary of Medicine must not be omitted; the first volume of Dr. Clifford Allbutt's System of Medicine is now out, while many of the articles in Reynolds's System are as well worth reading now as they were when they were written.

"IODISM."

To the Editors of THE LANCET.

SIRS,—I have read your correspondent Dr. A. Veitch's letter *re* Iodism, and the results of his use of the iodide with morphia and also atropia are certainly satisfactory. I should like to know if he has ever tried or knows anything of the strontium iodidi, which I venture to think he will find most satisfactory in all cases. I shall be glad to hear, if your correspondent should give this drug a trial, what results he has experienced. It is to be had in the very convenient form of tablets, which quickly disintegrate. The bromide strontium also is most valuable.

I am, Sirs, yours faithfully,

Harlesden, June 13th, 1896. R. FOSTER OWEN, M.R.C.P. Irel.

Ethics.—Our correspondent informs us that he knows of a case where a gentleman who had been debt collector to a medical man became a qualified medical practitioner, and returning to the neighbourhood proceeded to tout among his old master's clients, trading on his knowledge of their circumstances. It should be added that his master had been succeeded in practice by another medical gentleman, who, we are informed, is suffering from this touting, "several well authenticated cases" having occurred where the patients were invited to give the late collector a trial. We are asked to express an opinion, and can only say that if "Ethics" is correct in his facts the medical man whose patients are invited to try some one else has a right to feel aggrieved.

Dr. H. Mallins.—Apply to the Secretary, Swedish Turist Forening, Stockholm.

Squirt has not given his name and address.

THE PROFESSOR OF BOTANY AT CAMBRIDGE.

To the Editors of THE LANCET.

SIRS,—In your notice of the current number of *Science Progress* which appears in THE LANCET of June 13th, you observe that "on the title page ..... the name of the late Dr. Marshall Ward still appears." Of course this was written under a misapprehension of the fact that Dr. Ward is still Professor of Botany at Cambridge.

I am, Sirs, yours faithfully,

June 16th, 1896. J. BRETLAND FARMER.

*** We apologise to Professor Marshall Ward for the blunder.—ED. L.

PROFUSE ANTE-PARTUM HÆMORRHAGE CAUSED BY WOUND OF THE VAGINA.

To the Editors of THE LANCET.

SIRS,—A short time ago I was summoned to a case at some distance, the message not stating its nature, so that I went unprepared for midwifery. On arriving I found that it was a confinement and the woman had been in labour over twenty-four hours. She had lost a large quantity of blood and I found her approaching a state of collapse, the bleeding having commenced two hours previously to my arrival. On examination I found the cervix well dilated, the head presenting, and the membranes intact. No laceration could be detected in the cervix and no sign of a ruptured varicose vein at the vulva. The blood appeared to come from an artery in the anterior wall of the vagina, and I was puzzled to account for it. An antiseptic plug of lint was passed into the vagina and held against the anterior vaginal wall; this effectively controlled the hæmorrhage. Shortly after this I ruptured the membranes with my finger and the child was born in a few minutes. The placenta was expressed and the uterus contracted well. The hæmorrhage ceased after delivery. A neighbour who was acting as midwife was attending her, and there was also a second woman present, who took me aside afterwards and told me the cause of hæmorrhage was due to the woman acting as midwife, who, wishing to bring the labour on quicker, had taken a pair of sharp-pointed scissors with the intention of "clipping the waters," as she expressed it. Instead of doing this she wounded the anterior wall of the vagina, with the result that hæmorrhage came on immediately. The woman afterwards admitted that she had done it in previous cases. The patient was in a very feeble state for the subsequent three days, her temperature on the second and third day being 100° F. and 101° respectively, and I began to fear some septic absorption had taken place, but her condition improved in a few days and she did well. The vagina was syringed out every day with a warm solution of permanganate of potash. The woman in attendance received such a fright that I do not think she will repeat the proceeding. My excuse for publishing this case is to put on record the disastrous consequences which might ensue from an ignorant person tampering with a labour case. I am, Sirs, yours truly,

E. G. RENNY, M.R.C.S. Eng., L.R.C.P. Lond.

Colchester, June 15th, 1896.

Volunteer.—A surgeon-lieutenant must first ascertain that a commanding officer of a regiment or bearer company of the Volunteer Medical Staff Corps is willing to accept his services. He will then receive from the adjutant a printed form to fill in, consisting of a series of questions, with certificates of moral character, &c. This form, signed by the applicant, is sent through the adjutant to the officer commanding the regiment or bearer company, and by him transmitted, with a letter of approval, to the War Office. The appointment will be gazetted in about a fortnight. He must hold a double qualification. There is no age limit except the age at which he must retire—viz., sixty years, or by special permit it may be extended. When gazetted he can obtain £10 towards the cost of his uniform, and after passing the "P" or "P.S." examination a second £10, so that he receives £20 in all; but if he withdraws before three years he will have to refund the sum to the Government.

Mr. D. Ainsley.—Our correspondent is thanked for his letter, the subject of which we will notice if possible shortly. It is one which might well be brought forward at a medical congress.

A. R.—Our correspondent does not seem to have registered his qualification. The editors of the "Medical Directory" are exercising a proper discretion in deciding that he is not a British practitioner residing abroad, but a German with a British qualification.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Eastern Morning News, Manchester Courier, Scotsman, Civil Service Gazette, Leicester Post, Dundee Advertiser, Hampshire Independent, Cheltenham Mail, Stratford Advertiser, Glasgow Herald, Huddersfield Examiner, Retford News, Bridgwater Independent, South Wales Post, South London Mail, National Observer, Newcastle Journal, Accrington Observer, Western Daily Mercury, Birmingham Gazette, Sussex Daily News, Worcestershire Chronicle, Oban Times, Liverpool Daily Post, Times of India, Blackburn Times, Pioneer Mail, Doncaster Chronicle, Brighton Argus, Builder, Bristol Times, Liverpool Courier, Oldham Standard, Yorkshire Post, Halifax Guardian, Leeds Mercury, Burnley Express, Bolton Journal, Architect, Bristol Mercury, Westminster Gazette, Sanitary Record, Brighton Gazette, Le Temps (Paris), Weekly Free Press and Aberdeen Journal, Lincoln Mercury, Mining Journal, Reading Mercury, Hemel Hempstead Gazette, City Press, Hertfordshire Mercury, Le Courrier de la Presse, Local Government Journal, Surrey Advertiser, West Ham Guardian, Keble's Margate and Ramsgate Gazette, Citizen, North Queensland Herald, Colchester Mercury, Shrewsbury Chronicle, Bury Guardian, Blackpool Gazette, Wigan Examiner, Hereford Times, Derry Journal, Poole Herald, Middlesex and Surrey Express, Torquay Directory, &c., &c.*

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The Cavendish Lecture

ON

THE CENTENARY OF THE DISCOVERY OF VACCINATION BY EDWARD JENNER.

Delivered before the West London Medico-Chirurgical Society on June 17th, 1896,

BY THOMAS BRYANT, M.CH, F.R.C.S ENG. & IREL.

CONSULTING SURGEON TO GUY'S HOSPITAL; PAST PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND, ETC.

MR. PRESIDENT AND GENTLEMEN,—One hundred years ago a medical practitioner residing in a remote village in Gloucestershire, and who might have been described as obscure, wrote to Mr. E. Gardner of Frampton, an old and intimate friend, the following letter, dated from Berkeley, July 19th, 1796.

"DEAR GARDNER,—As I promised to let you know how I proceeded in my inquiry into the nature of that singular disease the cow-pox, and being fully satisfied how much you feel interested in its success, you will be gratified in hearing that I have at length accomplished what I have been so long waiting for—the passing of the vaccine virus from one human being to another by the ordinary mode of inoculation. A boy of the name of Phipps (aged eight) was inoculated on May 14th) in the arm from a pustule on the hand of a young woman who was infected by her master's cows. Having never seen the disease but in its casual way before, that is, when communicated from the cow to the hand of the milker, I was astonished at the close resemblance of the pustules in some of their stages to the variolous pustules. But now listen to the most delightful part of my story: The boy has since been inoculated for the small-pox (July 1st) which, as I ventured to predict, produced no effect. I shall now pursue my experiments with redoubled ardour.

"Believe me, yours very sincerely,

"EDWARD JENNER."

The letter I have just read[1] is now in the possession of the Royal College of Surgeons of England with a large number of other valuable Hunterian, Jennerian, and Baillie records, which are to be treasured by the College for all time as a distinct collection under the name of the Hunter-Baillie collection, the whole having recently been kindly presented to the College through me, according to the wish of the late Mr. William Hunter Baillie and his surviving sister Miss Helen Baillie. The pleasure with which Jenner indited this letter to his trusted friend, and reported the complete success of his crucial with his control experiment on vaccination, can be understood in a measure by all of us, and we can likewise appreciate how by his success in his well-thought-out experiment he was encouraged to go about his work with redoubled ardour. At any rate, the interest the perusal of this letter has raised in my mind and the possession of the letter with other original papers connected with Jenner and his work have induced me in giving this lecture, which bears the honoured name of Cavendish, the great chemist of the air, to bring before your notice the doings of another great Englishman, who has both directly, by the discovery of vaccination, and indirectly, by introducing a new method of investigation, been of incalculable advantage to his fellow creatures all over the world. And as this year is the centenary of Jenner's discovery I have been encouraged to bring his name and good work before you.

Edward Jenner was born at Berkeley, Gloucestershire, on May 17th, 1749, and died on Jan. 26th, 1823. He studied medicine and resided for two years as a house pupil with John Hunter when he was twenty-one and Hunter was forty-two years of age, and always subsequently referred to Hunter as the "dear man." A close friendship between these men succeeded this period for at least a quarter of a century, as proved by a correspondence which continued nearly up to Hunter's death. Indeed, Hunter's opinion of young Jenner must have been very high, for in 1775 when Hunter started his school of anatomy he asked Jenner to join him as a partner; and that the two men were intimate is proved by a letter from Jenner to Dr. Heberden that in 1778 Jenner had recognised the existence of the heart trouble from which Hunter died on Oct. 16th, 1793. In 1771, as soon as Jenner left Hunter's house, he commenced his systematic inquiries into the subject of cow-pox, and particularly into the truth of the floating opinions and scattered observations which had been made as to its influence; for in some of the dairy counties—particularly those of Gloucester and Buckingham—the fact had long been recognised that the dairymaids who had contracted cow-pox were far less susceptible to small-pox than others who were differently placed, and it is more than probable that Jenner had told this to John Hunter and had been stimulated by his precept and example to follow out this clue to its legitimate conclusions. Jenner was probably unaware of an isolated example of vaccination by B. Jesty in 1774, and of another in Holstein in 1791 by P. Plett. At any rate John Hunter never took the subject up, and it was left to Edward Jenner to realise the full value of these observations, to confirm them by way of experiment, and to apply them by a happy thought or stroke of genius to the lasting benefit of his fellow creatures. That Jenner understood the full meaning of the investigation he was following out, and the measure of good his work was likely to achieve if brought to a successful issue, is perfectly clear from the following conversation he had with his friend Gardner sixteen years before he made the crucial experiment recorded in the letter with the reading of which I commenced this lecture, and nine years after he had commenced his study of the subject. In 1780 Jenner, when riding on the road between Gloucester and Newport with his intimate friend Edward Gardner, went over the natural history of cow-pox. He stated his opinion as to the origin of this affection from the heel of the horse—an opinion which was never accepted in Jenner's time, but which has since been established, beyond room for doubt, by H. Bouley of Alfort, he having proved in 1862 the fact that the grease is a specific disease of the horse analogous to cow-pox and interchangeable with it. He likewise specified the different sorts of disease which attacked the milkers when they handled infected cows; dwelt upon that variety which afforded protection from small-pox; and with deep and anxious emotion mentioned his hope of being able to propagate that variety from one human being to another till he had disseminated the practice all over the globe, to the total extinction of small-pox. "Gardner," he said in conclusion and with great emotion, "I have intrusted a most important matter to you, which I firmly believe will prove of essential benefit to the human race. I should not wish what I have stated to be brought into conversation, for should anything untoward turn up in my experiments I should be made by my medical brethren the subject of ridicule." In 1780 the conversation I have just quoted took place; in 1796, sixteen years later, the success of his crucial experiment was reported to the same friend; and between 1796 and 1798, when he published his first treatise on cow-pox, he repeated the experiment over and over again. Indeed, he inoculated at least 100 children with cow-pox, and subsequently at different intervals with small-pox without effect before he ventured to communicate his discovery to the world. Jenner did not publish his discovery till 1798—that is, two years after the success of the crucial experiment he had performed on the boy "Phipps," which had proved to him the truth of his theory, and which helped him, as he expressed it, to pursue his experiments with redoubled ardour. He was not so eager to reap the fruit of his labour as to bring it to market before it was ripe, but he cautiously went over the ground again and again, by experiment and counter-experiment, until there was no room for doubt; so that when, in June, 1798, he gave the ripe conclusions of his prolonged investigation under the heading of an "Enquiry into the causes and effects of the variolæ vaccinæ" to an astonished and admiring world, its form and substance were so clear, simple, and convincing that his work was at once accepted and the practice based upon it speedily diffused over all countries. Indeed, France, Russia, Germany, Austria, Spain, Switzerland, Denmark, Norway, America, and India all vied with one another in their efforts to spread the means of contending with such a loathsome and fatal malady as small-pox had for so many centuries proved to be.

France forgot its jealousy and accepted the boon from England's son with candour and alacrity. She founded

[1] A facsimile of this letter is published on page 1773.

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institutions and societies for its extension under Government sanction, and the central government committee reported so early as 1802 that "there has not been one example to prove that amongst ten thousand individuals inoculated with the cow-pox a single one has been infected with the small-pox, though being in the midst of the contagion." In 1803 they were still convinced of the reality of the advantages ascribed to it, and returned what they described "as a just tribute of acknowledgment to Dr. Jenner, being fully persuaded that he will hereafter be remembered among those who have reflected the greatest honour on science and rendered the most important service to mankind." Dr. Valentine of Paris worked nobly to introduce and extend the practice.

In 1803 the Government of Denmark so effectually enforced the practice of vaccination that small-pox was rapidly extirpated from the country, and soon afterwards it prohibited variolous inoculation altogether. In 1821 not a single case of small-pox had occurred in Denmark for a period of eleven years. In 1826, however, a traveller from Hamburg re-introduced the disease.

In Sweden vaccination was taken up very warmly, and as a consequence in 1802 variolous inoculation had been given up and in 1803 vaccination was established by law. On Feb. 10th, 1814, the Government of Sweden reported that small-pox had been perfectly extirpated in that country. In 1823 its mortality, at any rate, had dropped from 15,000 a year to 37. Dr. Edwardes has within the last month recorded the facts, as demonstrated by official records, that whereas before vaccination 1 death occurred every year from variola in every 488 of the population, the average annual mortality of the disease for the last seventy-seven years has been 1 in every 6451, or $\frac{1}{13}$th part of the former average.

In 1801 vaccination was introduced into Russia, and the story of its introduction, which is so indicative of faith in its value and energy in its use, is worthy of repetition. The Court was at Moscow on account of the coronation of the Emperor, and the child who was first inoculated was patronised by that exalted and truly philanthropic personage, the Empress Dowager, who named her "Vaccinoff," sent her in one of her own coaches to St. Petersburg to be placed in the Foundling Hospital, and settled on her a pension for life. Her Majesty likewise transmitted on Aug. 10th, 1802, a valuable diamond ring to Dr. Jenner accompanied by a flattering letter written by her own hand. This act was followed by the adoption of vaccination throughout the Russian dominions. The nobles themselves inoculated the peasants with their own hands. Indeed, in Russia vaccination proved so successful that it was termed in the language of the country the "pock of surety," and no wonder, when we were told that variola before that period was the cause of death in Russia of every seventh child and sometimes was said to have destroyed two millions of people in a year. Woodville and Guthrie, two great authorities of that day, believed it not improbable that the great population of these regions, which formerly enabled them to pour such immense numbers over Europe, had been greatly lessened by this disorder.

In Germany vaccination was introduced through Hanover, and the King of Prussia was the first crowned head who had the vaccine inoculation performed on his own children. He established a vaccine institution in the capital of each part of his dominions and appointed a Berlin physician to the institution in that city with a suitable salary.

In Austria vaccination was introduced into Vienna in 1801 and taken up very warmly by Dr. de Carro of that town, who, when he vaccinated a child of a medical friend four and a half hours after its birth, expressed the wish that vaccination and christening should be one ceremony as by such a practice small-pox would be soon eradicated. It was said that this excellent idea was supported by the celebrated Dr. Darwin, who, from opposing the practice at its commencement, became before the year 1802 one of its warmest supporters.

Its effects in diminishing the mortality of small-pox in Vienna was very evident by comparing the number of deaths since its introduction in 1801 down to 1804 with the average of the ten years before its introduction:—From 1791 to 1800 inclusive the deaths were 835 a year; in 1801 (the year of the introduction of cow-pox into Vienna) the deaths were 164; in 1802, they were 61; in 1803, 27; and in 1804, 2.

In Lombardy the practice was so popular and so much enthusiasm as to its adoption was felt that in 1805 Dr. de Carro of Vienna reported that Dr. Sacco travelled from one town or village to another and the children were assembled in order to be vaccinated by the ringing of the church bell.

Spain took up the practice of vaccination very warmly, and both at home and abroad spared no efforts to confer its benefits upon all its children—indeed, one of the prettiest incidents connected with the early history of vaccination was brought about by the Spanish Government and is worthy of being recalled to mind. When evidence had been brought before the Spanish Government that both in India, Ceylon, and other Asiatic countries the vaccine inoculation had completely succeeded, "the Spanish monarch resolved to fit out an expedition for the express purpose of carrying to all the possessions of the Crown of Spain beyond the seas and to those of several other nations the inestimable gift of vaccine inoculation. An expedition was prepared which set sail from Corunna on Nov. 30th, 1803, under the direction of Dr. Francis X. Balmis, Surgeon Extraordinary to the King. There were on board twenty-two children who had never undergone small-pox selected for the preservation of the vaccine fluid by transmitting it successfully from one to another during the voyage. After an absence of nearly three years the able conductor of this philanthropic expedition returned to Madrid having circumnavigated the globe and having more than realised the most sanguine expectations that were entertained at his departure."

In America vaccination made early and rapid way, for Dr. Waterhouse as soon as he received a copy of Jenner's book, which he did within six months of its publication, was so struck with the importance of the subject and the incalculable benefit which might accrue to his country from its adoption, that he immediately communicated to the public a sketch of the discovery, and this effort on his part was most favourably received by Mr. John Adams, the then President, who wrote on Sept. 10th, 1800, "to disarm the small-pox of its contagion is an enterprise worthy of a Hercules in medicine." Mr. Jefferson, the succeeding President, continued to support the same, so that in 1802—four years after Jenner's book was published—vaccination had become widely extended through the United States and likewise amongst the Indians, who received it as a blessing from Heaven.

In 1806 it was reported that in Mexico and Peru, where small-pox every year had played sad havoc, by means of vaccination, variola had lost much of its malignity, so that at that date—eight years after its introduction—the number of children who fell victims to it had been reduced in the proportion of nine to one.

In China, even, much success was soon achieved, and at Canton the first British book that had ever issued from a Chinese press was published upon the subject in order to promote the knowledge of the discovery.

In India the practice was rapidly adopted and extensively practised. In 1802 it was recorded that no less than 800,000 natives had been vaccinated. The Brahmins at first objected to it as it proceeded from the sacred cow, but when the chief of the Mahratta empire had one of his own children vaccinated many others followed suit, and so at last the cow-pox inoculation became so popular as to be named "the dew of heaven."

In England, and particularly in London, vaccination, in common with all other great movements, was sadly opposed—prejudice and the pleasure of opposition had its influence, and inefficient and careless methods helped both. A striking instance of incredulity was exhibited on March 28th, 1808, at a place of public discussion in London called the British Forum, when the following subject was brought forward for discussion: "Which has proved a more striking instance of the public credulity, the gaslight of Mr. Winsor or the cow-pox inoculation?" The result of the discussion was that both gaslight and cow-pox were handed over to scorn and ignominy. That incredulity as to the value of vaccination itself was rapidly displayed after its introduction was not surprising, as well as incredulity as to the relative value of cow-pox and small-pox inoculation, which was then in vogue; indeed, such feelings were but natural. Hostility and opposition to the practice of vaccination as well as to the theory upon which it was based were also to be anticipated, for the curious tribe of anti's, including "anti-vaccinists," as they were then called, has always been present in the world and still exists; and although those unreasonable people may do some harm amongst the thoughtless and ill-informed, they help to stimulate healthy exertion and at the same time give the public an opportunity of studying human nature in one of its oddest forms. Nevertheless, it is clear that hostility to the

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FACSIMILE OF LETTER FROM DR. EDWARD JENNER, THE DISCOVERER OF VACCINATION.

(Reproduced by permission from the original in the possession of the Royal College of Surgeons of England.)

Dear Gardner

As I promised to let you know how I proceeded in my Enquiry into the nature of that singular disease, the Cow pox & fully satisfies how much you feel interested in its success, you will be gratified in hearing that I have at length accomplish'd that I have been so long waiting for the passing of the vaccine Virus from one human being to another by the ordinary mode of Inoculation

a Boy of the name of Phipps was inoculated in the Arm from a Pustule on the hand of a young Woman who was infected by her Masters Cows. Having never seen the disease but in its casual way before, that is, when communicated from the Cow to the hand of the Milker, I was astonished at the close resemblance of the Pustules in some of their stages to the variolous Pustules. But now listen to the most delightful part of my Story. The Boy has since been inoculated for the Small pox which as I ventured to predict produc'd no effect. I shall now pursue my Experiments with redoubled ardour.

Believe me Yours
very sincerely
Edw.d Jenner

Berkeley July
19 1796

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practice of vaccination was very serious, for the writer of an able article in the *Edinburgh Review* for 1806 upon the subject (vol. iv., p. 33) wrote that "in the whole course of our censorial labours we have never had occasion to contemplate a scene so disgusting and humiliating as is presented by the greater part of this controversy; nor do we believe that the virulence of political animosity amongst the lowest scribblers ever gave rise to so much coarseness, illiberality, and absurdity as is here exhibited by gentlemen of sense and education discussing a point of professional science with a view to the good of mankind." That carelessness in the operation of vaccination and in the transference of the vaccine virus had in Jenner's time, as in our own, some influence for harm in an occasional instance is also true; but such a fact is no more an argument against vaccination than any other act, for carelessness, of all human virtues, must be calculated upon as a human certainty. In Jenner's time carelessness must, however, have had a more pernicious influence, for the vaccine inoculation was not confined to members of the medical profession. In 1800 it was openly practised by some of the clergy. In a pamphlet before me, dated 1806, I read that a Mr. J. T. Read, who was curate of Leckhampstead and Akeley, near Buckingham, in March, 1800, began to vaccinate both the labourers of those villages and vast bodies of men who were working at the Grand Junction Canal, which was then in progress, and that in the course of six years he had inoculated upwards of 4700 persons and that not one of his cases had subsequently had small-pox although many had run extreme risks. This custom of amateur vaccination was, indeed, so general that the National Vaccine Establishment, in its report for 1815, drew attention to it in the following terms, which, please note, are commendatory and not, as they would have been in this age of Medical Acts, the reverse: "The board cannot omit to direct your Lordships' attention to the *meritorious conduct* and zealous exertions of private individuals, not of the medical profession, who have not only vaccinated many hundreds every year, but who have studiously maintained a supply of lymph in their districts for the perpetual renewal of vaccination. It has particularly noticed the ardent zeal of Mr. Ellis of Rhos farm, who has vaccinated several thousands in North Wales without a single failure, and also of the late Rev. Mr. Holt and the Rev. Mr. Finch, two of the earliest friends to the practice and who met with undeviating success, a success which puts to shame the negligent practice of some belonging to the medical profession." In 1818 the National Vaccine Establishments were so pleased with public non-professional assistance that they appointed honorary vaccinators to help in their work, and most of them were private gentlemen, ardent patrons of vaccination. This act on their part was somewhat curious, for at this time the same establishment began to recognise the necessity of acquiring knowledge as to the best modes of practice, for reports came in of failures, or supposed failures, which were of course exaggerated in the eyes of the public and helped the quacks and sceptics to encourage variolous inoculation, which at this period of the world's history seemed to be very much in their hands, with those of farriers, publicans, nurses, and low, cunning people of both sexes and of various descriptions.

I propose now to say a few words about the success of vaccination, for its very success at the present time is employed as an argument against its use. Indeed, small-pox since the introduction of vaccination has so steadily and rapidly diminished that the present generation of people until lately have little knowledge of its existence, and consequently hardly understand the necessity of seeking a preventive for an affection which seems so remote; and I question whether the present generation of medical men are fully alive to its former dangers. The following brief observations may consequently be of interest. It may be accepted as a correct statement that before the vaccine inoculation was introduced in 1798 3000 lives in London and 40,000 in the United Kingdom were *annually* the direct victims of small-pox, and that these numbers multiplied by six—or 18,000 in London and 240,000 in the United Kingdom—indicated the number of people who had been affected with the disease every year. Out of every 1000 persons who died from any cause, 100 died from small-pox and 600 had it; for 1 out of every 6 infected with small-pox died from it. This mortality was calculated when the practice of variolous inoculation had been very general, whereas before inoculation was introduced 1 out of every 3 persons attacked by natural small-pox died. It may also be accepted as true that of those who survived the ravages of the disease a number—at least twice as large as that given to indicate its fatal average—were afflicted with blindness or hideous deformity which rendered life miserable. Indeed, Mr. Moore, the author of an excellent pamphlet (A Reply to the Anti-vaccinators of 1806) referred to the well-known institution in the South of London for instructing the indigent blind, and reported that no less than three-fourths of its occupants had lost their sight from the small-pox. These figures taken together suggest an amount of preventable human misery which is appalling, as it affected every year 130,000 of our own country-men and -women. At the present time the mortality of small-pox appears but trifling, for in 1894 the Registrar-General reports that in a population of over 30 million persons in which the death-rate was 16·6 per 1000, the deaths from small-pox were only 820 or 27 per million people, or one death from small-pox in every 37,000 persons. And in 1895 in the metropolis out of a population of 4,400,000 there were 55 deaths from small-pox, or one in every 80,000; and out of 1546 deaths one only was from variola, whereas 100 years ago, instead of one death from variola out of the 1546 deaths there would have been 154 deaths. In the Continental war of 1870, in the well-vaccinated German troops there were but 300 deaths from small-pox; whereas in the imperfectly-vaccinated French army there were 23,400 deaths from the same disease. Jenner always considered small-pox and cow-pox as modifications of the same distemper, and that in employing vaccine lymph, we only made use of means to impregnate the constitution with the disease in its mildest, instead of propagating it in its virulent and contagious, form, as is done when small-pox is inoculated.

"It is," he wrote later, "the small-pox in a purer form than that which has been current among us for twelve centuries past. The security given to the constitution by vaccine inoculation is exactly equal to that given by the variolous. To expect more from it would be wrong."

In 1811 Jenner wrote: "At the commencement of vaccination, I deemed variolous inoculation after vaccination the necessary test of security. I now—that is, thirteen years later—feel confident that we have one of equal efficacy, and infinitely less hazardous, in the re-insertion of the vaccine lymph." Jenner clearly by this observation recognised the value of re-vaccination. He also advocated the use of lymph from the calf when it can be procured.

The question of variolous inoculation claims briefly our attention, for it was carried out throughout the world for many years with variable success.

The practice of inoculating the small-pox as we now vaccinate for cow-pox was recognised in Constantinople and Venice in 1714–15, and although its introduction into England was said to have been at about that date, its true adoption was unquestionably due to the influence of Lady Mary Wortley Montagu, the wife of the British ambassador at Constantinople in 1717, who had a child of hers so inoculated at Constantinople by Mr. Maitland, surgeon to the embassy of that town, and in 1722 a second who was in England, this case being the first known subject of the new practice in civilised Europe. The practice, however, made but slow progress, and in 1740 it had almost fallen into disuse. But about this date good accounts of its success had been reported from South America and the West Indies, and under this influence the practice was revived.

In 1754 variolous inoculation was described as a noble and blessed discovery, and the College of Physicians declared their fullest approbation of the practice and thus favoured its adoption. They failed, however, to support as they ought to have done the recommendation to keep the infected apart from the non-infected members of the population. As a consequence of this support from high quarters, variolous inoculation became prevalent in 1760. In 1768, or eight years later, what was known as the Suttonian method of inoculation also helped to spread the practice, aided by the encouragement given to it by the Empress Catherine of Russia who invited Dr. (afterwards Baron) Dimsdale of this country over to St. Petersburg to inoculate her and her son Paul. Nevertheless, inoculation of small-pox was but a mixed blessing, for experience proved that instead of mitigating it actually extended the evil, for although the proportion of those who died by it out of a certain number infected (1 in 200) was less than before its adoption, when it was 33 in every 100, yet the actual number carried off by it was greater. The cause of this was obvious: while the small-pox

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was more fatal in appearance caution was alive, and when ever the disorder appeared it carried such terrors with it that communication was cut off as much as was practicable and every house was shunned as a pest-house where its effects were so visible. A plague that carried off a third of those attacked, it was natural to fly from; but when by the introduction of inoculation and an improved mode of treatment it happened to be fatal in one only in 200 it gradually became disregarded; the horror which before attached to it vanished as the same consequences did not ensue, and the spreading of the infection was no longer considered as so great an evil. Lady Mary Montagu, indeed, in one of her letters remarks: "Every year thousands undergo the operation"; and the French ambassador of the period said, pleasantly, that "they take the small-pox in Paris by way of diversion as they take the waters in other countries." Contagion in consequence spread widely around and the world little regarded what would have appeared to them as a paradox, but which, however, may be easily explained. Dr Letteom, the great physician of the time, explained this to the Committee of the House of Commons, and proved from the yearly bills of mortality that between 1667 and 1722 the average number of deaths occasioned by the small-pox was to the whole number that died as 72 to 1000, whereas in the forty-two years after inoculation was in use—namely, from 1731 to 1772—the proportion of death was no less than 89 to 1000, being an increase of nearly one-fourth, and Dr. (subsequently Sir Gilbert) Blane later showed that in the following thirty years from 1772, before vaccination had had time to tell upon statistics, the mortality had increased to 95 in 1000. Dr. Blane also showed how by the inoculation of small-pox the disease was spread more extensively and became more fatal in the country than in London. For at that time there were certain districts in which small-pox previously to the introduction of inoculation was unknown for twenty, thirty, or forty years, so that great numbers of people had died without ever having had it; but in the latter years of the last century, for the reasons adduced and from the extended communication between the distant parts of the kingdom, an adult who had not had the small-pox was hardly to be found. Although therefore, variolous inoculation may have relieved individuals who availed themselves of its protection, it was a great evil to the people generally by universally spreading the disease. It was, however, productive of some good things, and amongst these stands the foundation of the London Small-pox Hospital, which was founded in 1746 primarily for the purpose of inoculating the poor gratuitously with variolous matter and secondarily with the better object of keeping the patients so inoculated distinct from the general population of the country. At this period this good object could not have been very generally appreciated, since, as I have already pointed out, the Royal College of Physicians, when it declared eight years later, in 1764, its fullest approbation of the practice of variolous inoculation, failed to emphasise the necessity of separating the infected from the uninfected. The Small-pox Hospital, however, continued its good work, and when vaccination was first introduced its officers at once adopted the practice. They did so also with such good effect that in 1803, when vaccination had been in use for only five years, it was stated in the public report of the hospital that "variolous inoculation" might be considered as generally superseded by the substitution of vaccination. Nevertheless, it must be recorded that the prejudice in favour of variolous inoculation was so great that at the hospital itself out-patient variolous inoculation was kept up for five years longer and in-patient inoculation for nearly twenty years—up to 1822. In 1813 the Royal College of Surgeons of England resolved that variolous inoculation was in future to be given up. Pressure was also applied to the Government to pass a law to forbid its practice, but without success. From this time, however, variolous inoculation gradually disappeared out of practice and vaccination became more general and more acceptable, so that in 1825 the medical officers of the Small-pox Hospital were able to report to Government that whilst the death-rate from casual small-pox in the unprotected was 41 per cent., in the protected it was but 8 per cent.

They also made much of the scar of vaccination as a sign of protection, and declared "that a perfect cicatrix should be distinctly defined, perfectly circular, indented, radiated, and not larger than the size of a common wafer. The diameter of the scar is, however, of less importance than its circular and well-defined edge." This description of a typical vaccination scar is so good that I have thought it worthy of repetition. I may say that it bears the stamp of Dr. Gregory.

In 1803 the Royal Jennerian Society for the Extermination of Small-pox was instituted in London in Salisbury-square, Fleet-street. It was founded at a meeting at the Mansion House held on Jan. 19th, 1803, and was patronised by the King and royal dukes.

I have before me the original instructions for vaccine inoculation as laid down by Jenner in 1801, as well as those published by the order of the Medical Council of the Royal Jennerian Society, which had Jenner at its head. I shall not weary you with reading them both, but those laid down by Jenner are well worth studying.

"INSTRUCTIONS FOR VACCINE INOCULATION, 1801.

"Let the vaccine fluid be taken for the purpose of inoculation from a pustule that is making its progress regularly and which possesses the true vaccine character, on any day from the fifth to the eighth, or even a day or two later, provided the efflorescence be not then formed around it. When the efflorescence is formed it is always most prudent to desist from taking any more of the virus from that pustule.

"To obtain the virus, let the edges of the pustule be gently punctured with a lancet in several points. It will gradually ooze out, and should be inserted upon the arm about midway between the shoulder and the elbow, either by means of a very slight scratch not exceeding the eighth part of an inch, or a very small oblique puncture.

"A little red spot will appear on the punctured part on the third day, if the operation succeed, which on the fourth or fifth becomes perceptibly vesicated. It goes on increasing till the tenth day, when it is generally surrounded by a rose-coloured efflorescence, which remains nearly stationary for a day or two. The efflorescence then fades away, and the pustule is gradually converted into a hard, glossy scab, of a dark mahogany colour. These progressive stages of the pustules are commonly completed in sixteen or seventeen days.

"A single pustule is sufficient to secure the constitution from the small-pox; but as we are not always certain the puncture may take effect, it will be prudent to inoculate in both arms or to make two punctures in the same arm, about an inch and a half asunder, except in very early infancy, when there is a great susceptibility of local irritation.

"If the efflorescence surrounding the pustule should be extensive, and occasion much local heat upon the arm, it may be cooled by the repeated application of pieces of folded linen dipped in cold water, or still more expeditiously by a strong solution of the aqua lithargyri acetati in water—an ounce, for example, of the former in five or six of the latter.

"If the scab should at any time be prematurely rubbed off, and not succeeded by another within twenty-four hours, the part may be occasionally touched with the undiluted aqua lithargyri acetati.

"Vaccine virus, taken from a pustule and inserted immediately in its fluid state, is preferable to that which has been previously dried; but as it is not always practicable to obtain it in this state, we are compelled to seek for some mode of preserving it. Various means have been suggested, but from the test of long experience it may be asserted, that preserving it between two plates of glass is the most eligible. Let a piece of common window glass be cut into squares of about an inch each, so that they shall lie smooth when placed upon each other. Let the collected vaccine fluid be confined to a small spot (about the size of a split pea) upon the centre of one of these glasses, which should be suffered to dry in the common heat of the atmosphere, without exposure to the heat of fire or the sun. When dry it should be immediately secured by placing over it the other piece of glass. Nothing more is necessary for its preservation than wrapping it in clean writing paper.

"The virus, thus preserved, when wanted for the purpose of inoculation, may easily be restored to its fluid state by dissolving it in a small portion of cold water, taken up on the point of a lancet. It may then be used in the same manner as when just taken from a pustule.

"The vaccine fluid is liable, from causes apparently trifling, to undergo a decomposition. In this state it sometimes produces what has been denominated the spurious pustule—that is, a pustule or an appearance on the arm not possessing the characteristic marks of the genuine pustule. Anomalies, assuming different forms, may be excited according to the qualities of the virus supplied, or the state of the person inoculated; but by far the most frequent variety or

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deviation from the perfect pustule is that which arrives at maturity and finishes its progress much within the time limited by the true. Its commencement is marked by a troublesome itching, and it throws out a premature efflorescence, sometimes extensive, but seldom circumscribed, or of so vivid a tint as that which surrounds the pustule completely organised; and (which is more characteristic of its degeneracy than the other symptoms) it appears more like a common festering produced by a thorn or any other extraneous body sticking in the skin than a pustule excited by the vaccine virus. It is generally of a straw-colour, and when punctured, instead of that colourless, transparent fluid of the perfect pustule, its contents are found to be opaque. That deviation from the common character of the pustule, arising from vaccine virus which has been previously exposed to a degree of heat capable of decomposing it, is very different. In this instance it begins with a creeping scab of a pale-brown or amber-colour, making a long and slow progress, and sometimes going through its course without any perceptible efflorescence. Its edges are commonly elevated and afford on being punctured a limpid fluid.

"A little practice in vaccine inoculation, attentively conducted, impresses on the mind the perfect character of the vaccine pustule; therefore, when a deviation arises, of whatever kind it may be, common prudence points out the necessity of re-inoculation, first, with vaccine virus of the most active kind, and secondly, should this be ineffectual, with variolous virus. But if the constitution shows an insusceptibility of one it commonly does of the other.

"When any constitutional symptoms occur in inoculated cow-pox they are commonly first perceptible, especially in children, on the fourth or fifth day. They appear again, and sometimes in adults not unlike a mild attack from inoculated small-pox, on the eighth, ninth, or tenth day. The former arise from the general effects of the virus on the habit, the latter from the irritation of the pustule.

"If the effluvia of the small-pox have been received into the habit previously to the inoculation of the vaccine virus, the vaccine inoculation will not always be found to stop its progress, although the pustule may make its advances without interruption.

"The lancet used for inoculation should always be perfectly clean. After each puncture it is proper to dip it into water and wipe it dry. The practitioner should be particularly cautious in observing that its point be free from rust, either contracted by common means or from the action of the vaccine virus, which even when dry and in contact with it has a tendency in a little time to produce it.

"The preservation of vaccine virus upon a lancet beyond the period of a few days should never be attempted, as it is so apt to produce rust, which will decompose it.

"EDWARD JENNER."

This Royal Jennerian Society, however, soon got into trouble on account of certain irregularities of its local vaccinator, and in 1808 it ceased to exist. The Royal College of Physicians of London, by the command of the King, were consequently ordered to inquire into the state of vaccine inoculation in the United Kingdom and report their opinion and observations on that practice. This was accordingly done, and the Royal College, after a full and impartial investigation of the subject, made a report, dated July 8th, 1807, highly favourable to the practice of vaccination and strongly recommended its adoption. The report contained a recommendation that the poor should be encouraged to undergo the treatment by its being offered free of expense, with the hope that by such means vaccination would in time supersede inoculation for small-pox. To this recommendation the birth of the National Vaccine Establishment is to be attributed on June 22nd, 1808. The Home Secretary, then Lord Liverpool, having given his first instructions that the Royal College of Physicians should be consulted as to the most effective means of carrying into execution the resolution of the House of Commons respecting the formation of a National Vaccine Establishment, on Dec. 21st, 1808, a scheme was accordingly drawn up by the President of the College (Sir Lucas Pepys), in conjunction with Dr. Jenner and the Right Honourable George Rose, which received Lord Liverpool's approbation; and on Dec. 28th of the same year the President and Censors of the Royal College of Physicians of London and the Master and Governors of the Royal College of Surgeons of England constituted themselves into a board which met to carry out the scheme in a manner which should be satisfactory to the public and creditable to the high authorities under which they were to act. The work of the institution commenced in Leicester-square on March 11th, 1809; and by May 25th of that year—in the first ten weeks of its existence—732 people had been vaccinated and 2500 charges of vaccine fluid had been distributed. This movement was consequently the origin of our National Vaccine Establishment.

I have before me the first seventeen reports of the institution—the three first are written, the others printed—and it is pleasant to read in these pages of its steady success in all ways, although with successes came reports of reputed failures of vaccination and complaints of want of energy on the part of some of the members of our profession in spreading its blessings. In the report of 1820 some distinct and valuable recommendations as to the method of vaccinating were printed. The board thought it right to direct that lymph should never be employed from any vesicle in which the slightest irregularity or imperfection could be observed; nor even from a perfect vesicle after the areola had formed; that two punctures be made in each arm in order to secure at least three perfect vesicles; that one vesicle on each arm should be left unopened, and the lymph be suffered to be absorbed or desiccate. The board was earnestly desirous that more rather than fewer vesicles should be produced, and was of opinion that it was especially wrong to confide in one vesicle and highly imprudent to open all. I would wish you to remember that this board was made up of the President and Censors of the Royal College of Physicians of London and Master and Governors of the Royal College of Surgeons of England, Dr. Latham's name standing at the head. In the same year, 1808, there had lately been established by Government "a Board of Health to prepare and digest rules and regulations for the most speedy and effectual mode of guarding against the introduction and spreading of infection, and for purifying any ship or house in case any contagious disorder shall manifest itself in any part of the United Kingdom, and to communicate the same to all magistrates, medical persons, and others, His Majesty's subjects, who may be desirous and may apply to be made acquainted with the same." This report was drawn up with the view of preventing the introduction of the plague or other contagious and mortal distempers. It was hoped that this board would adopt the same rules with respect to persons affected with small-pox. This Board of Health was doubtless the beginning of our present Local Government Board, which in its maturity has but little likeness to its first ancestor; for whereas at its origin the rules and regulations against the introduction and spreading of infection were at the service of those who might apply to be made acquainted with them, all such are now made compulsory and under the control of specially educated scientific men under whom the great work of sanitary reform has so distinguished our age. The way in which cholera has been kept from our country in recent years is an object lesson which has well demonstrated the value of our present system.

In 1802 the House of Commons voted Jenner £10,000, and in 1807 £20,000 more, as a reward for his discovery; but this was not done without opposition and much worry to Jenner. Indeed, in 1801, when the subject of vaccination came before a committee of the House of Commons appointed to receive evidence of its value, Jenner wrote to Lady Berkely, his neighbour, "that he trusted that the committee would hear enough to remove all that nonsense which has crept into the brains of some of the sceptics, and be able to trace it to its true source, when it will appear to have sprung either from jealousy, as at Gloucester (near his home); from envy, as at Bristol; and from stupidity, as half the country over." In 1798, after the publication of his book, Jenner spent many months in London to demonstrate the truth of his discovery, yet during this time he was unable to prevail on one individual to submit to the operation of vaccination. Mr. Cline, the distinguished surgeon of Guy's and St. Thomas's Hospitals, did the first case in London in August, 1798, using some of the virus Jenner had given him. He, however, evidently did it with only half faith as to its specific virtue, for he used the vaccine upon a boy who had hip disease, under the theory that the counter-irritation excited by the cow-pox might prove beneficial to the disease. The vaccination, however, took well and went through its normal course, and the influence of this case and Cline's example in using the virus did much to encourage the introduction of vaccination. In 1821 Jenner still complained of the want of encouragement he received from his own people, and he always considered London to be the centre of opposition to the vaccine

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practice. In a letter to his friend Gardner he alluded to a paragraph from Berlin in which some high mark of distinction was made to his name by a foreign nation when no marks at all had been made by that to which he belonged. He wrote: "Not only the people you see assemble to celebrate my name, but the Court itself through the proper officers. And why are all these attentions paid to me? For this plain reason: they see the truth of my original position that 'vaccination properly conducted (in such hands as their own, for example) is capable of banishing from their city, and I believe their empire, the small-pox—the severest scourge that ever spread its desolations among them.' The observation must not be confined to Prussia, as it will equally apply to the Continent in general. If any portion of the Continent has been more conspicuous than another in eradicating this poisonous weed it is Denmark, as we are told in a late publication that it is now (1821) eleven years since a single case of small-pox has been recorded in Copenhagen or indeed in any part of the Danish dominions, so strictly have the edicts of the Government been enforced respecting the prohibition of small-pox inoculation and the use of the vaccine only."

But time warns me that I must bring my observations to a close, for hitherto I have drawn your attention only to Jenner's work on the cow-pox and the influence it has had upon the world in supplanting variolous inoculation and doing much towards realising Jenner's hopes and stamping out small-pox altogether. That this result may come is quite possible if human effort continues to work in the right lines, but that we have not yet reached it experience too surely records. It may, however, be said with truth that small-pox is now, thanks to vaccination, a comparatively rare and certainly a somewhat unheeded affection; indeed, it has for some years been so lightly regarded by the public that vaccination has neither been rightly valued nor carried out with the care which is essential to bring about its full beneficial effects. The influence of the anti-vaccinationists and the delay in the publication of the report of the Vaccination Commission, which has been sitting seven years, have also probably had a pernicious effect upon the public, leading the ignorant and thoughtless to believe that the law of compulsory vaccination has been abolished or suspended, and that the Vaccination Commission itself is hesitating about pronouncing a definite opinion upon the value of the practice and in enforcing its general adoption. It is to be fervently hoped that the conclusions of this Commission will be clear and decided, and as there can be no open question as to the value of vaccination in suppressing small-pox, so there ought to be no question as to the expediency and justice of making it compulsory. The object-lesson now being so painfully given at Gloucester, near Jenner's own home, ought to be taken to heart by the country generally, and strengthen the opinions of those in authority who are the custodians of the public health: for it has made clear, to all who know what vaccination has done in the past to suppress variola, that where it has been so disgracefully neglected, as at Gloucester, it has proved as fatal as of old in at least one case out of every five attacked; and that small-pox unchecked by the only known available means of vaccination would soon re-assume its former power and become the same devastating and disfiguring scourge it was in the seventeenth century. For my own part I cannot do otherwise than regard Jenner—the discoverer and introducer of vaccination—as the greatest benefactor of the human race that this or any other country has produced, and I believe that the magnitude of this single act, which now seems to us so simple, has had its influence in leading the professional world to look upon Jenner himself as by no means so great a man as many others who have done less good work than he. In this opinion I am sure the world has been entirely wrong, for no one can read his life as written by Baron—though not in a very happy vein—or read the many letters of his which are now in the Hunter-Baillie collection and not feel that Jenner possessed the true Hunterian characteristics; that as an observer he was quick, deep, and accurate; as a worker, untiring and zealous; as an experimenter, careful and precise; and as a thinker, of the highest and clearest kind. Cautious almost to a fault, he, like Hunter, postponed the publication of his thoughts and discoveries until there was no room for doubt as to their truth, so that in 1823, a few days before his death and twenty-five years after he had given his great discovery to the world, he could write: "My opinion of vaccination is precisely as it was when I first promulgated the discovery. It is not in the least strengthened by any event that has happened, for it could gain no strength. It is not in the least weakened, for if the failures which have been reported had not happened the truth of my assertions respecting those coincidences which occasioned them would not have been made out." And now, nearly a century later, we his successors can endorse these views, for no flaw has yet been found in Jenner's discovery, or in his recognition of the value of re-vaccination. I could say much in support of my opinion of Jenner's general character, but time forbids, and I cannot do better in closing this address than quote some words from an autobiography of his intimate friend Mr. Gardner, commenced about 1810, this gentleman having been a man of literary tastes living at Frampton, near Gloucester. "In the year 1780," wrote Gardner, "I fortunately became acquainted with that luminary in philosophy and in the art of medicine, Dr. Edward Jenner, since the celebrated discoverer of the vaccine inoculation. I was so much flattered by him that I ranked amongst the first friends of his early youth. I reflect upon the hours, the days, the weeks, the months, and the years which I spent in his society as the happiest in my life. How often have I dwelt with silent attention upon his profound remarks upon various subjects of natural philosophy, particularly those of a physiological kind, and how frequently have I witnessed his skill displayed in the various parts of his profession. Honoured with this gentleman's friendship I have passed more than thirty years of my life and intercourse equally instructive and delightful. No man, I should suppose, has known Dr. Jenner more than myself, and to know him is to know everything that is excellent in human nature. His skill in his own profession has long been acknowledged and has been by the learned world justly appreciated. The genius of Jenner was formed by nature for higher pursuits than the medical art. He was the poet, 'poeta nascitur'; that gift divine so rarely bestowed upon man was given to him, and though his unremitting ardour in the pursuit of natural history and his attention to the duties of his profession prevented him from the frequent exercise of his talent for poetry, yet the fire, in some measure extinguished but not smothered, sometimes burst out. He was peculiarly happy in epigram. Dr. Jenner, so eminent as he is by his natural and acquired endowments, by a sort of singular composition of character has not lost any of those soft amenities which polish the surface of human life. In him was always perceived the gentleman of polite and elegant manners which gilded over the profundity of his philosophic remarks. Nothing harsh was ever found in Jenner, and were I inclined to censure any part of his conduct it would be his too ready acquiescence with the sentiments of some of his associates, however absurd; but this was the acquiescence of philanthropy. As the discoverer of the vaccine inoculation we behold him for a series of years unremittingly pursuing the grand object which he had in view, undismayed by prejudice and only smiling at the assaults of ignorance. Shielded by his good sense from the shafts of envy, he consigned to posterity (that certain judge of merit in every branch of science) the eulogium of his genius and his labours. With this distinguished character I have in the social intercourse of uninterrupted friendship spent more than thirty years of my life; in his company I have experienced some of the happiest days of my existence. He was my guide, my counsellor, and my friend. Language can go no further." Nor, may I add, is any addition wanted, for such testimony as I have read from a lifelong friend of Jenner and which was not written for publication bears the stamp of truth upon it. It remains for us, therefore, to recognise the claims of Jenner upon the admiration and gratitude of humanity, and as Englishmen to be proud of the distinction which his immortal discovery has conferred upon us. Let us keep in mind the opinion of Professor Virchow, speaking as an ethnologist in Berlin on May 14th, 1896, that "all the peoples that had not been reached by vaccination, or that had not accepted it, had disappeared from the face of the earth destroyed by the small-pox"; with that of M. Hervieux, who, on May 12th, 1896, in an eloquent address upon Jenner delivered before the Académie de Médecine in Paris, said:—"Resting on the triple base of animal vaccine, re-vaccination, and compulsion, this power is sufficient to defy all the assaults of small-pox, and may be proclaimed to be the grandest conquest of medical science." But our gratitude and pride must not stop here, for Jenner by his methods of investigation pointed out to scientific men a new direction in which future triumphs were to be won, and which in the

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hands of our best scientists already promises to be productive of untold value. The results of their work and consequently of Jenner's work cannot yet be fully estimated, but the light which has been thrown by Pasteur and his co-workers—when working in Jenner's line—upon the causes of specific diseases and the means of fighting them has encouraged the most hopeful of us to expect that many, if not all, of the contagious diseases with which we are now afflicted may in the near future be as much under human control as small-pox is now known to be, and that the development of Pasteur's work in the direction which has been so skilfully worked out by Sir Joseph Lister may in the future be productive of as much good as it has already proved to have been in the past. Let us, then, cherish these memories and encourage such labours and be careful whilst we do so not to lose anything of their value by carelessness or indifference.

The Croonian Lectures:

A CONTRIBUTION TO THE STUDY OF THE BLOOD AND OF THE CIRCULATION.

Delivered before the Royal College of Physicians of London,

BY GEORGE OLIVER, M.D., F.R.C.P. LOND.

LECTURE IV.[1]

Delivered on June 11th.

MR. PRESIDENT AND GENTLEMEN,—During recent years observers have found that the percentage of the hæmocytes is considerably affected by altitude, baths, massage, and by surgical interference, such as opening the abdomen and section of the cord.[2] Certain theories have been suggested in explanation of these variations, and it will be convenient to refer to them now, as a whole, before dealing with the results of further observation by means of the new modes of rapidly determining the corpuscles and hæmoglobin described in the last lecture. They may be broadly divided into two classes—namely, those which refer the increase or the reduction of the percentage of the chromocytes either to (1) the corpuscles themselves or to (2) variation in the quantity of water in the plasma.

I. *Theories associated with the corpuscles.*—Three such have been suggested—namely, (1) formation and destruction of corpuscles, (2) dislodgement of resting corpuscles, and (3) transference of corpuscles.

1. The formation and destruction of corpuscles. Whenever a marked increase of the number of the corpuscles has been observed, as in high altitudes, the first adopted theory has almost invariably been that of increased formation.

2. Dislodgement of resting corpuscles has been advanced in explanation of the effects of massage.

3. The transference of corpuscles from the arteries to the capillaries and *vice versâ* was suggested by Cohnstein and Zuntz[3] in explanation of the variation in the number of the corpuscles which they observed in the arteries on the one hand, and in the capillaries on the other, as the result of experiments on animals. These observers found that the proportion of the corpuscles to the plasma was definitely varied in the large vessels and in the capillaries by cutting the cord, by electrically stimulating the cut cord, and by other procedures, and they concluded that the capillaries are normally poorer in corpuscles, and therefore richer in plasma, than the larger vessels, that when the arteries leading to the capillary field are contracted the blood in that field becomes still poorer in corpuscles and that elsewhere still richer, and that when the arterioles are dilated the capillary blood contains a larger proportion of corpuscles, and the plasma previously present in it in comparative excess is now distributed and dilutes the rest of the blood. According to this theory widening of the arterioles and filling of the capillaries produce the same effect on the blood of the large vessels as resorption fluid and narrowing of them as increased filtration.

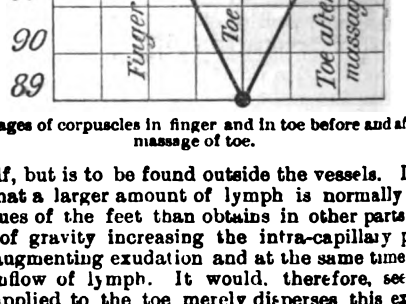
II. *Theories founded on alterations in the proportion water in the plasma.*—An apoplasmic state of the blood been referred to (1) increased transudation from capillaries; and (2) increased discharge of water from kidneys, skin, and mucous membranes.

1. Increased transudation from the capillaries. Regèc Brasols,[5] Klikowitsch,[6] and others refer peripheral change the circulation to disturbance of the equilibrium betw filtration on the one hand and resorption on the other, the adjustment of the normal balance to the operation these forms of transudation. Though this theory does explain the variations that take place in the periphe vessels, it is nevertheless not at all improbable that a exudation of watery fluid from the capillaries plays a m important part in the temporary and quickly induced alte tions of the blood which result from all forms of exerci and Professor Sherrington refers the striking reduction the plasma which he has observed as the consequence setting up local inflammation in animals to "increa exudation through the vascular membrane in the inflam area."[7]

2. Increased discharge of water from the kidney, skin, a mucous surfaces is an undoubted cause of apoplasmia various physiological and pathological conditions presen to be referred to. The following observations mainly s port the theories founded on fluid-transfer from the blo and do not corroborate those relating to the formation a destruction or to the dislodgement and transference corpuscles.

I. *The blood derived at the same time from different pa of the body* does not always afford the same percentages corpuscles and hæmoglobin. A large number of observatio were made on subject A. with the invariable result that t blood furnished by the toes was much poorer than th afforded by the fingers. This disparity does not seem to the same in all individuals, for in subject B., w possesses a higher arterial pressure, it was less appare It does not, however, follow that the blood present the vessels of the parts in question is actually differe in quality, for it has been repeatedly found th when the toe, which yielded a sample of very inferi quality, was well rubbed it furnished another quite co parable with that derived from the finger (Fig. 19).[8] Pr bably, therefore, the cause of the difference is not in t

FIG. 19.



Percentages of corpuscles in finger and in toe before and after massage of toe.

blood itself, but is to be found outside the vessels. It is unlikely that a larger amount of lymph is normally pres in the tissues of the feet than obtains in other parts in c sequence of gravity increasing the intra-capillary press and thus augmenting exudation and at the same time retar ing the onflow of lymph. It would, therefore, seem t massage applied to the toe merely disperses this excess tissue lymph and enables the observer to ascertain quality of the blood as it actually exists in the vess Exactly the same thing is not infrequently observed ansæmia, the percentage of the corpuscles and hæmogl rising very considerably after the application of massage a few minutes to the finger. Probably, therefore, there often, if not generally, an excess of tissue fluid even in finger in ansæmia, and consequently in this condition

[1] Lectures I., II., and III. were delivered on June 2nd, 4th, and 9th, and published in THE LANCET of June 6th, 13th, and 20th respectively.
[2] References to these observations are given subsequently.
[3] Pflüger's Archiv, 1888.
[4] Ibid., Band xxxvii.
[5] Archiv für Anatomie und Physiologie, 1884.
[6] Du Bois' Archiv, 1886.
[7] Proceedings of the Royal Society, vol. lv.
[8] For the sake of clearness and brevity the variations in hæmogl are omitted from all the figures.

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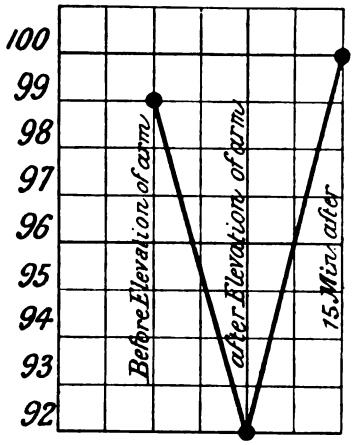
sample of blood obtained in the ordinary way without previous massage does not always afford a true reading of the actual state of the blood. The existence of this diminutive degree of œdema in the insufficiently nourished tissues of the anæmic is, moreover, rendered probable by the experiments of Lazarus-Barlow. This observer says: "This explanation of œdema as the result of anæmia I have confirmed in the following way. By means of an Esmarch's bandage I rendered the limb of a dog bloodless, while at the same time, of course, most of the lymph was removed from the part. After keeping the limb thus anæmic for from two to three hours I removed the bandage, and now by means of the specific gravity method I found that œdema came on. The arterial blood rose in specific gravity; the blood in the femoral vein rose in such a way as to show that more fluid was being lost during the passage through the limb than normal; and the muscles and skin fell in specific gravity. Starvation of the tissues, therefore, plays an important part in the causation of passive œdema."[9]

II. *Posture.*—The remarkable effects of gravity on the composition of the blood is well illustrated by passively elevating a limb (arm or leg) for fifteen minutes. Figs. 20 and 21 show that the percentage of the corpuscles is thus markedly reduced. This result was invariable in both subjects. It will be observed (Fig. 21) that even the blood derived from

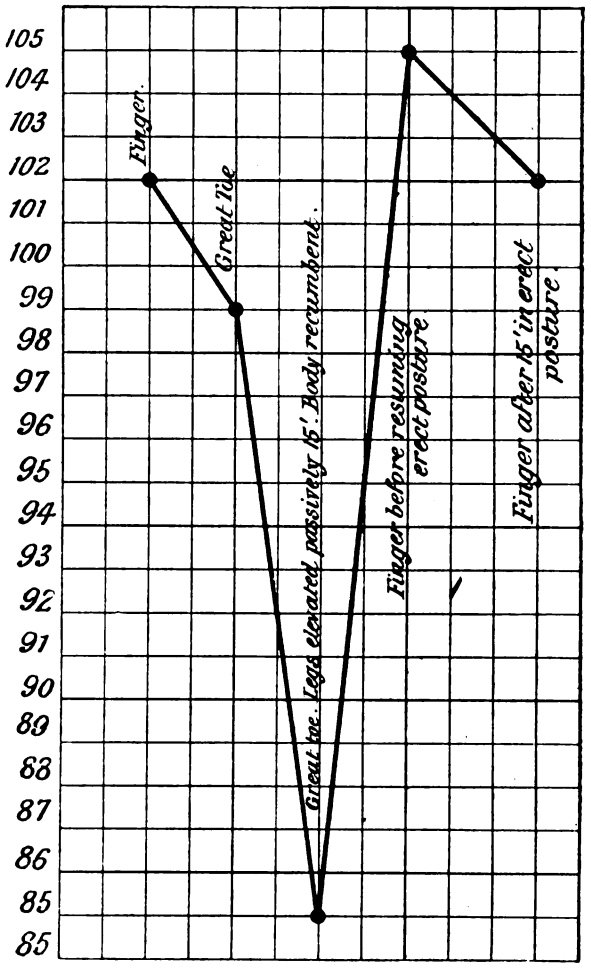
FIG. 20.



Percentages of corpuscles before and after passive elevation of arm.

the great toe, which is poorer in corpuscles than that of the finger, becomes still poorer after passive elevation of the leg for fifteen minutes, and that the blood afforded by the finger before resumption of the erect posture acquires a higher percentage of corpuscles than was present before the legs were elevated. These alterations in the proportion of the corpuscles is much in keeping with the effects of gravity on the blood pressure described in the first lecture. (Fig. 21.) It was then shown that when the legs were passively elevated the radial pressure was considerably increased, and that the passive elevation of a limb above the level of the arch of the aorta reduces the arterial pressure in that limb. It may, therefore, be inferred that the variations in the percentage of the corpuscles are in keeping with similar alterations in the intra-capillary pressure; that when there is an increase in both (as in the recumbent parts) there is probably augmented normal exudation; and when there is a reduction (as in the elevated limb) there may be an arrest of normal exudation or probably there is an osmotic inflow of tissue-fluid into the blood through the capillary wall.[10] According to the theory of Cohnstein and Zuntz[11] the diminution of corpuscles in the elevated limb should be referred to an increase of the normal disproportion between the plasma and the corpuscles in the capillary area, and the augmentation of them to a removal or diminution of that disparity as a result of the opening up and the extra filling of the peripheral vessels of the recumbent parts. Whichever theory be accepted the fundamental position remains that the alterations in the

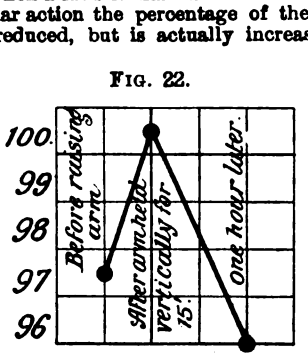
FIG. 21.



Percentages of corpuscles in finger and toe. Effect of posture. Legs elevated with support.

blood are closely associated with similar differences in the intra-capillary pressure; and this is further illustrated by the fact that when a limb is maintained in the vertical position by muscular action the percentage of the corpuscles is not only not reduced, but is actually increased (Fig. 22).

FIG. 22.



The percentages of corpuscles in the finger before and after raising the arm vertically by muscular effort fifteen minutes.

Fig. 23 further illustrates this fact, for it shows that elevation of the leg by muscular effort may raise the percentage of corpuscles in the blood of the toe to that of the finger, and that on passively maintaining the position of the limb

[9] The Pathology of Œdema, Brit. Med. Jour., 1895, vol. i, p. 635.

[10] Dr. Starling's experiments support this explanation. "Whereas capillary pressure determines transudation the osmotic pressure of the proteids of the serum determines absorption. With increased capillary pressure we shall have increased transudation until we get equilibrium established. ..... With diminished capillary pressure there will be an osmotic absorption of salt solution from the extra-vascular fluid until this becomes richer in proteids."—The Arris and Gale Lectures, THE LANCET, May 16th, 1896.

[11] Op. cit.

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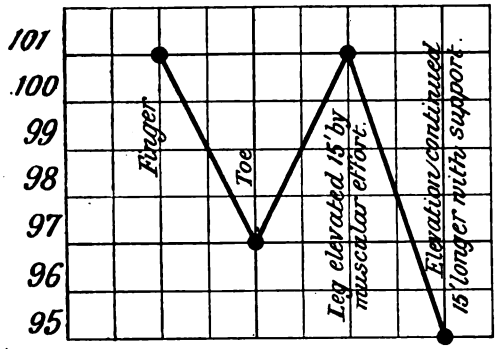
the usual fall of the percentage then takes place. From these observations it would seem that the intra-capillary pressure of the elevated limb is not only prevented from falling, but is increased by the afflux of blood which occurs when the muscles are brought into play, and that when the muscular action is withdrawn and the vertical limb is passivly supported the intra-capillary pressure promptly falls. These observations on the influence of gravity on the composition of the blood and the thwarting of that influence

FIG. 23.

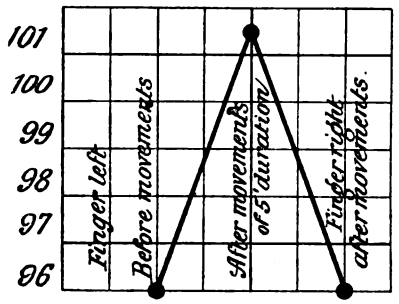


Percentages of corpuscles in finger and in toe before and after active followed by passive elevation of leg.

by muscular action illustrates the wisdom of passively supporting a part when in a state of inflammation or inflammatory congestion, for such a procedure not merely tends to reduce the blood pressure, but to diminish the percentage of the corpuscles also.

III. *Exercise.*—The effects of local exercise on the relations of the red corpuscle will be considered before those of general exercise. *Local exercise* may be active or voluntary, as when the hand is flexed and extended on the forearm until fatigue is induced, or when the muscles of the arm are thrown into a state of tonic contraction, as in the resistive movements, or it may be passive as when produced by faradism or massage. It has been found that muscular action, however induced, causes an immediate decisive and proportionate rise in the percentages of the corpuscles and the hæmoglobin. Fig. 24 illustrates this effect produced by

FIG. 24.

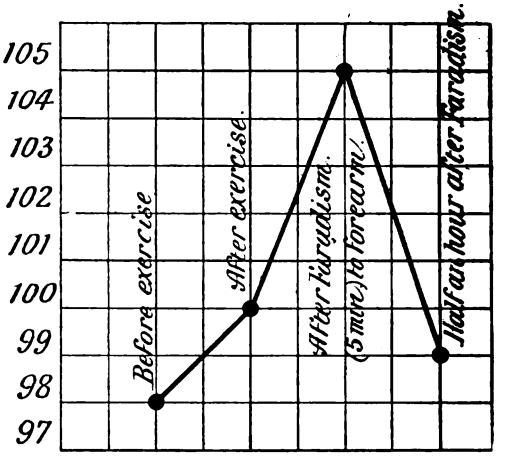


Percentages of corpuscles before and after local exercise.

flexion and extension of the forearm, and the same result is induced by resistive movements, by massage, and by faradism. Fig. 25 shows that the rise caused by local exercise may be extended by faradism. In all cases the increased percentage of the corpuscles was purely local, for at the termination of the procedure the blood yielded by the opposite finger presented the same proportion of corpuscles as was observed before the muscles were brought into action. Though the rise was rapid it did not subside so quickly, for the disappearance of it generally required from thirty to sixty minutes, and in the case of massage it lasted longer than after voluntary exercise or faradism. It was observed that galvanism of the forearm (contraction of the muscles being avoided) and faradism of the finger and massage of the finger[12] did not disturb the reading of the corpuscles. The invariable antecedent of the rise of the corpuscles was either muscular contraction or manipulation of the muscular tissue, which in producing this effect is equivalent to muscular contraction. Inasmuch as the rise in hæmoglobin is proportionate to that of the corpuscles, this common effect of active and passive exercise of the muscular tissue for short periods is obviously due to an increased proportion of chromocytes to the plasma. How is this temporary and strictly local apoplasmia produced?

In the first lecture it was pointed out that there was some probability in the view that the increased volume of blood

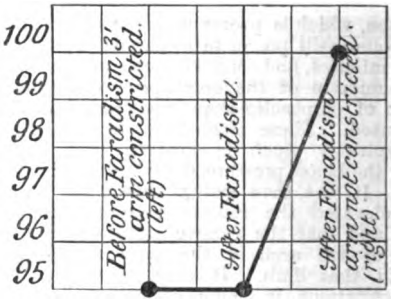
FIG. 25.



Percentages of corpuscles before and after local exercise and after faradism following the exercise.

which circulates through the muscular tissue when brought into action, and the consequent increase of the intra-capillary pressure within that tissue, may lead to the effusion of watery fluid from the blood into the substance of the muscles. But inasmuch as the blood-supply of the finger is not immediately connected with that of the muscles it is difficult to see how muscular exercise can thus affect the blood in the finger. This, however, is not the only explanation available, for it is known that in a state of rest there is no lymph-flow at all,[13]

FIG. 26.



Percentages of corpuscles before and after faradism with arm constricted and non-constricted.

and that muscular contraction is necessary to propel the lymph from the lymph spaces into the lymphatics; therefore, when all the muscles of a limb are thrown into action there will be an immediate acceleration of the circulation of lymph from the whole limb, including a considerable area of non-muscular tissue, accompanied by an augmented exchange of fluid from the blood to the tissues (non-muscular as well as muscular). The muscular action of a limb, therefore, accelerates the circulation of all the fluids in the limb, and the increased intermediary transfer of fluid from the blood through the capillary wall to the lymph spaces and from these to the lymphatic vessels must reduce the volume of the plasma in all the vessels of the limb. There is one experiment recorded which may have a bearing on this explanation (Fig. 26). The left arm was

[12] This observation only holds good when the circulation is normally vigorous, for when it is enfeebled, and especially when the blood is poor in corpuscles and hæmoglobin, massage of the finger may produce a marked rise of the chromocytes.

[13] Starling, op. cit.

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firmly constricted above the elbow, but not so constricted as to affect the pulse, and the muscles of the forearm were thoroughly faradised for three minutes; but the blood drawn from the left forefinger afforded no evidence of change. Faradism was then applied in exactly the same manner and duration to the right forearm free from constriction, and the blood of the right forefinger showed the usual marked rise of corpuscles. The inference seems to be that in the former case the lymph-flow was arrested by the constriction and the accumulation of tissue fluid nullified the rise of the corpuscles. Moreover, when treating on general exercise an observation will be adduced which shows that exercise does cause an increased transfer of fluid to the tissues, which, however, lodges in a limb until it is removed by massage or by muscular contraction. Cohnstein and Zuntz might refer this effect of muscular contraction on the blood to the increased filling of the whole peripheral area of the exercised part—the normal relative excess of plasma in that part being thus diminished. But later it will be shown that when the non-muscular part of the periphery is well filled by the agency of warmth the corpuscles are found to be reduced. All the facts seem to be best explained by the view that muscular contraction stimulates the circulation of all the fluids and aspirates, as it were, the lymphatics of the non-muscular and remote parts of the limb, and thus reduces the storage of tissue lymph in them. Moreover, this view explains to a large extent the wide-reaching effect of exercise on the nutrition of all the tissues by promoting that most important part of the circulation of fluids, the intermediary circulation. In this way, in all probability, some of the benefit which is derived from modulated movements, such as the resistive exercises, is to be explained.

Since these observations were made I find that Chéron has observed that massage, dry friction, and electricity will within ten minutes greatly increase the number of the corpuscles—in one case of anæmia raising it from 2,430,000 to 4,080,000 per c.mm. He also attributes the rise to concentration of the blood from increased transudation of fluid which results from augmentation of the blood pressure.[14] After an hour's massage J. Mitchell noticed an increase of the chromocytes which attained its maximum an hour after the cessation of the process, but without a corresponding rise in the hæmoglobin. He explains this anomaly by suggesting that massage may dislodge a number of corpuscles poorer in hæmoglobin than those in circulation which were resting in various parts of the body.[15] So far I have not met with any corroborative evidence of this observation or of this suggested explanation of it. It is but natural that those who have observed the blood before and after massage should dwell on the immediate effect as evidence of the benefit at once conferred by the procedure. It is well, however, to keep in mind that the observed alteration in the blood is merely an indication that the massage, like exercise or faradism, has advanced the onflow of tissue fluid and has increased the transudation of fluid from the blood, so that this for a time is poorer in water and therefore richer in corpuscles. In anæmia it is highly probable that the repeated stimulation of the intermediary circulation by massage will eventuate in an improvement of the blood, but only because, like other forms of exercise of the muscles, it raises the nutrition of all the tissues.

General exercise.—In animals it has been observed that active exercise produces an increase in the percentage of the corpuscles and hæmoglobin and a fall in the blood-decimal. For instance, an hour's run in a dog that had been kept in the laboratory for several weeks raised the corpuscles from 99·5 per cent. to 110 per cent. and the hæmoglobin from 104 per cent. to 109 per cent., and reduced the blood-decimal from 1·04 to 0·99. It has been shown by Löwit that binding down and tying of animals, especially when long continued, induce severe changes in the composition of the blood.[16] I have observed that the struggling of a rabbit for merely a few minutes (as when the animal is carried by the ears or is tied up) will impair the validity of the results of any observations of the blood made for specific purposes. For instance, in one case before such strenuous muscular effort the corpuscles read 92 per cent., but immediately after it 110 per cent., and in ten minutes afterwards 105 per cent. Therefore, it would seem that profound (though temporary) alterations in the blood are immediately induced by very active general muscular action.

In attempting to determine the effects of general exercise on the blood it is difficult to eliminate the rise in corpuscles due to perspiration. The general results, however, of the observations already made may be stated to be a rise in the corpuscles, which after a variable period somewhat subsides, but remains above the initial percentage while the exercise lasts, and a similar though diminished rise and reduction of the hæmoglobin percentage. The rise in corpuscles and hæmoglobin produced by an hour's active walk generally subsides after an hour's rest. The immediate effect of general exercise on "the worth" is to reduce it, and the remote effect—observed after the lapse of some hours—is to increase it.[17] It would seem that in general exercise there are the same increased transfer of fluid from the blood and the same augmented lymph-flow as take place in local exercise; but the concentration of the blood thus induced is after a time somewhat lessened by the return of a portion of that fluid to the blood. It was found that when an arm is slung at rest and without constriction during exercise the volume of the limb increases and the blood yielded by the finger falls in corpuscles while that afforded by the free and exercised arm rises, and then when the finger of the passive arm is well rubbed upwards and rolled for a few minutes it furnishes a sample equally rich in corpuscles as in that obtained from the opposite finger. This observation was repeated in two subjects who ascended the Schatzalp (1020 ft.) at Davos, and as the results were the same in both it is only necessary to give the figures furnished by one of them. On return from the ascent the blood from the finger of the slung arm contained 3 per cent. fewer corpuscles and that from the opposite finger 5 per cent. more than on starting out, and after massage of the former finger the corpuscles rose 8 per cent., so that now they read exactly the same on both sides.[18] This observation shows that in the non-exercised limb the tissue fluid was increased, probably from the rise in blood pressure resulting from the general exercise, but in the absence of muscular contraction it was not removed from the tissues as in the exercised limb, so that the blood issuing from the finger of the passive arm was diluted by it until it was dislodged by massage, when the true state of the blood was ascertained—namely, a rise in corpuscles equal to that observed in the exercised limb. Probably the effect of general exercise is modified by the amount of tissue lymph present when the exercise is taken. In those, for example, who do not take exercise habitually or in whom the circulation is languid or the blood poor the lowered intermediary circulation favours the storage of tissue fluid, and exercise may even fail to incite a rise in the corpuscles. On the other hand, those accustomed to regular active exercise have a smaller storage of tissue lymph, good percentage of corpuscles and hæmoglobin, and a permanently high specific gravity of the blood.[19]

IV. *Digestion.*—Observation of the effects of ninety-six meals (breakfast, lunch, and dinner), each having an average supply of seventeen ounces of fluid, shows that, as a rule, in from two to three hours the percentages of the corpuscles and hæmoglobin fell in 70 per cent., rose in 23 per cent., and were without change in only 7 per cent. The evidence, therefore, preponderates in favour of a fall of the chromocytes[20] and hæmoglobin during digestion. The average "worth" showed but little alteration, for in 53 per cent. of the observations it slightly fell, while in 47 per cent. it either rose or presented no variation. Two other facts were also very frequently apparent—namely, a preliminary and very transitory rise shortly after the meal and a rise with slight gain in "worth" subsequent to the lowest point of the fall. These stages of the effect of the digestive process on the blood taken from the systemic periphery are probably the resultants of several causes, of which perhaps the most prominent may be fluid transfer and the hæmolytic and hæmopoietic functions of the organs accessory to primary digestion. The preliminary rise may be due to the copious

[14] Comptes rendus de l'Académie des Sciences, tome ii., No. VI., 1895.
[15] Massage and the Blood, American Journal of the Medical Sciences, May, 1894.
[16] Studien zur Physiologie und Pathologie des Blutes und der Lymphe, p. 9, quoted by Sherrington. Proceedings of the Royal Society, vol. lv.

[17] Though the data obtained support these positions I do not present them just now because observation in this direction should be extended.
[18] For the sake of clearness I have omitted to give the hæmoglobin estimations. The fall in the blood-decimal the result of this effort was 0·05.
[19] Lloyd Jones: Journal of Physiology, vol. xii., p. 318.
[20] Hayem states that his pupils Dupérie and Cadet found a diminution of from 200,000 to 300,000 corpuscles per c.mm. during digestion.—Du Sang et de ses Altérations Anatomiques, Paris, 1889.

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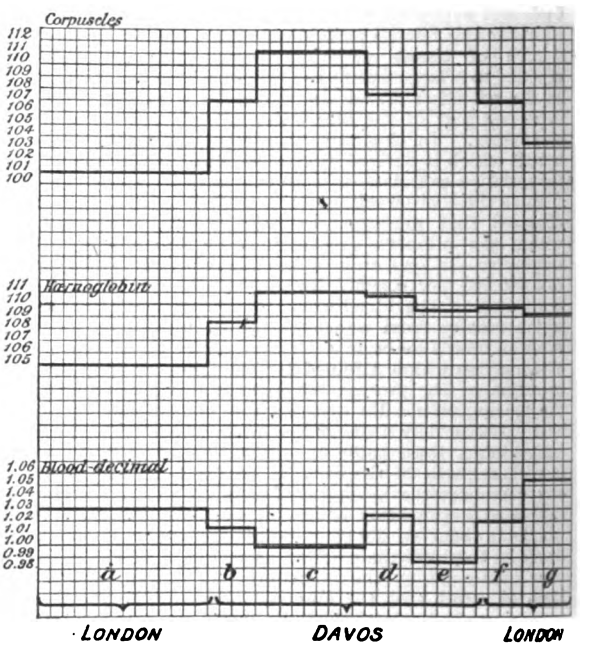
outpouring of the digestive juices. But this effect is so transitory that it may be easily missed, even though the meal is a solid one; therefore, it would seem that it is quickly compensated, either by the absorption of fluid, as from the tissues, or perhaps by a cytolytic process. The digestive fall appears to coincide with an increase in the volume of the blood and with a reduction of the specific gravity as observed by Lloyd Jones, and the subsequent rise with a reduction of the blood volume through renal elimination and a corresponding increase of the specific gravity.[21] It has been observed that these variations are not caused by the water taken with the meals, for they are quite as pronounced when it is withheld. Time and opportunity have so far failed me to ascertain the effects of certain diets on the blood decimal—such as one exclusively vegetable or animal (e.g., red meat and hot water, the Salisbury diet) and the osmotic effects of water and especially of mineral waters.

V. *Altitudes*.—The remarkable effect of altitude in raising the percentage of the corpuscles and hæmoglobin has furnished one of the most interesting physiological problems in relation to the blood—a problem which has of late years attracted many observers, who have now collected a fairly large body of data with a view to its solution. All these observers (including Viault,[22] Egger,[23] Mercier,[24] Von Jaruntowsky and Schröder,[25] Miescher,[26] Wolff and Koeppe,[27] are perfectly agreed as to the facts—namely, the presence of a larger number of hæmocytes in the inhabitants of mountainous regions than in the residents of lower altitudes, and a rapidly induced increase of them in those of the latter who resort to the mountains—an increase which, however, as rapidly passes away when they return to the plains. Among the residents Viault enumerated 8,000,000 per c.mm. on the Cordilleras (14,274 ft.) and Egger, 7,000,000 per c.mm. at Arosa (6100 ft.) in Switzerland. It has been observed in those who visit the higher levels that the increase begins shortly after arrival. Egger estimates that in healthy subjects it amounts to 702,000 and in tuberculous subjects 982,000 per c.mm. in fourteen days. Wölff and Koeppe at Reiboldsgrün (2257 ft.) observed that in from twenty-four to thirty-six hours after arrival an average rise of 1,000,000 per c.mm. takes place, and this is followed, first by a decline, and then by a further increase, until an average of 5,970,000 per c.mm. is attained. They found, moreover, that the proportionate hæmoglobin at first fell and afterwards rose. Von Jarnutowsky and Schröder at Görbersdorf (1740 ft.) observed the same fact; and, moreover, found that mild phthisical cases acquired a larger number of corpuscles per c.mm. than are present in healthy persons in the same altitude, and that severe cases attained even more than are generally found in normal individuals residing in lower parts. The lessening of the percentage of the hæmocytes on return to the valleys and plains is just as rapid as is the increase produced by visiting the higher altitudes. Miescher gives an example of the progressive daily fall of 250,000 per c.mm. for a series of six days, so that in this case at the expiration of this short period 7,200,000 per c.mm. on leaving Arosa were reduced to 5,700,000. With the view of observing for myself this interesting effect of altitude I spent twenty-three days at Davos Platz (5200 ft.) last month. Exactly the same mode of life was there followed as in London in regard to exercise, &c. The leading results are shown in the annexed diagram (Fig. 27), in which the night and morning observations are averaged for certain periods—namely, (*a*) fourteen days preceding the visit (affording the basis of comparison), (*b*) the first four days of the visit, and (*c*) the ten following days during which the daily consumption of water was the same as in London, (*d*) four days in which it was increased (from fifty to seventy-five ounces), (*e*) five days in which it was again the same, (*f*) four days, and (*g*) five days after returning to London. The corpuscles began to rise within twenty-four hours and attained their maximum percentage within the first week. The average increase during the second portion of the visit (*c*) was 10 per cent. and the maximum rise 14 per cent. The hæmoglobin increased, but in a less degree than the corpuscles. Consequently the blood-decimal fell from 1·03 to 0·99; when, however, the consumption of water was increased and the corpuscles were reduced in number it rose to 1·025, and when the ordinary quantity of water was was resumed it again fell.

There is another fact strikingly apparent in the Davos observations—namely, the greatly reduced range of the night and morning variations of hæmoglobin and of the corpuscular worth, and particularly the latter. Whereas in London they varied 9 per cent. and 0·05 respectively, at Davos they were reduced to 4·2 per cent. and 0·02. The night and morning variations of the corpuscles were only slightly diminished (from 2·9 to 2·4 per cent.). It therefore follows that though the night and morning worth was reduced the hæmoglobin was more uniformly distributed over the twenty-four hours at Davos than in London and the worth during the day was approximated to that of the night. After leaving Davos the corpuscles fell much more slowly than after arrival, and the hæmoglobin remained at much the same level as during the visit; hence the blood-decimal rose, and, indeed, advanced beyond the degree present in London

FIG. 27.



The percentages of corpuscles and hæmoglobin and the blood-decimal at Davos Platz and in London before and after the visit.

before the visit. This after-effect would seem to show that Davos has impressed the blood most favourably, notwithstanding the fall of the blood-decimal during the immediate influence of the altitude. The question arises, Would this gain in value have taken place at Davos had the visit been prolonged? On return to London the night and morning variations in hæmoglobin and worth again widened as before. I am hoping to make another and a longer series of observations on the effects of altitude on the blood. In explanation of the facts there is a somewhat remarkable agreement among the different observers. They all regard the increase of the chromocytes as due to rapid construction incited by lessened supply of oxygen from the reduced pressure, and they believe that it compensates for the deprivation of oxygen. Recently Grawitz has criticised this position and has shown it to be untenable.[28] He points out that the experiments of A. Fränkell and Gepert, in which dogs were subjected to an atmospheric pressure equal to that of an altitude of 16,000 ft., show that the blood contains at that greatly reduced pressure as much oxygen as at the ordinary pressure. Therefore it would seem that in altitudes below 16,000 ft. there does not exist a need for a compensatory increase of the chromocytes.

Besides this, the theory of new formation is highly improbable from the extreme rapidity of the rise, and from its

[21] Op. cit.
[22] Comptes Rendus, tome iii., p. 917, 1890.
[23] Verhandlungen des xii. Congress für Innere Medicin, Weisbaden, 1893.
[24] Archiv der Physiologie, Band xxvi, 1894.
[25] Münchener Medicinische Wochenschrift, No. 48, 1894.
[26] Correspondenzblatt der Schweizer Aerzte, Band xxiii., No. 24, 1893.
[27] Münchener Medicinische Wochenschrift, 1893, Nos. 11 and 43.
[28] Berliner Klinische Wochenschrift, 1895, pp. 713 and 740.

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being still more rapid and greater in the phthisical than in the healthy. Moreover, when on returning to lower levels the percentage falls there are no signs of wholesale destruction of chromocytes, such as hæmoglobinuria, icterus, and bilirubinuria. The observers have described the appearance of a number of small forms in the blood after seven or eight days which they regard as young chromocytes; and as they assert that these increase in number as the ordinary regular sized corpuscles decrease, they conclude that during the first week the old corpuscles undergo destruction and new ones are formed. Grawitz, on the other hand, believes that this microcytosis arises from the lessening of the red discs in consequence of the loss of water, there being a diminution and a concentration of the serum (oligoplasmia) from the same cause. I am inclined, however, to doubt if this explanation of Grawitz will account for the appearance of the microcytes, for shrinking of the chromocytes from loss of water would probably lead to alteration in their appearance, such as crenation, which would scarcely escape observation. The blood was frequently observed during my visit; but the presence of microcytes was never detected, nor were any changes observed in the appearance of the corpuscles. Perhaps the microcytes described by previous observers were such as are met with in anæmia. It is obvious that this is a matter requiring further observation. Grawitz points out that the investigators who held the view of the new formation of corpuscles have not mentioned the presence of nucleated red discs and the increase of leucocytes which are generally met with when the blood-cells are being formed after hæmorrhages, &c. He refers the solution of the problem to increased loss of water from the blood through the skin and respiratory tract in consequence of the great diminution of humidity in the atmosphere. There are many facts in support of this view. Meteorologists find that the reduction of humidity is more rapid than that of the atmospheric pressure, and certainly a fall of from 40 to 50 per cent. of the absolute moisture present on the sea-level must greatly increase the abstraction of water from the blood by transpiration through the skin and the oro-respiratory mucous membrane. Though this explanation is highly probable it would, I think, be more conclusive were it proved that the corpuscles rise in number in places equally dry near the sea-level, such as Egypt. At the same time also we should not overlook the fact that high altitudes may perhaps favour polycythæmia in another way. In the first lecture it was shown that deep breathing raises arterial tension. The rarified air of mountain climates is known to induce deeper breathing, and, in consequence, to increase the circumference of the chest from one to three inches.[29] Shortly after arriving at Davos it was observed that my arterial tension was raised and continued to be raised throughout the visit, for the radial pressure and calibre were increased, the former being from 20 to 30 mm. of Hg., and the latter from two to three points higher than in London, and, moreover, the postural variation was reduced from one to three points. All these signs of increased arterial tension gradually subsided after leaving Davos.

Some facts were adduced in the second lecture which favour the view that increased intra-capillary pressure augments transudation from the blood, and later other data will be referred to which point to increased arterial tension as a common cause of apoplasmia by raising the excretion of water. It would, therefore, seem probable that two factors combine to produce the polycythæmia in question—namely, increased transpiration of water from the dryness of the air[30] and increased arterial tension from the reduced atmospheric pressure. When the consumption of water was increased (Fig 27) the operation of the first cause was, at any rate in some degree, counteracted and the corpuscles fell 3·5 per cent., still there remained a rise of 6·5 per cent., which was probably largely due to the increased arterial tension produced by altitude. From the facts observed it may therefore be concluded that the physiological effect of altitude on the blood is to raise the percentage of the corpuscles more than that of the hæmoglobin and thus to reduce the blood-decimal, and that this reduction may be counteracted by the increased consumption of water. This fact is in the main in keeping with my clinical observation of apoplasmia, for it has been almost invariably observed that when the percentage of the corpuscles is increased beyond the normal that of the hæmoglobin is not raised in proportion, and therefore the blood-decimal falls, and that when the supply of water is increased the corpuscles fall in number and rise in value. The wherefore is not obvious, but repeated observation has shown that water in some way raises "the worth" when an undue proportion of corpuscles exists, and that it is of undoubted value in the treatment of apoplasmic anæmia to be referred to later. Dr. Theodore Williams[31] regards high altitude climates as contra-indicated in anæmia, diseases of the heart and great vessels, chronic renal disease, and in all forms of albuminuria. This physiological study so far seems to support this clinical experience. In anæmia, perhaps, the ingestion of more fluid will prevent the fall of the blood-decimal. The ultimate rise in hæmoglobin value after a preliminary fall described by Wölff, Koeppe, von Jaruntowsky, and Schröder may represent the adjustment produced by the increased consumption of water prompted by the thirst which high altitude induces. It is easy to understand how cases of cardiac incompetency may be severely tried by the rarified and dry air of high altitudes, for the friction co-efficient of the blood will be increased by the polycythæmia and the deeper breathing will tend to maintain heart-hurry, and over-incitement of the weakened heart may be maintained by the increased respiration. But inasmuch as the breathing of rarified air seems to lead to filling of the arteries and reduction of the veins, it is quite conceivable that if applied *gradatim* in suitable cardiac cases it might prove to be of considerable therapeutic value. Physiology and pathology likewise join hands in regarding cases of chronic interstitial nephritis as unsuitable for treatment by the mountain cure, for in that disease polycythæmia and high arterial tension are prominent pathological conditions. Undoubtedly this physiological mode of treatment by mountain air is very decisive in character. It is certainly of the highest value in phthisis, and the profession will be ever grateful to two distinguished Fellows of this College for their successful advocacy of it—Dr. Hermann Weber, who brought forward its claims twenty-seven years ago, and who in his Croonian Lectures silenced the remnant of opposition to it, and Dr. Theodore Williams, who in his Lumleian Lectures adduced much valuable and telling testimony in its favour.[32]

VI. *Baths.*—Hot and cold baths, whether local (as hand baths) or general, produce contrary effects on the blood, the former lowering the percentage of the corpuscles and hæmoglobin and the latter raising them. The fall from a warm bath of fifteen minutes' duration may be 7 per cent., and the rise from a short immersion (three minutes) in cold water may be 4 per cent.[33] The alteration is merely a disturbance of the relation between the corpuscles and the plasma, for the blood-decimal remains unaffected. It would, therefore, seem that temperature, which is the predominant influence in bathing, alters the composition of the blood by retarding or accelerating the rapidity of fluid-transfer through the capillary wall, warmth slackening it and probably favouring the lodgment of tissue lymph and cold stimulating it. In all probability this influence is mainly exerted through the effect of warmth and cold on the intra-capillary pressure. These results confirm the observations of Winternitz and Kellogg[34] on the effect of warm and cold bathing on the blood. These observers refer the rise produced by cold bathing to general causes—increased activity of the heart and circulation, improved nerve tone, and the driving out of red corpuscles from the organs in which they had accumulated. The immediate effects of warm and cold bathing are, however, purely local.

VII. *Oxygen inhalation and ether anæsthesia.*—The inhalation of oxygen in rabbits produces, as a rule, a concurrent rise in the corpuscles and hæmoglobin. Probably this result

[29] Aero-therapeutics, by C. Theodore Williams, M.D. Oxon., p. 100.

[30] Probably the results of my observations at Davos Platz would have been still more pronounced had they been made in mid-winter, when the absolute moisture is much less than in May. I am indebted to the Cuverein of Davos for data showing that the average daily absolute moisture during the twenty-three days of observation was 5·03 mm. of Hg., whereas in the six months of last winter it was only 3·56.

[31] Op. cit.

[32] I must express my indebtedness to Mr. Waters, Dr. Buol, the Cuverein of Davos, and others, who greatly aided my inquiries at Davos.

[33] Bristowe and Copeman have shown by enumeration that in paroxysmal hæmoglobinuria the number of the chromocytes is reduced by exposure to cold air, or to a cold bath, or by plunging the hands in cold water. (Transactions of the Medical Society of London, vol. xii.) This interesting result is, however, one thing and the effect of cold immersion in healthy subjects is quite another, for it is highly probable that in hæmoglobinuria the normal resistance of the stroma is greatly reduced.

[34] Modern Medical and Bacteriological World (quoted by Dr. Leith, THE LANCET, March 28th, 1896).

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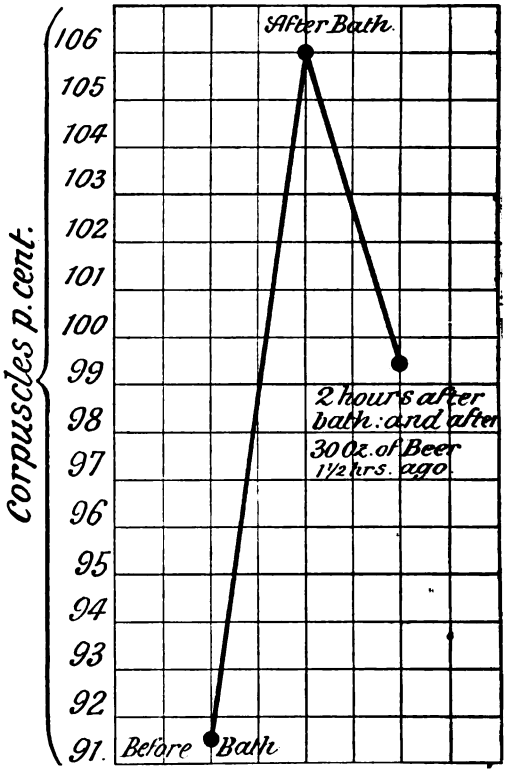
arises from the increased arterial and consequent intra-capillary pressure caused by oxygen (see Lecture I.) It having been stated during the past year that ether anæsthesia, particularly in anæmic subjects, produces a rapid and marked diminution of the hæmoglobin,[35] it seemed desirable to make some observations on animals in order to ascertain if the normal red corpuscle is effected by ether, especially as observations on the effects of anæsthetics on the blood made before, during, and after operations are unreliable, because these themselves, whether producing loss of blood or not, profoundly disturb the composition of the blood. In a series of six experiments on rabbits, in which eighteen observations were made during the profound ether anæsthesia of one hour, the average blood-decimal was 1·01 before and 0·98 during the administration. The corpuscles examined during the anæsthesia were normal in appearance. No obvious after-effects were observed. From this too limited number of observations it would seem that ether anæsthesia does not produce a very pronounced effect on the normal red corpuscles. But it should not be inferred that it will be equally harmless when the corpuscle is abnormal, as in anæmia. There is some ground for believing that the stroma varies in its resistance to the same chemical agent; for example, it has been observed that the corpuscles of different subjects vanish at different rates when mixed with the same solution of sodium chloride in the same proportion and exposed to the same temperature. Lately I met with a good instance of this fact in two rabbits, one normal and the other spleenless; after mixing 5 mm. of the blood of each with 995 c.mm. of solution of sodæ sulph. the corpuscles of the spleenless animal were found to have vanished within two hours, while those of the normal rabbit remained intact for several hours longer.[36] So that it is quite conceivable that ether may be comparatively harmless to the normal red corpuscle and may yet be distinctly injurious to the abnormal one. The effects of chloroform on the red corpuscle have not been sufficiently observed to warrant any statement of results.

VIII. *On variations in the plasma and the circulation of water.* — The preceding observations have shown, on the one hand, that the hæmoglobin value of the corpuscles rises with rest and falls with systemic exercise and work; and, on the other hand, that the corpuscles are continually varying in their relation to the plasma. Though this latter fact has been already amply illustrated it will, I think, repay a little further examination. The concurrent variations in the percentages of the corpuscles and hæmoglobin, which have been so repeatedly pointed out, are indeed volumetric indications of the circulation of water into, or from, the blood—into it from the digestive tract and the tissues and from it by the kidneys, skin, and lungs, and probably into the muscles during exercise The blood is continually tending to balance its income and output of water and is thus always striving after a mean; but, notwithstanding this wonderful persistent adjustment, variations in the proportion of water present in the plasma are at the same time shown by these observations to be constantly taking place within certain physiological limits. It is true they are individually of comparatively short duration, but in this respect they resemble all the other oscillations of function which characterise health, such, for instance, as those described in the first lecture in connexion with the arteries. When, for example, the output of water, whether by the kidneys, skin, or bowels, temporarily exceeds the income, the volume of the plasma is for the time reduced and there is a proportionate rise in the corpuscles. Fig. 28 illustrates this temporary apoplasmia induced by a Turkish bath. All such transitory phases of concentration of the corpuscles can only be due to the shrinking of the plasma from loss of water.[37] But this question does not rest merely on examination of the blood derived from the finger. It has been conclusively proved by experiments on animals. Bizzozero, Golgi,[38] and others have observed that the intra-peritoneal injection of blood produces in from twenty to sixty minutes an enormous rise in the corpuscles, and Dr. William Hunter has shown that this result was merely due to concentration of the plasma (as shown by an equally pronounced rise of the specific gravity of the blood) caused by rapid effusion of serum into the peritoneum set up by the injection.[39] Professor Sherrington has likewise furnished equally conclusive evidence of the apoplasmic effect of operations and inflammations in animals. Inflammation was set up in a limb by immersing it in water at 52° C. for five minutes, and in the abdomen by applying to a knuckle of intestine sponges steeped in salt solution of the same temperature for five minutes. Taking the initial enumeration of the chromocytes

FIG. 28.



Percentages of corpuscles before and after a Turkish bath.

as 100, in the average results of all the experiments the maximum rise in the case of the abdomen amounted to 75 per cent. and in that of the limb to 35 per cent.[40] In some cases the duration of the apoplasmia was considerable, even five days. Sherrington and Copeman "have noticed that in the rabbit the operation of ligation of the vessels of the spleen and various other forms of experimental interference with the contents of the abdominal cavity, including even the simple opening of the cavity by an incision through the linea alba, are all followed by an increase in the specific gravity of the blood."[41] Such striking results as these suggest that some caution should be exercised in accepting any conclusions respecting the function of the spleen derived from observation of the blood during the first week after splenectomy. Clinical observation during last summer also indicated that persistent deviations are to be met with on one or the other side of the physiological mean percentage of the hæmocytes. For example, polycythæmia was frequently observed in chronic interstitial nephritis with high arterial tension, in diabetes mellitus, in chronic gout with increased arterial tension, and in those disposed to hæmorrhage (epistaxis, &c.).[42]

[35] The Blood Alterations in Ether Anæsthesia, by J. Chalmers Da Costa. Philadelphia Medical News, 1895, vol. i., p. 225.

[36] This bypath of the enquiry remains to be explored. In this observation there may be a hint as to the lowered resistance of the stroma in paroxysmal hæmoglobinuria.

[37] Apoplasmia (as indicated by polycythæmia) from abstinence from food and fluid has been recorded by Hayem, Reyne, and others. It is rapidly induced, for abstinence for twenty-four hours in man determines a rise in corpuscles from 4 to 500,000 per c.mm., and the augmentation is said to continue in the guinea-pig and dog until death.

[38] Centralblatt für dicinischen Wissenschaften, 1879, p. 917.

[39] Journal of Physiology, vol. xi.

[40] It has been pointed out that as a rule apoplasmia in man reduces "the worth." Out of the six protocols relating to these experimental inflammations of a limb and of the abdomen "the worth" fell decidedly in 4, slightly in 1, and was unchanged in 1.

[41] Proceedings of the Royal Society, vol. lv.

[42] At present I refer to this matter merely in general terms, for further observation is necessary to test these preliminary conclusions.

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Lloyd Jones found that in arterio-sclerosis and in chronic interstitial nephritis the specific gravity of the blood was "highest in those in whom there is no œdema and in those who have cerebral hæmorrhage," and was "high in those who had had one attack of cerebral hæmorrhage and who are likely to have another."[43] Becquerel and Rodier (quoted by Lloyd Jones) found a high specific gravity and a great increase in the number of the corpuscles in twelve cases of cerebral hæmorrhage, and they add that the increase of the corpuscles "appear indeed to precede the cerebral hæmorrhage." In all such cases the persistent polycythæmia is, as a rule, associated with increased arterial tension and augmented elimination of water. It has been repeatedly observed that when the arterial tension is raised by any means, such as by small doses of suprarenal extract, by tonics generally, and even by mere change of air and scene and by recreation, the corpuscles will, as a rule, rise considerably; but it does not follow that the rise is necessarily and entirely due to the formation of chromocytes, for the major part of it probably arises from accelerated transfer of water from the blood as the result of increased intra-capillary pressure. Even in anæmia the blood may become apoplasmic. The pathogenic cause is not always obvious; it may, however, be frequently traced to a reduced ingestion of water and occasionally to the increased elimination of it probably under neurotic influence. In such cases the volume of the blood is obviously reduced, the percentage of the corpuscles is absolutely either normal or in excess, and that of the hæmoglobin—though it may be absolutely in excess—is always relatively subnormal, and improvement is indicated by a fall in the absolute percentages and a rise in the blood-decimal, as in the following example, in which the subject was a woman aged twenty-three:—

—	Date—1895.			
	Aug. 3rd.	Aug. 7th.	Aug. 19th.	Aug. 23rd.
Corpuscles	110	98	90	87
Hæmoglobin	105	96	91	96
Blood-decimal	0·954	0·98	1·01	1·09

In 1854 Becquerel and Rodier[44] described some cases of chlorosis in which the blood was not modified and was of higher specific gravity than normal; and Lloyd Jones alludes to similar cases—pale girls with a relative excess of corpuscles and a high specific gravity of blood.[45] On the other hand, the reduced elimination of water, as when the blood pressure is much diminished, tends to lower the percentages of the corpuscles and hæmoglobin. This fact is well illustrated by the recent very definite observations of Grawitz on the effects produced on the composition of the blood by loss of compensation and by the restoration of compensation. This observer shows that in the former condition the percentages of the corpuscles and of the dry residue of the blood and of the serum diminish, whereas when compensation is restored they again increase in proportion as the renal elimination of water is improved.[46]

In conclusion it is perhaps superfluous to point out that according to the data which have been advanced in these lectures it would seem that in health the composition of the blood varies quite as much as the calibre of the arteries, and that the variations in the former are largely influenced by the forces of the circulation; in a word, that the physiological relationship that subsists between the blood and the circulatory apparatus is as intimate as is the anatomical.

CORRIGENDA.—In Lecture III., on p. 1699, footnote 3, read *1896* for "1886"; on p. 1704, footnote 13, read *chlorid* for "chloras"; and in footnote 14, read *many* for "heavy."

[43] Journal of Physiology, vol. xii.
[44] Traité de Chimie Pathologique, Paris, 1854. [45] Op. cit.
[46] Deutsche Archiv für Klinische Medicin, Band liv., p. 6.

CHICAGO EXHIBITION, 1893.—The medals and diplomas awarded to British exhibitors at Chicago have at length been issued to H. B. M. Ambassador at Washington, and have been transmitted by him to the Foreign Office. Sir Henry Trueman Wood has been requested by the Secretary of State to undertake the duty of distributing them, and this will be done at once, and all the exhibitors may expect to receive their medals within about a month from the present date.

The Ingleby Lectures

ON THE

MECHANISM OF BINOCULAR VISION AND THE CAUSES OF STRABISMUS.

Delivered at Mason College, Birmingham, on June 10th and 17th, 1896,

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LECTURE II.[1]

GENTLEMEN,—It is an interesting experiment to show to an intelligent student a case of ordinary convergent strabismus in a child and to ask for his idea as to the probable cause of the squint. If he is in his anatomical period he will probably suggest that something is wrong with one of the muscles; if rather more advanced he will usually suppose that a nerve is paralysed; unless he has studied the matter specially he will hardly guess that it is the motor centres which are acting wrongly or that the cause of their doing so lies very probably in the eyes themselves. If he does understand this and has thoroughly grasped the teaching of Donders that convergent strabismus is commonly a result of hypermetropia, he will be apt to retaliate with another question he will want to know why this particular child squints while many others, equally hypermetropic, do not; and to this his teacher may possibly find himself unable to give a satisfactory answer. The possible causes of strabismus are very numerous, for, as you will remember, the turning of the eyes towards a particular point, seemingly such a simple matter, is in reality a highly complex act. It demands: (1) that the object be pictured with sufficient clearness in both eyes; (2) that the pictures be transmitted properly to the visual centres and that these latter instruct the motor centres as to the impulses required; (3) that the motor centres issue these impulses and that the nerves convey them to the muscles; (4) that the muscles respond normally; and (5) that the eyes be free to move. This is a chain of many links and a fault at any point may spoil the result—i.e., may lead to strabismus. In considering the several kinds of fault which may occur it will be convenient to begin at the other end and work backwards.

A. Mechanical displacement of the eye or limitation of its movement by a tumour or an effusion in the orbit, or by an adhesion with the eyelid, will cause deviation when certain movements are attempted. We need not discuss these cases, their nature is generally obvious.

B. A fault in one or more of the muscles will do the same. Congenital malformation or absence of a muscle has been found in a few instances, but the condition is probably uncommon; it cannot be diagnosed with certainty during life. Damage by injury, generally a perforating wound, is more often met with. Some years ago I saw a young man who, in vaulting over a table, had caught his eye on a gas bracket, tearing the conjunctiva and tearing out a large part of the internal rectus muscle; a divergent strabismus was the result. In another and more unusual case a boy was struck between the eyeball and the upper margin of the orbit by a blunt arrow. There was no wound, but for some weeks there was double vision of the kind which generally indicates lesion of the fourth nerve. Here, no doubt, the tendon of the superior oblique, or the pulley through which it glides, had been bruised and temporarily thrown out of action.

C. Lesions of the motor nerves by disease or injury constitute a much more important group. The lesion may lie within the skull, in the sphenoidal fissure, or in the orbit; it may be primary in the nerve itself, or secondary to changes in the surrounding parts. Much might be said of the etiology of these paralytic deviations, but this would carry me beyond my present limits. I will ask your attention rather to the special phenomena

[1] Lecture I. was published in THE LANCET of June 20th, 1896.

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which they present and to the methods by which we investigate them. The salient point is this: the deviation increases or diminishes according to the direction in which the patient attempts to look; it manifests itself chiefly during those movements in which the services of the paralysed muscle are chiefly required. If, for example, the right sixth nerve be injured the right external rectus will be partially or completely paralysed. When the patient desires to look to the right the conjugate centre which governs that movement (see Fig. 7, R, Lecture I.) will issue the customary bilateral impulse; this will be conveyed properly to the left eye, but will be weakened or arrested in its transit to the right. The left eye, therefore, will make the normal movement, while the right will remain still or will "lag behind" its fellow. On the other hand, when the patient desires to look to the left the services of the damaged nerve are not required, the bilateral impulse is carried normally to the two eyes, and they move in harmony. Observe, however, that the deviation does not always begin and end at the median line; the loss of tonicity in the paralysed muscle gives its antagonist a preponderance and the eye is drawn somewhat to one side even when the fellow eye is directed straight forwards. On the other hand, when the paralysis is slight the deviation may manifest itself only when the patient tries to look much towards the affected side. The difference in the movement of the two eyes in paralytic strabismus may be expressed by a diagram. Here is a case of paralysis of the right external rectus (Fig. 11).

FIG. 11.

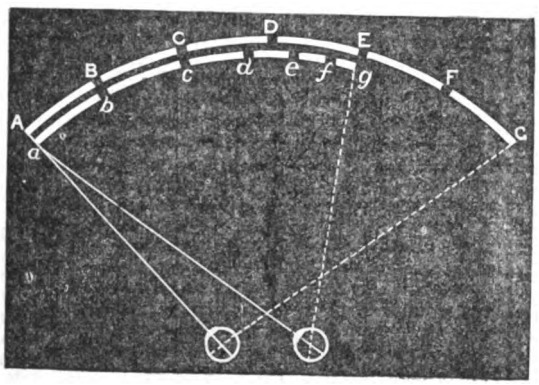

Diagram showing unequal movements of the two eyes in paralysis of the right external rectus.

The arc A G represents the excursion in the horizontal plane which the two eyes ought to make in harmony; *a g* is the excursion which the right eye actually makes while the left travels from A to G. For a certain distance—namely, from A to C—the two eyes move harmoniously; then the paralysed eye begins to lag behind; it reaches only to *d* when it ought to reach to D; to *e* when it ought to reach to E. The distances *d* D, *e* E, and so on, represent the amount of its deviation at each part of the journey. In examining such cases it is necessary to remember that the deviating eye is not always the paralysed eye. If the paralysed eye happen to have much better vision than its fellow the patient will strive to make it follow the object in spite of the paralysis; the strong impulse will be sent equally to the non-paralysed eye and will cause this to deviate, not to lag behind but to shoot ahead of the paralysed eye, and the deviation will be greater than in the former case. For example (Fig. 11), the strongest effort of which the conjugate centre is capable will enable the paralysed eye to follow the object to the point *g*, and will simultaneously carry the non-paralysed eye to the point G; the deviation is now *g* G. If the patient had followed the object with the non-paralysed eye to the same point, say E, the paralysed eye would have lagged behind at *e*; the deviation would then have been only *e* E. In many cases of paralytic deviation the lagging of the eye is too slight to be easily seen; in any case, mere inspection is a very uncertain method of testing it; fortunately we have a better. The double vision which is commonly present affords a precise test. The deviating eye sees the object in a false position—it sees a false image; the position of the false image will tell us the direction and the amount of the deviation if we bear in mind that the false image and the cornea deviate equally and in opposite directions. We judge of the position of an object from the positions of its pictures on the retinæ, and when either retina is displaced without our knowledge, i e., otherwise than by an effort of the will, our judgment is by so much led astray. For example, when the cornea is displaced inwards the picture which should fall on the macula is displaced to a part of the retina which corresponds, when the eye is straight, to an object situated outwards; the patient judges as though the eye were still straight (see Fig. 10, Lecture I.), and therefore sees the object displaced outwards. Hence in double vision the positions of the two images will tell us the positions of the two eyes, provided we know which image belongs to which eye. This is readily determined. Using a strip of white paper as the object to be looked at, we place a disc of red glass before one eye; the patient now sees one white image and one red, and the red image belongs of course to the "red eye." Moreover, the varying distance between the two images as the eyes move will tell us in which direction the deviation increases, in which it diminishes or disappears. Diplopia, therefore, is a very delicate index of deviation. Here is a working formula which applies to all cases, to mechanical displacement as well as to paralytic deviation:—1. Ascertain in which direction the images stand furthest apart: the inefficient muscle is one of those which normally turn the eyes in this direction. 2. Ascertain which image belongs to which eye: the inefficient muscle belongs to the eye whose image stands furthest in the said direction.

This formula saves both time and mental effort in the press of practical work, but it must be confessed that there are a good many cases, especially where the lesion is complex or where it is old and has led to secondary changes in the muscles, in which the most careful examination will leave us in doubt. I must remind you also that these paralytic deviations are not always accompanied by double vision, for one eye may have little or no sight, or the patient may have learned to disregard or suppress the impression which it receives. Lastly, it must be remembered that there is such a thing as double vision with a single eye, usually from defects in the refracting media, possibly in some cases from psychical disturbance. We must not assume that a patient who sees double has a deviation of the eye until we have made certain that one image belongs to one eye and the other to the other. The other disturbances which paralytic deviations often cause I can merely mention in passing: they are giddiness due to seeing objects in a false position, an altered carriage of the head, whereby the patient contrives to minimise the demands made on the paralysed muscle, and closure of one eye, by which he avoids the double vision altogether.

D. Lesions of the motor centres, unless confined to the primary nuclei of the nerves, cause paralytic deviations of bilateral type. The loss of movement is common to the two eyes. Conjugate deviation of both eyes to the right or left is the best known form; it is frequently associated with hemiplegia, the same lesion causing both. When the lesion is in the cerebrum the limbs of the opposite side are paralysed and the eyes cannot be turned towards the paralysed side; they are drawn over towards the other side by the unopposed action of the other conjugate centre. When the lesion is in the cerebellum the limbs of the same side are paralysed and the eyes are unable, as in the former case, to look towards the paralysed side. When it is in the pons the eyes are turned towards the paralysed side. Another form of bilateral deviation due to central lesion is paralysis of convergence. There is a constant divergence of the eyes which the patient cannot diminish, yet the internal as well as the external recti remain active for conjugate movements to either side. Paralysis of convergence is apt to be associated with loss of accommodation, of contraction of the pupils, and of downward movement, for the several impulses which produce these movements arise from closely adjacent parts of the brain. Paralysis of divergence is the counterpart of this and is apt to be combined with loss of upward movement. In cases of this class, you will observe, certain muscles are at one moment powerless and at another active, according to the nature of the movement attempted.

E. Faulty control of the motor centres.—The great majority of all the cases of strabismus which we meet with, especially of those arising in early life, depend, not on faults or lesions in the motor apparatus itself, but on extraneous causes which impair its action. The commonest forms are frequently associated with errors of refraction, convergent strabismus

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with hypermetropia, divergent with myopia. Before discussing other causes let us consider the influence of these conditions. When we look from a distant to a near point our eyes undergo three changes: the ciliary muscles contract so as to accommodate each eye for the near point, the pupils contract, and the internal recti contract so as to converge the eyes for the point in question. These three changes are always wanted simultaneously, and the centres which govern them are therefore placed close together in the brain, so that they may act, as it were, by a common impulse, and the centres on the two sides are closely united, so that the impulses may be strictly bilateral—i.e., issued with equal force to the two eyes. The habit of using these impulses together makes it difficult to use them separately; thus it is difficult to accommodate without converging or to converge without accommodation. This is easily demonstrated. While looking at a point, say, at three feet distance I place concave glasses before my eyes. Now, if I am still to see the object clearly I must accommodate more strongly than before in order to neutralise the effect of the glasses, but I must not converge more or I shall see the object double. This is difficult and would soon become painful, for I have to resist a strong tendency to increase my convergence. If I cover one eye with the hand so as to exclude it from the act of binocular vision it at once squints inwards—a proof that it was previously kept straight with difficulty. On the other hand, if while looking at a near point, say at twelve inches, I place convex glasses before my eyes I must relax my accommodation without altering the convergence, which, again, is difficult, if not impossible. These difficulties, here induced artificially by means of glasses, are naturally present, more or less, in hypermetropia and myopia. As compared with the emmetrope, or normal-sighted person, the hypermetrope is obliged to make an extra effort of accommodation; he therefore tends to converge too much—to squint inwards. The myope, on the other hand, for near objects, must accommodate less than the emmetrope, and therefore tends to converge too little—to squint outwards. The squinter, of course, does not allow both eyes to deviate either inwards or outwards, but turns both to the right or to the left by means of one of the conjugate centres, so as to correct the deviation of the one and double that of the other. The squinting eye, therefore, owes one-half of its displacement to the excess or deficiency of convergence, the other half to the conjugate movement which keeps the fellow eye straight. The fundamental ideas in this explanation of strabismus we owe to Donders. He taught us the relationship of accommodation to convergence, the nature of hypermetropia, and its connexion with convergent strabismus, and in doing this he raised a whole department of ophthalmology to a high scientific level, and conferred immense benefit on the legions of hypermetropes, who are always with us. Since his great work appeared convergent strabismus has been cured in many cases every year by the use of glasses, and this fact is a sufficient reply to those writers, few in number, who still deny the essential truth of his teaching. Still, that teaching does not cover the whole ground. Some squinters have no hypermetropia; many hypermetropes have no squint, and no tendency to squint even when one eye is covered. In hypermetropia normal convergence is the rule and squint the exception. We have then to ask, How does the average hypermetrope manage to combine an extra effort of accommodation with a normal effort of convergence, whereas you and I, trying the experiment with glasses, find it impossible to do so? The average hypermetrope learns from the cradle upwards to regulate his eye-impulses according to the special requirements of his eyes. He trains his motor centres to a different partnership from that which is present in the emmetrope. He teaches the convergent centre to act moderately while the accommodative centre acts strongly. Now, this education, this purposive control of coördinated movements, depends on the higher cortical centres. We may say, therefore, that when hypermetropia leads to strabismus the control centres have failed in their duty.

Conditions which impair the control of the eyes.—Anything which spoils the retinal picture in either eye renders the blending of the two pictures comparatively valueless and is likely to lead to strabismus. Even in the adult who for half a lifetime has used the two eyes together a loss of vision in either eye may cause it to deviate. He no longer takes the trouble to maintain a particular degree of convergence, but allows the useless eye to assume the position which involves least effort. It may remain properly directed, or it may deviate in a purposeless fashion inwards, outwards, or in any other direction, according to its anatomical connexions and the various nerve impulses which still act upon it.[2] The young child under similar circumstances has a still greater tendency to squint, for his eyes have had but little training in harmonious action. Thus, corneal opacities following purulent ophthalmia or phlyctenular ulcer, opacities in the deeper media and disorders of the retina, choroid, and optic nerve are frequent causes of strabismus in early life. We cannot always exclude such causes, even though we fail to discover them a few years later. The hæmorrhages in the vitreous or retina which are sometimes present in the new-born child after long and difficult labour, the changes in the retina or optic nerve which occur during whooping-cough and other acute disorders, even the occlusion of one eye with a bandage during the early months of life, may probably sometimes suffice to check the development of the visual apparatus during its period of most rapid growth and thus to lead to strabismus. Such cases when examined some years later might show no obvious defect in the squinting eye. Again, a great difference in the refraction of the two eyes, especially a high degree of astigmatism in one, will prevent the fusion of the two retinal pictures. The controlling influence may be suspended in other ways than through the absence of good retinal pictures. The mother will often tell us that her child's squint began after a fright, after a fall, during a fever, or at the time of teething; not very seldom there are worms in the intestine; we frequently see that the squint comes on when the child is startled, poorly, or nervous, and disappears or nearly so when he is in vigorous condition; in some cases the inability to exercise the necessary control is distinctly hereditary. Since Donders threw a new light on the causation of strabismus, we have been apt, I think, to treat such points as these with scant attention, especially when we find a few dioptres of hypermetropia in the eyes; but in all conditions of this kind the higher brain powers are more or less disturbed, and just as the hand is apt to become unsteady or the tongue to stammer when its owner is "nervous," so under similar circumstances the eyes are likely to escape from the necessary control. Let me give you a single example of the production of strabismus by fright. A girl who up to eight years of age was healthy and free from eye-trouble was shut up for punishment in a dark room by a well-meaning but misguided relative. The child was utterly terrified and climbed out of her prison through a small window at risk of life and limb. From that time she seemed changed in character, became liable to faint, and had frequent strabismus. To summarise the matter: in infancy the control of the cerebral coördinations is less complete and less stable than in later years, hence the child is more liable than the man to lose it under trivial or temporary difficulties, either ocular or cerebral. In presence of hypermetropia an extra effort of control is needed, hence the hypermetropic child is more liable than others to acquire strabismus. With his first lapse into strabismus the child enters on a vicious circle in which cause and effect are apt to perpetuate each other. He quickly learns to disregard the picture belonging to the deviating eye, and having done so makes no further effort to combine it with that of the fellow eye. The loss of binocular vision then confirms the squint. If it become habitual before the child's visual perceptions are fully developed he is likely to be amblyopic in the squinting eye throughout life. Thus amblyopia is often a consequence as well as a cause of squint. Secondary changes in the muscles and other tissues around the deviating eye occur in course of time and confirm the displacement which originally caused them.

Myopia as a cause of strabismus is not quite the counterpart of hypermetropia, for high myopia is rarely present in the young child. In early life the future myope learns the ordinary association of convergence with accommodation; later, as his myopia develops, he gradually unlearns it and learns to converge without accommodating, but he rarely unlearns completely. The majority of myopes show some outward deviation when one eye is covered, and in a few cases of high myopia this leads to actual divergent strabismus, especially when vision in one eye becomes defective. On the other hand, a few highly myopic persons do succeed in keeping the divergent impulse entirely in abeyance, and, indeed, acquire the habit of persistent convergence for short distances: it is only at short distances that they see well,

[2] See Hansen Grut's Bowman Lecture. Transactions of the Ophthalmological Society of the United Kingdom, 1890, p. 1.

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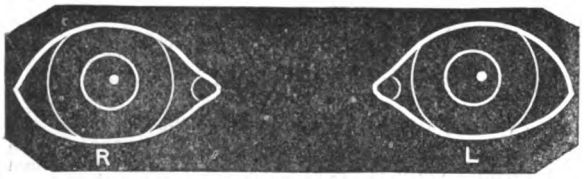
and they make noeffort to obtain binocular vision of distant objects, hence the apparent paradox that concave glasses tend to correct convergent strabismus in such persons. The exceptional occurrence of high myopia in infancy would seem to predispose to convergent strabismus, for the child who never sees distant objects properly is likely to take no trouble to acquire binocular vision except for short distances. Other auxiliary causes and various atypical forms of strabismus might be mentioned, but time forbids. I will conclude by dealing very briefly with a few of the practical questions which often arise in connexion with the common strabismus of childhood.

Does the child squint?—The family is divided in opinion; the medical man is asked to decide. We cannot test a very young child, as we should an older patient, by covering each eye separately while he looks steadily at a distant object, but we may do it with the ophthalmoscope, for a child aged two years or less will look readily at the bright mirror if care is taken not to startle him. The observer standing about

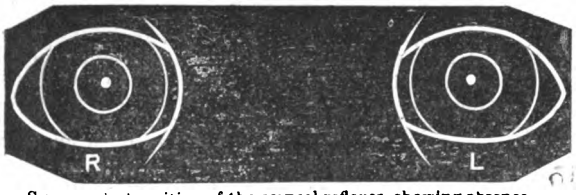
FIG 12.



Asymmetrical position of the corneal reflexes, showing inward deviation of the left eye.

two feet away throws the light first on one eye, then on the other, and notes the position of the corneal reflex in each—i.e., the minute bright reflection of the mirror, which in normal eyes is usually seen just to the inner side of the centre of the pupil. If the corneal reflexes are symmetrically placed in the two eyes there is no strabismus, at least at that moment; asymmetry, on the other hand, shows deviation of one eye and tells us its direction (Fig. 12). A false appearance of strabismus in a young child is usually due to the condition known as epicanthus, a redundant fold of skin hiding the inner angle of the eye (Fig. 13). A squint which

FIG. 13.



Symmetrical position of the corneal reflexes, showing absence of deviation in a case of epicanthus simulating convergent strabismus.

is latent will usually manifest itself when one eye is covered, especially if the child be caused to look at an object placed six or eight inches from his eyes.

At what age should a squint be treated?—The child should be examined with regard to the cause of the squint as early as possible. Before discussing treatment we want to know (1) whether the squint is paralytic or concomitant, in other words, whether the two eyes move unequally or equally when the child looks in different directions; (2) whether the squinting eye is able or unable to "fix" the object when the fellow eye is covered; (3) whether it presents in its own structure any visible cause of defective vision, such as opacity of the media or disease of the fundus; (4) whether the onset of the squint was connected with any obvious disturbance of the nervous system; (5) whether it is always in the same eye or alternates between the two; and (6) lastly, in every case we want to know the refraction of both eyes—this, with the help of atropine and the shadow-test, can be determined even in the youngest child—and, if the child be old enough, the acuteness of vision in each eye when the refractive error is corrected. These data being obtained so far as may be possible we are in a position to speak of treatment and the future probabilities.

Will glasses cure the squint?—If there be a considerable hypermetropia in the straight eye glasses will probably diminish the deviation, whatever be the condition of the deviating eye; but if this latter fail to right itself when the fellow eye is covered they will not effect a real cure. The more promising cases are those in which the squint alternates between the two eyes, the most promising being those in which it appears and disappears periodically; in a case of this kind, if we find that atropine banishes it entirely for the time being we may be almost sure that glasses will remove it permanently. But the glasses must be correct, neutralising astigmatism as well as hypermetropia in both eyes. They must "fit," so that the child looks through them and not over them, and they must be worn constantly from morning till night. Failure frequently depends on lack of perseverance. The parents want a speedy cure and, not getting it, they allow the child to lay aside the glasses after a few weeks or months or fail to renew them when he breaks them. Sometimes they complain illogically that "the glasses do no good, for the squint returns the moment they are taken off." In reality this is the strongest proof of their value. But we must not expect too much from glasses; they can lessen the excess of convergence and they can sharpen the retinal pictures, but they cannot create the visual perceptions and motor impulses which are essential to the acquirement of binocular vision.

What else can be done?—The squinting eye, or rather the perceptions and impulses which ought to control its movements, can, to some extent at least, be educated. The process will be difficult or impossible, according to the duration of the previous neglect. The patient must be taught first to perceive the impressions belonging to the squinting eye; then to perceive them simultaneously with those of the fellow eye—i.e., to see double; next to make the effort which is necessary to unite the double images; and, lastly, to form those judgments of distance and perspective which perfect binocular vision gives. Cures, absolutely complete in this last respect, as proved by Hering's drop test (see Fig. 9, Lecture I.), are rare but not unknown. For this process of teaching several means are at our disposal. We may cause the patient to use the squinting eye exclusively by covering the other; we may induce him to give it the preference when both are open by partially disabling the other with atropine; we may teach him to notice both pictures simultaneously and ultimately to blend them by means of persistent practice with the stereoscope,[3] differentiating them at first by different coloured glasses and approximating them by prisms; and we may facilitate the process at any stage by bringing the eye into better position by means of tenotomy.

When is it best to operate?—No operation should be done until the nature of the squint has been thoroughly investigated and until efforts have been made to minimise the deviation and to sharpen the visual perceptions by glasses and by regulated practice. When these measures are inapplicable or have ceased to give progressive benefit operation is in place and is hardly contra-indicated by age in either direction. But the younger the child the more important it is to do too little rather than too much. Full correction of a squint by tenotomy in very early life may give over-correction later. Partial correction by the first tenotomy, then an interval with regulated exercise, and then a similar tenotomy on the fellow eye in case of need are better practice. Confirmed strabismus often diminishes in degree as time goes on, hence the too common idea that time alone will often cure a squint, and the advice, not seldom given, to "wait and see." For the squinting eye this too often means waiting and not seeing. Time alone may lessen the disfigurement, but will not remove the disability. Binocular vision is not recovered in this way.

[3] See Javal on Binocular Vision in relation to Strabismus. Abstract in Ophthalmic Review, vol. xi., 1892, p. 288.

THE LEICESTER BACTERIOLOGICAL INSTITUTE.—During the Royal Agricultural Show at Leicester, at Stand No. 431, the Leicester Bacteriological Institute have given to agriculturists and dairy farmers demonstrations by means of microscopes of the various pathogenic organisms common to animal and man—tubercle, anthrax, tetanus, erysipelas, actinomycosis, swine fever, typhoid fever, pleuro-pneumonia, diphtheria, &c., and also exhibited cultivations on various media of the different micro-organisms; photographs of the different micro-organisms and their mode of growth; sections of organs containing bacilli; micro-organisms in food—meat, milk, and water; drawings; pamphlets of explanation; exhibition of the antitoxic serums, including antitoxins for diphtheria, tetanus, erysipelas, rabies, typhoid fever, &c.; tuberculin and mallein and their mode of use.

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THE PRACTICAL APPLICATION OF "X" RAYS TO SURGERY AND SURGICAL TEACHING.

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(Continued from p. 1717.)

2. To General Bone Surgery.

ITS application to general bone surgery, I wish first to say, is not chiefly from the diagnostician's point of view. I have not photographed a single case where the diagnosis was materially altered by the process, but in confirming a diagnosis and in finding out the exact extent of an injury it is of greater value. First in importance comes the photographing of fractures to ascertain the extent of the injury especially, the amount of comminution and splitting longitudinally of a bone being necessarily almost impossible to determine unless post mortem. A skiagraph was taken in the ward, the patient not being disturbed and the splint and dressings being untouched; his leg also had extension applied which was not removed. I might mention here that the noise caused by the induction coil, sparking, and contact breaker is not sufficient to materially disturb patients, and on occasions when I have had to use it at night most of the other patients slept on through it. In this case the exposure given was seven minutes. The notes of the case are as follows.

A man aged forty-four years was admitted into King's College Hospital, having fallen from a ladder into the pit of a theatre. He was found to have a compound comminuted fracture of the tibia and fibula and a simple fracture of the femur on the same side. The lower fractures were explored, some loose portions of bone removed, and a wire placed round the tibia. The photograph taken on May 11th, five weeks after the accident, shows longitudinal splitting of both bones with a large amount of comminution and also that the early callus is very transparent to these rays and so does not show. The skiagraph of the femur with eight and a half minutes' exposure shows an unusual condition of impaction of the shaft of the bone at the junction of its upper and middle thirds, the upper part being split into two pieces, enclosing the conical-shaped upper end of the lower fragment. This condition could not have been diagnosed without this method, and helps in the prognosis of the case, especially as regards the probable shortening.

Again, the process can be used to photograph through water-glass, enabling the surgeon to watch the progress of a case treated by this method; thus Fig. 3 is taken with a six and a half minutes' exposure, which is longer than it ought to have been owing to the patient having a bad cough, it being necessary to stop the instrument for at least one and a half minutes owing to two or three attacks of coughing; the patient kept his arm fairly still during the attacks and it came back to the original position. The man in question was forty-four years old; he met with an accident in July, 1894, and broke his right radius. In June, 1895, the fracture being still ununited, a piece was taken out of the ulna and both were wired, as seen in the illustration, showing that there is still no osseous union between the bones. The other applications of the process are also numerous, as, for instance, in injuries about the elbow-joint, which are often obscure; many of them can be fully comprehended by means of the cryptoscope or from the skiagraphs. Also in deformities it may be found useful; for instance, in finding the exact position of an abnormal curve of a femur or the absence or presence of a metatarsal or metacarpal bone with congenital deformities of hands or feet.

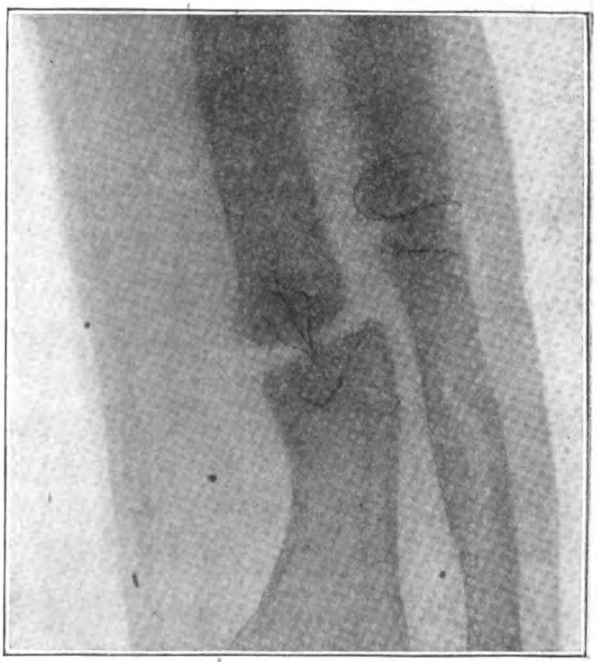
It would be profitable to ascertain the value, if any, of his work in tuberculous and malignant disease of bones or joints; at present I am not in a position to give any definite opinion on these subjects. I am sure that two important items for all this class of work are (1) the short exposures, which, though necessarily often not producing very dense negatives, nevertheless show the surgeon what he wants to know, and (2) the use at the bedside so as not to move or disturb the patient. I may add that I am at present in favour, for clinical purposes, of skiagraphs in preference to the cryptoscope. I next give a few examples of this work as applied to teaching purposes.

3. Application to Teaching Purposes.

I now come to the part of this subject that at present seems to have been kept more or less in the background, but which, I think, will be a very important addition to the medical schools—namely the application of skiagraphy to teaching—and I will endeavour to give a few examples where this process may materially assist the teacher in his often difficult task, and the student in his endeavours to grasp the "whys and wherefores."

A. Osteology.—Firstly the process can be applied to the study of osteology—e.g., the method of growth of bones with the epiphyses, their positions, their appearance at different ages, and, lastly, their date of union to the diaphysis. For instance, in a skiagraph of the hand and wrist the epiphyses of the phalanges and metacarpals are easily demonstrated and one glance shows clearly to the student their position and difference between the metacarpal of the thumb and those of the fingers; also the date of appearance of the epiphysis of the lower end of the radius is shown—I should say the

FIG. 3.



Reproduction of photograph of fractured radius and ulna showing no union and wires which had been put in. Exposure six and a half minutes.

commencement of ossification rather than the appearance of the epiphysis, as mere cartilage is not opaque to these rays and only leaves a space on the plate, whereas when ossification has commenced, a shadow is thrown on the negative This is well shown in two skiagraphs: one is of a boy aged four and a half years, where the epiphysis is seen only as a space, whilst in the other, taken at the age of five and a half years, it is seen as a definite opacity. Similarly the method of union of the epiphyses of the upper end of the humerus can be determined and demonstrated. In a skiagraph of a knee of a boy aged twelve years taken antero-posteriorly with an exposure of six minutes, the epiphyses round the joint are very obvious. These points of course to many appear easy enough to understand, but the student commencing his studies will grasp facts much more readily with a skiagraph before him than by means of post-mortem specimens (which so often get damaged) or diagrams.

B. Surgery.—Now, with regard to surgical teaching there are very many points of interest. The above-mentioned skiagraph of the knee-joint enables the teacher to point out to the student the importance of remembering the position

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of these epiphyses and the line of cartilage from which the bones grow when the operation of excision of the knee is about to be performed, and to emphasise the supreme importance of not injuring the cartilage, as if it is damaged more shortening must occur, and this point is one which is made of importance at examinations. The skiagraphs of the two wrists of a patient taken in the dorso-palmar position with an exposure of four minutes, illustrations of which are reproduced (Figs. 4 and 5), and the fellows of them taken in the radio-ulnar position with six minutes' exposure, demonstrate to the student: (*a*) the position of a Colles' fracture; (*b*) the clinical evidences of it; and (*c*) the causation of the deformity. Thus is rendered clear the position of the corresponding styloid processes—the prominence on the dorsal surface being produced by the backward and upward displacement of the lower fragment, whereas that on the palmar surface is due to the lower end of the upper fragment; the rotation of the lower fragment on its antero-posterior axis and consequent abduction of the

FIG. 4.

Skiagraph of a Colles' fracture. The line of fracture appears across the lower end of the radius.

hand and prominence of the styloid process of the ulna; and the rotation of the lower fragment on its transverse axis with resulting extension of the hand at the wrist-joint. These point out well the use of taking skiagraphs of the normal as well as the abnormal side for comparison. In many cases, and especially for permanent records or for teaching purposes when the cases themselves are not available to be shown to the student, great assistance could be got by comparing the ordinary photograph with the skiagraph, thus pointing out the effect seen in the former with the cause as shown in the latter. Again, in cases of difficult physical signs—as, for instance, a bad comminuted fracture of the head of the tibia where, except to the experienced eye and hand of the surgeon, the question of injury to the lower end of the femur is not easily excluded—the student may be greatly assisted by the skiagraph, and thus be enabled to grasp the meaning of the clinical evidences presented by the patient, which, without it, appeared uncertain and indefinite. Another and last instance is that afforded by the examination of joints after an operation has been performed upon them, especially hips and elbows after excision. Here there is often much difficulty in explaining the final condition of the joints, and the skiagraphs will greatly aid the teacher and the student. I have before me two skiagraphs of the hip-joints of a boy aged fifteen years, taken when the patient was in bed in the ward as described before with exposure of ten minutes, the one is normal, showing the epiphyses of the head and great trochanter; and the other one is after excision had been performed for tuberculous disease; here the upward and backward displacement of the rest of the femur and the absence of the head and neck are easily shown to the student. Likewise, with an elbow after excision for similar disease and the resulting almost perfect movement, the resulting false joint is easily compared with a normal one and shown.

I wish to add one point, although it has no direct bearing upon the previous points I have tried to draw attention to, and that is, that people who have a tendency towards bringing

FIG. 5.

A normal wrist-joint, for comparison with Fig. 4.

actions against medical men for unskilful treatment will be tempted to use this method as evidence in their favour. But fortunately this may show the opposite; as in more than one case of mine the trouble has either been shown to be due to something else altogether or to adhesions remaining in the joint after the injury.

I wish to express my great indebtedness to Mr. W. H. Sodeau, B. Sc. Lond., for his valuable assistance, and for many practical suggestions which he has made from the time I commenced to experiment, and to Mr. Herbert Jackson, of King's College, for having not only given me much advice but for lending me some tubes to start my work without which I should not have been able to begin until much later; and also I have to thank Mr. W. Watson Cheyne for having allowed me to publish so many of his cases. I have also to thank the staff at King's College for their help, and especially Mr. William Rose for letting me use his case of Colles' fracture in the way I have above.

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SHOULD A HEALTHY MOTHER SUCKLE HER CONGENITALLY SYPHILITIC CHILD?

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IT is a matter of much gratification to me to find myself on nearly all points in accordance with the views expressed by Dr. Coutts in his Hunterian lectures on Infantile Syphilis. Everyone, indeed, must be indebted to him for having put an end to a good deal of dogmatic teaching, by subjecting those points about which there is, or has been, controversy to sound criticism based upon a careful and minute study of facts, and his lectures mark a step forward in our knowledge of the subject. Dr. Coutts considers the question whether there are exceptions to Colles' law as settled in the affirmative, but he does not think that "such eminently infrequent occurrences ought to largely modify our practice in allowing apparently healthy mothers to suckle tainted infants," and he adds: "Following in the same path as Henoch, the only limitations I would place on suckling by mother or wet nurse would be the presence of excoriations on her nipple and that of ulceration or fissures about the mouth of the infected infant." With reference to this, it appears to me that it is neither safe nor proper to adopt such a rule of practice.

That the infection of a wet nurse by a tainted child, whether the nurse be or be not its mother, is a possibility has been established. Dr. Coutts shows from the statistics of the Shadwell Hospital that the frequency of the occurrence of the infection of wet nurses has probably been much exaggerated, but still the thing occurs, and it has to be accepted as a fact that a healthy woman, whether she be the child's mother or not, may contract syphilis by suckling a congenitally syphilitic child. The position which I venture to take up is that it is not right to expose a woman to that risk, even though Henoch's precautions are taken. Of course, if the tainted child's mother enjoys a certain amount of immunity which is not enjoyed by a wet nurse who is not its mother, it would be safer for the mother to suckle the child than for such unrelated wet nurse, but infection may come to either, and the question is whether Henoch's precautions give such a security as to justify our running the risk. In my opinion they do not give such a security. It does not seem to me that it would be sufficient to examine the nurse's nipple and the child's mouth before allowing the child to suck. The nipple and mouth would require to be kept under observation, and Henoch's rule does not say how the practitioner is to act in the event of lesions of the nipple or mouth appearing during the suckling, say weeks or months after it has commenced. But in addition to this, the lesion of the mouth or nipple may be so small as to escape detection and yet be sufficient to allow of infection. It therefore appears to me that the rule for the practitioner ought to be to prevent the risks to a healthy wet nurse from suckling a congenitally syphilitic child, by not giving his sanction to such suckling. I have elsewhere pointed out that under very exceptional circumstances a particular case may offer itself, in which deviation from this rule is perhaps justifiable, but, in my opinion, no fault can be found to that practice which never makes an exception and never allows a healthy woman to suckle a tainted child. Since the law of Colles is proved to have exceptions, this prohibition should apply to nurses who are mothers as well as to other nurses; indeed, the practical dealing with mothers should be the same as that in regard to hired wet nurses if protection is to be always secured. It may of course be said that it will be injurious to syphilitic children as to children generally, not to derive their nourishment from woman's milk—that of mothers or of other women—and I cannot say that this may not be true. But in this conflict of interests, I believe that few will think of deciding in favour of the child. There may be some disadvantage to the child from artificial feeding, but this may be easily overrated. In some of the large Russian institutions a large number of children suffering from congenital syphilis have quite recently been brought up entirely on the bottle with completely satisfactory results. I do not desire the extermination of the tainted or weakly, but it seems to me that I am right in regarding the health and life of the mother of a tainted child, or of its hired wet-nurse, as of higher value than the health and life of the child itself. Most of us perhaps go as far as Fournier does when he says: "For an infant born of a syphilitic father and mother there are but three alternatives: (1) Either it dies before birth, and that is undoubtedly the best thing that can happen to it; (2) or it will be born at the full time the subject of syphilis; (3) or it will survive with compromised health and exposed to all *les alternatives de la maladie*." I have a difficulty, in short, in regarding it as warrantable to expose a healthy mother or a healthy hired wet-nurse—perhaps destined to have other children—to the least risk of sustaining a serious injury, on the chance of bettering a life already seriously damaged. It will be seen from what I have written that I go further than Dr. Coutts, and cannot accept Henoch's precautions as sufficient not only as regards hired wet-nurses, but also as regards mothers, since Colles' law has been shown to have exceptions, though we do not yet know much as to the frequency or infrequency of such exceptions. In other words, I desire to take a safe course in the interests both of maternal and non-maternal wet-nurses.

Mr. Hutchinson does not appear to regard the precaution, which is recommended by Henoch and adopted by Dr. Coutts as necessary; at least, so far as I know, he does not indicate that he takes the precaution, and with his views it is scarcely seen that he would have any sufficient reason for doing so. He has "expected" the occurrence of exceptions to the law of Colles, and, indeed, admits that they have occurred, but he does not think we should "allow these extremely few exceptional cases to interfere with our general rule of permitting mothers (of tainted children) to nurse their infants."[1]

Before the discussion in January last at the Royal Medical and Chirurgical Society, I was not aware that Mr. Hutchinson did admit the actual occurrence of any exceptions. Indeed, he had previously expressed himself often and strongly in the opposite sense, as, for instance, when he says: "I am not aware that a single exception has been recorded;"[2] and again, "if there is on record a single case in which the mother of a syphilitic infant is proved to have contracted a chancre from her own child it has escaped my reading."[3] and again at a later date, "since Colles' day no exceptions to his law have I think been put on record which are worthy of trust."[4] But Mr. Hutchinson though he has never seen an exception, now admits the occurrence of exceptions, and says that it is reasonable to expect them. Notwithstanding this, however, he is of opinion that we "may continue" to "encourage mothers of syphilitic children to nurse the children themselves, not giving them, indeed, an assurance of positive immunity but telling them that for all practical purposes they are safe."[5] His reason—his only reason, so far as I know—is that it would be a pity if, by not allowing mothers to suckle such children, we condemned the children, "to the additional risk of life entailed by their not being nursed by the mother."[6] I am not able to see that this is a proper and justifiable practice. In my opinion Mr. Hutchinson exaggerates the risk to the child. For infinitely weaker causes than their possible protection from syphilis mothers are often allowed and advised to bring up their children by hand, and without a thought that this involves any important risk to the life of the children. Whenever it is shown that Colles' law is not a law which has no exceptions—and this I believe to have been clearly shown—it seems to me that no mother should be exposed to the risk of contracting a chancre by nursing her syphilitic child.

The rule as regards mothers should in my opinion be exactly the same as that regarding unrelated wet nurses. The first are probably in less danger than the last, but they have been now shown to be in some danger, and that danger ought not to be run. If the actual occurrence of exceptions had not been established, and if their occurrence were still only a reasonable expectation, it seems to me but right to the mother to protect her in every possible way from all risk. Even Mr. Hutchinson holds the mother of a child by a syphilitic father only to be rendered "in

[1] Proceedings of the Royal Medical and Chirurgical Society, Third Series, vol. viii., p. 107.
[2] Transactions of the Pathological Society, 1876, p. 460.
[3] Medical Times and Gazette, vol. ii., 1876, p. 644.
[4] Syphilis, p. 91, 1893.
[5] Proceedings of the Royal Medical and Chirurgical Society, Third Series, vol. viii., p. 108.
[6] Ibid. p. 108.

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some degree insusceptible to syphilis" and to have become "as a usual thing" "immune towards syphilis in a certain sense."[7] It matters nothing as I see it, and changes nothing, to regard a mother who gets a chancre from her syphilitic child as getting a second attack or a second infection of syphilis, which seems to be Mr. Hutchinson's view, that is, if I understand him correctly. A woman receives from vaccination something which renders her different from an unvaccinated person in respect of exposure to infection from small-pox—just as carrying a syphilitic fœtus does to the woman who carries it in regard to infection from syphilis—but I do not suppose that any one would advise a vaccinated woman to put herself unnecessarily in the way of being infected with small-pox, nor would we, if she did expose herself and became infected, call it a "second attack" or "second infection." I admit that "the something" which is received from vaccination and "the something" which is received from carrying a syphilitic fœtus may not be of the same potency as regards infection from small-pox and syphilis respectively. But the difference is one only of degree; and at the most the mother of the syphilitic fœtus is only less liable to infection from syphilis than the vaccinated woman is to infection from small-pox. My position is that, as the protection of the mother from syphilis is not complete, she ought never to be exposed to the risk, even if the reason for doing so were much stronger than that which is adduced by Mr. Hutchinson, and which seems to me altogether insufficient.

Welbeck-street, W.

TRANSFUSION OF SALINE FLUID INTO THE AXILLARY CELLULAR TISSUE IN CASES OF SEVERE HÆMORRHAGE.

BY ARTHUR H. DODD, L.R.C.P. LOND., M.R.C.S. ENG., L.S.A. LOND.

THE credit of this method of treatment is due to Mr. Thomas H. Morse of Norwich, and it was owing to his suggestions some time ago that I became aware of it. The instrument used is a very slight modification of Mr. Arbuthnot Lane's transfusion apparatus, made by Messrs. Down Brothers, the only difference being that a sharp-pointed needle of a little stouter make is required instead of the blunt one used for introduction into a vein, and the ordinary saline solution is used—i.e., a teaspoonful of common salt to the pint of boiled water cooled down to the proper temperature (100° F.). Having fitted the needle, tube, and syringe together, fill the latter with the solution, then force the steel point of the needle through the skin of the axilla deep enough to move freely into the cellular tissue, and slowly and gently force the fluid into the cellular tissue. Refill the syringe and proceed again until a pint or more has been used. The following are brief notes of a successful case in my own practice.

In February last I was sent for one evening about 7 P.M. to attend a multipara, as the nurse was alarmed at the excessive hæmorrhage which had taken place during the preceding two hours without apparently any progress being made in the labour. I found the patient had lost an enormous quantity of blood and was in a dangerous condition, being blanched and pulseless, and the pains, which had been going on regularly for several hours previously, had now entirely left her. Upon examination I found the os only partially dilated and the membranes protruding, but no presentation detectable. I ruptured the membranes, a large quantity of liquor amnii escaping, and I found that the cause of the hæmorrhage was right partial placenta prævia. She was now in an exceedingly critical condition, vomiting, in a cold clammy perspiration, with sighing respirations, the bowels acting involuntarily, and she was pulseless, semi-conscious, and apparently rapidly sinking. Two subcutaneous injections of ether were given without the slightest improvement. Dr. Treutler, who kindly saw the case with me and lent me his assistance, agreed that no further interference in the labour was at present justifiable. Remembering Mr. Morse's suggestions, and having my instrument within easy distance, we performed transfusion according to his method, injecting about a pint, although I must confess without the remotest idea of benefiting the patient, as we considered the case beyond our assistance. However, after a very brief interval there were indications of slight improvement and a very feeble pulse was detectable at the radials. During the next two hours small quantities of warm milk and brandy were able to be taken at frequent intervals. After that time there were decided symptoms of rallying and benefit from the transfusion and pains returned. By examination a vertex presentation could be made out, and ergotinine ($\frac{1}{10}$ gr.) was injected and we delivered with forceps.

It may be interesting to note that the child (female) was stillborn and very large, weighing eight pounds and three-quarters and measuring twenty-one and a half inches in length. It was in a state of well-marked rigor mortis, the stiffness of the limbs and body adding considerably to the difficulty of completing delivery, which was accomplished at 12 45 A.M. The movements of the child were last felt at 6 P.M. The placenta was easily removed, and the position of the part whence the hæmorrhage occurred found well-marked on its border. The patient made an uninterrupted recovery, assisted by taking iron in the form of Blaud's pills (bi-palatinoids) for several weeks.

The results of the transfusion were rapid absorption of the saline fluid (hardly any swelling remaining at the end of two hours) and decided and rapid improvement of the urgent symptoms, thus enabling the patient to take minute quantities of nourishment; and its advantages are the quick, ready, and easy application of the method which could be managed any time single-handed. Mr. Morse has had two successful cases, one being for a pulseless patient, due to hæmorrhage as a result of extra-uterine fœtation, and he says "that the pulse became quite a good one in fifteen minutes," and he further suggests the use of this method "before certain operations in collapsed conditions due to hæmorrhage," and on future occasions he intends performing the operation in both axillæ.

West Brighton, Sussex.

[7] Ibid, p. 106.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

CASE OF OBTURATOR HERNIA SUCCESSFULLY TREATED BY COPIOUS ENEMATA.

BY C. W. MONRO GRIER, M.B., C.M. EDIN.,
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ON June 25th, 1895, a fisherman aged thirty-eight years was carried home from his boat suffering great pain along the line of the adductor muscles to the knee of the left leg. The day before he had hobbled to his boat in pain in the same region, and had been obliged to remain on his hands and knees until he was carried ashore, as stated. The bowels had not been moved for two days. A slight sense of fulness to the inner side of the femoral vessels, inability to extend the thigh, the great pain at the groin, complete loss of appetite, and a sense of nausea, with the tongue dried in the centre, suggested the diagnosis, the inguinal and femoral canals being clear. Having tried moderate taxis without result I ordered an enema of a gallon of warm water, which was injected almost without the patient being aware of it, so complete was the loss of sensation in the lower bowel. After a quarter of an hour, there being no desire to defecate, he was asked to make an effort to move the bowel, with the result that about a pint of hardly discoloured water was passed. He was then put on morphia, belladonna, and tincture of chloroform, which somewhat relieved his pain and induced sleep for an hour or two. On June 26th, 10 A.M., I found that nothing had been passed by the bowel during the night. The tongue was drier and the condition was evidently worse. The temperature was 101° F. and the pulse was 112. I gave another enema of a gallon of warm water and applied taxis, with the result that I fancied I heard and felt a slight gurgle under my thumb. He now stated that he was not suffering so much pain. There was still loss of sensation in the lower bowel, but on the patient's trying to evacuate the enema about two pints were passed with a

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few hard fæces, which I thought (from his passing so small a portion of the enema) must have been lying below the seat of injury. The morphia was continued. In the evening there was considerable pain, but no further motion by the bowel; a considerable amount of urine was passed. The tongue was still dry. I ordered elixir of cascara sagrada, two drachms, to be repeated in four hours. On June 27th no motion had been passed during the night, but much urine. The tongue was still dry and the pulse, temperature, and condition were generally about the same as they had been on the previous morning. The fulness at the inner side of the femoral vessels had disappeared and the pain at that part was not so severe. I considered that the hernia had been reduced and that there was probably stricture of the gut in the region injured. I again gave an enema of a gallon, rolled the patient gently from side to side of the bed, and kneaded the abdomen. The combined efforts induced considerable peristaltic action, with much pain and desire to defecate, with the result that there was a free motion of the bowels with plenty of fæces. On June 28th the patient was generally better; the bowels had been moved once freely during the night, but there was still some abdominal distress. On the 29th and 30th he was better, and on July 1st he went out for a walk. The diet throughout consisted of well-boiled gruel, beef-tea, and milk.

Polpier, Mevagissey, Cornwall.

CASE OF CHRONIC NEPHRITIS IN WHICH THE SEVERE DROPSY DISAPPEARED AFTER PERSISTING FOR NEARLY TWELVE MONTHS.

By MATTHEW SHIRLEY, L.R.C.P. EDIN., L.F.P.&S. GLASG.,
MEDICAL OFFICER TO THE HUNSLET UNION WORKHOUSE.

A MAN aged thirty-two years was in the Skipton Union Workhouse in November, 1893, and onwards for thirteen weeks under Dr. Wylie and Mr. Welsh. He was swollen to the waist from below upwards and his urine on boiling was nearly solid with albumin. In March, 1894, he was under Mr. Atkinson of Romaldkirk, near Barnard Castle. On Sept. 19th his condition was rather worse and he went to the General Infirmary, Leeds. His urine was examined then, but his condition did not improve. On the 20th he came into the Union Workhouse at Hunslet, when his condition was as follows. There was anasarca from head to foot; the urine on boiling became solid; the patient was very restless; he had a dry, hacking cough; and was sleepless and muttering. Pilocarpine was given. On Oct. 4th there was no change for the better. The patient had been sweating, was still swollen, and very restless. The pilocarpine was given up. On the 11th the anasarca had become somewhat less. He was more cheerful and felt better. The urine was in the same condition and there were casts. On the 14th the anasarca was less all over and the urine was the same. On the 15th there was no albumin on boiling, but about one-fifth albumin on settling after adding nitric acid. The anasarca was quite gone and the improvement continued. On the 25th the patient was up and partook of eggs, liquor carnis, a mutton chop, and some milk. He was cheerful, and there was no return of any symptom. There were no casts and the albumin was lessening.

A NOTE ON FIFTY CASES OF INFLUENZA.

By H. W. WEBBER, M.S., M.D. LOND.

SEVERAL interesting points with regard to the symptoms and complications occurring in influenza have at times been raised by correspondents of THE LANCET, notably—(1) throat affections, (2) the presence of skin eruptions, and (3) the treatment of the disease. My experience in fifty consecutive cases of influenza observed during the last epidemic is that throat trouble has been present in the majority, although the subjective symptoms of this have been slight, no pain on swallowing (or very little) being complained of. On examination the fauces, uvula, soft palate, and pharynx showed a general redness of peculiar dusky colour and dry appearance; the intensity of the inflammation has been fairly proportionate to the degree of pyrexia, though its slow subsidence has been in marked contrast to the usually rapid (from twenty-four to forty-eight hours) fall of temperature. I have not observed swelling of the tonsils beyond a slight congestion accompanying the above condition in any case. In twenty-two of the cases redness of the skin was present. This was of the nature of a congestive erythema, well-marked when pyrexia was at its height and then of deep-red colour, the skin being burning hot to the touch, this disappearing with the fall of temperature and leaving the patient anæmic. In nearly all the cases it was most intense on the face, arms, and hands. No desquamation of any sort has followed in any case. In four of the cases I have observed vesicular herpes; in three this made its appearance on the fall of temperature, in the fourth the patient when first seen was still going about, having a temperature of 102·2° F. on the fourth day of the disease. In one case the eruption was profuse, involving the alæ and columna nasi and both lips; in the other three a crop of vesicles about the size of a sixpence was situated on the lower lip. My treatment with all has been—(*a*) during the acute stage confinement to bed, liquid diet, and a mixture of salicylate of soda, bicarbonate of potash, and liquor ammoniæ acetatis, with the addition of a little sal volatile; the latter counteracts the depressing tendency of the salicylate of soda and the influenza virus and seems to lessen the headache, and this, when persisting after the acute stage, I have always found relieved by five-grain doses of antipyrin given every four hours if required; (*b*) after the subsidence of pyrexia by quinine with strychnia; and (*c*) special complications, such as bronchial catarrh, which has been frequent, require suitable treatment.

Plymouth.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

THE ROYAL EYE HOSPITAL, SOUTHWARK.

A CASE OF DIPHTHERITIC CONJUNCTIVITIS.

(Under the care of Dr. W. J. COLLINS.)

THE following notes of a case occurring in Dr. Collins's practice at the Royal Eye Hospital, Southwark, deserve record as showing very completely how the local, constitutional, and bacteriological phenomena which we recognise as diphtheritic have their exact counterpart when the seat of the initial lesion is the conjunctival mucous membrane instead of the faucial. The disease is said to be most common in Germany, but we sometimes get very severe cases in this country as evidenced by the record of this one. We are indebted to Dr. J. W. H. Eyre, clinical assistant, for the notes and the account of the bacteriological investigation.

The patient was a male child aged two years and was first seen by Dr. W. J. Collins on Feb. 10th, 1896. The history given by the mother was that the child's left eye had begun to be inflamed three days previously. The right eye became affected the next day, but it was not until the day previously to her visit to the hospital that the lids had swollen to any extent. When first seen both eyes were affected, the lids being swollen, red, and painful, and difficult to separate on account of the brawny infiltration of the surrounding subcutaneous tissues. On separating the lids by means of retractors the ocular conjunctiva was found to be injected and much chemosed; the palpebral portion was congested and thickened and presented patches of pale greyish-yellow membranous exudation, giving one the impression that a strong caustic had been recently applied. This membrane stripped off easily, leaving a raw bleeding surface below. The corneæ were slightly hazy, but the surface epithelium remained unbroken. A thin milky-white discharge, slight in quantity, exuded from

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the palpebral fissures, excoriating the skin of the cheek. Such was the local condition; added to this the child was obviously ill, being flushed, restless, and irritable, with a temperature of 102° F. and a pulse of 100; he had albuminous urine. No throat symptoms were present, nor could any history of exposure to contagion be elicited. The treatment adopted was the isolation of the child and the use of a lotion of hydrochlorate of quinine (five grains to the ounce) every half hour, an ointment of boracic acid being subsequently applied to the edges of the lids. Once a day the membrane was stripped off and the whole of the palpebral conjunctiva painted with a solution of silver nitrate (twenty grains to the ounce). The membrane at the commencement of the treatment re-formed in the course of a few hours, but after the first day or two the exudation process was much less rapid and entirely ceased in seven days. As the cornea remained a little hazy drops of sulphate of atropia (two grains to the ounce) were instilled from Feb. 17th to 24th. At the end of this period the cornea and conjunctiva had regained their normal appearance. One month later the child was again examined, when there was found to be marked paresis of the extensor muscles of the left hand and forearm. The mother stated that the condition had been more marked a week or so before and was then improving.

Bacteriological examination.—When the child was first seen (Feb. 10th) cover-slip preparations made directly from the serous discharge revealed the presence of numerous polynuclear leucocytes, some staphylococci, and slender bacilli. These last measured about 1·75 μ in length, and from the irregular manner in which they took the stain (carbolic methylene blue) presented a somewhat beaded appearance. None were clubbed, and morphologically the bacilli might equally well have been either the bacillus diphtheriæ or the xerosis bacillus. A blood serum tube was therefore inoculated with some of the discharge taken from the left lower conjunctival fornix and incubated at 37° C. for eighteen hours. At the end of that period the resulting growth consisted of small raised circular or rather spherical colonies of an opaque white colour, which microscopically consisted entirely of what appeared to be the long variety of the Klebs-Löffler bacillus. Some larger colonies of staphylococci were also present. From this first culture agar plates were made and the bacillus diphtheriæ was isolated. A subculture in bouillon was next prepared and after forty-eight hours' incubation at 37° C. examined and found to be pure. One c.c. was then inoculated into the subcutaneous tissue of the abdomen of a guinea-pig weighing 250 grammes (Feb. 18th); eighty-three hours later (the 22nd) the guinea-pig was dead, and post mortem the local œdema and serous effusions usually associated with death resulting from inoculation of the bacillus diphtheriæ were observed. Cover-slip preparations were made and blood serum tubes inoculated with the conjunctival secretion from each eye when the membrane had finally disappeared (Feb. 24th), but with negative results—the staphylococcus epidermidis albus alone being present. This observation was again repeated on the 27th with a like result.

STATION HOSPITAL, SIRDARPUR, CENTRAL INDIA.

A CASE OF ATROPINE POISONING AND A DOUBTFUL ONE OF STRAMONIUM POISONING.

(Under the care of Surgeon-Lieutenant-Colonel J. DUKE.)

THERE is probably no country in the world which affords so much employment and instruction to the toxicologist as India, and we in Great Britain gain considerable advantage from a perusal of notes of cases such as the following. It is to be regretted that the time of our medical brethren in the East is so much taken up with practical administrative duties that little is left for the record of clinical observations. Much which we can ill afford to lose should be published but is daily lost to the world owing to want of opportunity on the part of the overworked observer. The dose of atropine in the first case was unusually small in amount to produce such severe symptoms, and owing to the method of administration its effects were exceptionally difficult to overcome.

CASE 1. *Atropine poisoning.*—On June 21st a Sepoy aged forty years who was otherwise in sound health was admitted for lumbago attributed to a fall from a tree, the patient alighting on his buttocks. On the 25th five minims of liquor atropiæ P.B. (strength four grains to the ounce) were ordered as an injection into the loin to relieve the pain. The injection was given at 4.30 P.M., and fifteen minutes later he complained of dryness of the throat, giddiness, a feeling of intoxication, and distress. At 5 P.M. the pupils were dilated and the body was trembling. He picked at the bedclothes and was restless, throwing his arms about and moaning. If allowed to rise he wandered about, picking at the walls with his fingers. He was conscious and able to answer questions in a drunken manner. At 7 P.M. Surgeon-Lieutenant-Colonel Duke saw him. He was more or less insensible and restless, tossing about in bed and throwing his arms about wildly, his actions being restrained by two attendants. The noisy, pleasing delirium mentioned by Murrell was present. The pupils were dilated, the pulse was full and strong, and the respiration was thoracic and abdominal. He had apparently a desire to micturate, but was unable to do so. At 7.30 P.M. one-sixth of a grain of pilocarpine was injected subcutaneously; no physiological effects followed. At 8 P.M. the same quantity of pilocarpine was given without any physiological effects, but the delirium seemed to be less. At 9.15 P.M. the patient was quieter, but he was still quite unconscious. The pupils were widely dilated. The pulse was now small, thready, and compressible. At 9.45 P.M. one-sixth of a grain of pilocarpine was again injected; there were no physiological effects, but the delirium was much lessened. Mustard plasters were applied with bandages to the calves of the legs. At 10.15 P.M. the following enema was given: rum, two ounces; liquor ammoniæ fortior, five minims; and very hot coffee, one pint. At 10.30 P.M. the patient suddenly became conscious and answered questions. He micturated freely. At 12 midnight he was sitting up; he was a little shaky in his movements, but quite rational and answered all questions. He said that "something had happened to him, but what that something was had gone."

CASE 2 *Stramonium poisoning (a doubtful case)*—A Sepoy aged thirty-five years was carried to hospital on Sept. 15th. On admission he was insensible. His temperature was 101·6° F., indicating fever; the attendant symptoms were, however, unusual. His decubitus was peculiar; he lay boring his head into the pillow and trying to hide it; he picked at the bedclothes with his fingers and was generally restless. He tried to get up, but was unable to stand. His pupils were neither dilated nor contracted. Inquiry showed that on the previous day he had worked with a fatigue party engaged in removing mud from a river, and that he was in good health on the evening preceding his attack. He was said to take one pill of opium three times a day. The diagnosis was possibly cerebral effusion. There was no history of poison. A blister was applied to the head, calomel with antifebrine was administered internally, and mustard plasters were applied to the calves. At 7 P.M. the temperature was 102°. At 8 P.M., owing to retention, twelve ounces of urine were drawn off with a catheter. At 9 P.M. his symptoms were serious and much the same; a castor oil enema was ordered. On Sept. 16th at 8 A.M. the bowels had been moved three times and there had been vomiting once. His behaviour was still most curious. He was more or less delirious and started when the hand was placed on his body. If roused he looked up and then buried his head in the clothes. As these symptoms corresponded to the description of datura poisoning given in the text-books one-sixth of a grain of pilocarpine in ten minims of water was injected. The usual physiological effects followed and the patient became quieter and more conscious. At 6 P.M. the same quantity of pilocarpine was given, after which he was much quieter. On Sept. 17th at 8 A.M. he was conscious and spoke rationally; he walked and took food. He was discharged to duty on the 24th.

Remarks by Surgeon-Lieutenant-Colonel DUKE.—The patient in Case 1 was a confirmed Indian hemp smoker and drinker of twenty years' standing. When the Indian Hemp Commission sat in 1893 he contributed to it the principal written evidence sent from Sirdarpur. Whether this habit renders a man liable to be specially affected by atropine is an open question. My own impression at the time (considering the smallness of the dose and the severity of the symptoms) that the Indian hemp habit had created an idiosyncrasy in this patient is only a conjecture. I can find no mention of it in the text-books. With a view of determining whether the gunja habit hindered the action of pilocarpine, four days after his recovery pilocarpine was again used as follows. On June 29th at 4 P.M. one-sixth of a grain of pilocarpine was injected; at 4.5 P.M. there were slight forehead

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perspiration and slight salivation; at 4.10 P.M. free salivation was present; and at 4 30 P.M. the salivation had ceased. The saliva secreted amounted to three ounces, giving the full and usual effects of this drug. This experiment proves that (1) the bhang habit in no way checked the action of pilocarpine; and (2) the atropine poison alone prevented its action, the dose of pilocarpine being insufficient. Regarding the treatment of atropine poison, in his book on Poisons Murrell advises the injection of half a grain of pilocarpine every half-hour. In this case only one-sixth of a grain doses were given, as at first it seemed incredible to me that one-twenty-fourth of a grain of atropine could produce dangerous results. Yet at 10 P.M. the symptoms were somewhat alarming. Had half a grain been used at first it seems probable that consciousness would have been restored in a brief period. I have lately tried atropine in three cases of local pain, using two minims of the solution in three minims of water. In all instances slight physiological symptoms rapidly developed. Martindale and Westcott, in their Extra Pharmacopœia (fourth edition) quote as follows: "Inject. atrop. hypd.: dose 1 to 4 minims or more." The condition of the patient in Case 2 at one time seemed to be very serious, and the symptoms were most puzzling. A high temperature indicated fever, but the symptoms of delirium, retention of urine, picking at the bedclothes, and pillow-boring were not such as occur in fever of a few hours' duration. On Sept. 14th, when at fatigue duty, he probably ate some datura seeds, and the rise in the temperature was caused by a chill caught in the river bed. The case was probably one of mild datura poisoning accidentally associated with fever, both producing a combination of symptoms difficult to diagnose.

Medical Societies.

OPHTHALMOLOGICAL SOCIETY.

Leucosarcoma of Choroid — Cataract Extraction and Gout.— On the Origin of Ruptures in Detached Retinæ.— Cyst of Orbit.— Acquired Nystagmus in other Occupations than that of Coal-mining, with Cases and Remarks.

AN ordinary meeting of this society was held on June 11th, Mr. E. NETTLESHIP being in the chair.

Dr. ROCKLIFFE (Hull) described a case of Leucosarcoma of the Choroid. The patient was a man aged forty-two who had previously had a fall on the occiput. Three years afterwards he fancied he saw "black specks" before his eyes, but no inconvenience was remarked until nine months later, when he discovered it was necessary either to close the left eye or to hold a book slantingly in order to read with comfort. He had a good family history and always enjoyed good health. His vision when first seen was normal in the right eye and $\frac{6}{12}$, with + 1 D. = 4 J. in the left. Pupil natural, field normal. There was no scotoma; the colour sense was good; and the fundus was normal. The above condition continued, with the exception of increase of defect of vision, for two months, when the perimeter showed a defective field and the retina was loose around and below the yellow spot. A fortnight later the retina showed marked detachment with defined margin extending from above the yellow spot downwards nearly to periphery and almost to the optic disc. There was no other symptom of orbital tumour. No choroidal vessels were to be seen beneath the detached retina. No tremulousness of iris. Sarcoma of the choroid was diagnosed and immediate excision advised. This was done four months after he had first noticed the defect of vision. The specimen (shown) exposed a round-celled unpigmented sarcoma, measuring 13 mm. by 4 mm., originating to the outer side of the optic disc in the deeper layers of the choroid. Dr. Rockliffe alluded to several recorded cases and inferred that leucosarcomata of the choroid usually originated from the deeper layers of the choroid at the posterior pole of the eye, that they were not easily diagnosed in their earlier stage, and although the adult eye seemed to be the most common as in other sarcomata it might vary from twenty months to seventy years and their development was usually rapid. He estimated that about one in every 100 cases of sarcoma of the choroid was unpigmented and that the majority proved fatal by metastasis.—Mr. MARSHALL, estimating from a limited number of cases coming under his notice at Moorfields, stated that as high a proportion as 22 per cent. of the sarcomas were devoid of pigment. Mr. Lawford and Mr. Treacher Collins, in the cases they had collected, estimated the proportion of unpigmented sarcomas as 11 per cent.—Mr. JOHN GRIFFITH had met with eight unpigmented specimens among thirty-five sarcomas affecting the choroid. He was of opinion that the growth originated in the chorio capillaris and not in the deep layers of the choroid.—The PRESIDENT thought that the difficulty of diagnosis in this case lay in the great extent of the tumour and its slight depth; it illustrated the importance of estimating refraction carefully in cases where vision had undergone a change.

Dr. ROCKLIFFE also related a case of Cataract Extraction complicated by Gout. The patient six hours after the operation had alarming and copious hæmatemesis, followed on the second day by an acute attack of gout in the hands and feet, and immense chemosis of the conjunctiva on the sixth day. The patient, however, made a good recovery from the extraction, and on May 15th, two months after the operation, his vision was $\frac{6}{9}$ and J 1, and he had read the lessons in his village church on the previous Sunday using the operated eye with the greatest ease.—The PRESIDENT was of opinion that attacks of gout following cataract extraction were not very uncommon, even in hospital patients, but were not generally mentioned in the notes because they did not affect the after recovery of the eye; he had met with several instances.—Mr. W. LANG referred to four cases in which patients had suffered from an acute joint attack just after cataract extraction, but in none of them had there been any ocular manifestations of gout.

Mr. TREACHER COLLINS read a paper on the Origin of Ruptures in Detached Retinæ. He first referred to the views of Graefe and Raehlman that the ruptures were due to tension of the subretinal fluid, and of Leber and Nordensen that they were produced by traction on the retina from shrinking bands in the vitreous. He then read an account of, and showed some lantern slides of, two specimens, which afforded definite anatomical proof of the occasional formation of these ruptures in the way inferred by Elschning from the appearances seen by him in two cases he had examined ophthalmoscopically. In each of the eyes described by Mr. Collins the retina was apparently completely detached and lay folded in the centre of the globe. In each he had found, however, on microscopical examination, a patch of atrophied retina intimately adherent to the choroid in the yellow spot region, and completely isolated from the rest of the retina. It would seem, therefore, in these two cases that there had first been some central retino-choroiditis which had, over a localised area, so firmly united the retina and choroid that when subsequently the former became detached the adherent patch of it was torn away and remained attached to the choroid, a hole thus being formed in the detached retina.—Mr. W. LANG spoke of three cases of detached retina under his care in which there had been holes in the yellow spot region. He inquired whether adhesions occurred elsewhere than at the yellow spot. In many of the ruptures there was no loss of retina, only laceration.—Mr. COLLINS readily admitted that there might be other ways in which rupture occurred besides the one he had described; he merely wished to give this anatomical evidence in support of the theory of Elschning.

Mr. R. W. DOYNE communicated for Mr. W. E. CANT of Jerusalem an account of Cyst of the Orbit. The patient, a man, went to the British Ophthalmic Hospital, Jerusalem, with proptosis. Vision was not much impaired. There was a firm, solid substance to be felt in the seat of the lacrymal gland, and deeper than this a fluid tumour was felt occupying the orbit and passing through the bone to the temporal fossa, so that the eyeball became more prominent with the movements of the jaw. The tumour was incised, and found to be a cyst lying beneath the periosteum in the outer wall of the orbit; the bone between it and the temporal fossa had been absorbed. After considerable delay the cavity granulated.—Dr. ARGYLL ROBERTSON said that dermoid cysts of the orbit adherent to the bone often caused great difficulty. It had been suggested to him by Dr. Robertson of Singapore to make a free incision into them, evacuate their contents, and insert a small piece of lunar caustic. This caused brief suppuration, and in a few days the cyst wall was loosened and could be withdrawn entire by forceps.

Mr. SIMEON SNELL (Sheffield) read a paper on Acquired

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Nystagmus in other Occupations than Coalmining, with cases and remarks. The labour bestowed in recent years in the investigation of the etiology of miners' nystagmus, was bearing fruit in demonstrating the existence of a similar occupation—neurosis in the workers in other employments than that of coalmining. The constrained position in which the collier worked would, perhaps, remain *par excellence* the most conducive to the production, in frequency and severity, of acquired nystagmus, but the case he related showed that nystagmus and weariness of the ocular elevators were already to be found in a variety of occupations. He referred to the interesting historical fact that Michael Angelo suffered in his eyes from painting the vault of the Sistine Chapel, and he wrote a sonnet which Mr. Snell quoted, describing the constrained attitude he was compelled to occupy at his work. Vasari, suffered in a similar manner from painting the Medicean Palace. Mr. Snell mentioned that since recording his case of nystagmus in a compositor in 1891, 12 other cases, 5 of them compositors, had come under his observation. Three cases had been communicated to him by Mr. Priestley Smith, and 3 by Dr. Simons (Merthyr Tydvil), and Nieden had recorded an instance of acquired nystagmus in a plank cutter. The total number of cases referred to in the paper was 19, and comprised 6 compositors, 2 metal rollers, a platelayer, a plankcutter, a saw maker, a sanitary tube maker, a fitter, an ironfounder, a worker in a "cage" at a mine, 2 employés at a glass factory, a youth engaged at a confectionery warehouse, and a man employed at the screens at the surface of a coal mine. They varied much in degree, and in some there was more weariness of the ocular elevators than very noticeable nystagmus: but it was held that, as in the case of miners, the oscillations would have been more marked if the examinations had been made when the patients had been at work for some time. Generally speaking, the nystagmus was less marked than that met with in miners. Mr. Snell thought that attention having been drawn to the matter, nystagmus and strain or weariness in the elevators will be much more widely recognised as caused by different employments than was the case at present. The plan of investigation advocated was to get the patient to place himself in the position in which he worked, or better to see the patient actually at his employment. In conclusion, Mr. Snell remarked that he thought a main factor in the causation of "Academy headache" was the weariness induced in the ocular muscles by turning the gaze so frequently above the horizontal line. This could be compensated by a backward movement of the head.

The following living and card specimens were shown:—

Mr. SECKER WALKER: (1) Tumour of Optic Nerve; and (2) Cysticercus of Conjunctiva.

Dr. BELL TAYLOR: Cases of Cataract Extraction.

Mr. SILCOCK: Lymphangioma of Orbit.

Mr. LAWFORD: Pigmentation of Conjunctiva.

Mr. JULER: Macroblepharon.

Mr. HOLMES SPICER: Acute Double Optic Neuritis.

ABSTRACT OF THE BOWMAN LECTURE.

Vision and Retinal Perception.

Dr. H. SNELLEN, Professor of Ophthalmology in the University of Utrecht, delivered the Bowman Lecture on Vision and Retinal Perception before this society on June 12th.

After paying an eloquent tribute to the memory of Sir William Bowman and to his powers as a brilliant operator and scientific physician Dr. Snellen proceeded to consider the demands made by the State on ophthalmic surgeons at the present day in regard to the examination of candidates for the public services, and pointed out that England had taken the lead among nations in this matter. The Ophthalmological Society and the British Medical Association, having each of them investigated and reported on the subject, had succeeded in impressing the authorities with a knowledge of its importance. As tending to throw light on some of the questions of vision which were still undetermined, the lecturer went on to describe the result of some investigations on vision and retinal perception which he had recently been making. Alluding to the contention of Vierordt and others that it was better to express the acuity of vision by the square of the diameter of the retinal image rather than by its linear measurement, Dr. Snellen pointed out that while the recognition of form depends on more complicated considerations than can be expressed by the simple linear measure, yet the value of perception is not fully represented by the square measure of the retinal image, inasmuch as the perceptivity of the fovea is not equal all over, but diminishes from the centre outwards. Moreover, the act of vision was not confined to the perception of a stationary retinal image, because the movements of the eye brought every part of the image over the centre of the fovea and each muscular movement represented a linear measure. One of the most important questions was the dependence of acuteness of vision on the amount of illumination and the difficulty of stating the amount of illumination, especially by daylight which varies so constantly. A fresh series of observations had been recently made on this subject at Utrecht under Dr. Snellen's direction. The observations were carried out by the light of a gas flame kept at a constant pressure by a special regulator and passed over benzine to secure constancy of illuminating power. The photometer of Leonhard Weber was used, by means of which it was possible to estimate the amount of light on any given surface without regard to the source of the light. It was found that when the illumination reached a certain degree of intensity the unprotected eye was unconscious of any further increase of luminosity: the maximum of vision was reached with a luminosity of 30 to 50 metre candles. With decrease of illumination the vision soon diminished and changes in intensity were quickly perceived. The acuteness of binocular vision was higher with every degree of illumination than that of monocular vision, but the difference was not equal to doubling the intensity of the light, as had been stated. A further series of observations was made with the photometer in order to arrive at the intensity of daylight at different times in various workshops. In a printing business the want of light impeded the work of compositors when it fell below 15 metre candles and if at dusk the intensity did not fall below 15 metre candles there would be in full daylight an intensity of 30 to 50 metre candles, direct sunlight being excluded; for coarser kinds of work, like that of carpenters and blacksmiths, a minimum of 10 metre candles was enough. In the new Ophthalmic Hospital at Utrecht special arrangements for lighting the operating room had been made; the highest demands on the visual powers were made where operations on the eye had to be performed. Considering that the visual power is heightened by adaptation of the eye for a weaker light than that falling on the observed object, the walls, ceiling, and floor of the operating-room had been painted black and light was only admitted through a window directly on to the patient. By this means the operator had at his disposal the maximum of his vision; there was the additional advantage that the troublesome reflections from the cornea were avoided, and the patient's gaze could be kept fixed in any direction by the flame of a candle which could be well seen against the dark background of the walls. The adaptation of the eye to light was next considered. Like the size of the pupil, the sensibility of the retina changed under the influence of light and darkness. The time required for adaptation corresponds with the period of anatomical changes in the retina—namely, the formation and disappearance of the visual purple, the changes in the pigment cells and cones. Observations were made with a small screen illuminated by an electric spark of great intensity. The moment the light flashed forth there appeared on the screen a bright flood of light, which rapidly increased in intensity and then faded away in about a corresponding period of time. During the increase in intensity the light had the same colour as the screen; during the decrease it had the opposite colour. This occurred with all colours, provided they were sufficiently saturated. Mixed colours were seen as such, followed during the decrease by opposite mixed colours. It was found that absolute white is very rare; white paper has always a yellow or blue tint, and dead black appears as saturated blue followed by yellow. These two phases were succeeded by a third phase of much longer duration. The after-image corresponding to this third phase was very feebly coloured and was mostly of a reddish-brown colour. As long as this red-brown after-image persisted there was anæsthesia for objective light, such as was given by a plate of luminous paint. The third phase corresponds to the more commonly studied after-images, which arise by long-continued looking at a bright object and its projection on a white surface. This interesting succession of light and dark of the after-image can also be seen on looking at a very

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feeble light in a darkened room; if this be done the light slowly fades and disappears altogether, but with the slightest movement of the eye it suddenly reappears, owing to its falling on a fresh part of the retina. If the light be looked at while movement of the eye is carefully avoided after disappearance it slowly and gradually returns to its former brightness and then slowly fades again, so that a continual slow succession of light and darkness can be observed. These phenomena are to be looked upon as an example of the reciprocal effect of the adjoining parts of the retina on each other; according to Herring's theory of colour vision there is a continuous reciprocal influence between the spot in the retina where the image is observed and the adjoining parts, due to a modification of the visual substance which undergoes alternate assimilation and dissimilation. Assimilation and dissimilation can temporarily become equally great and by reciprocal influence neutralise each other.

BRITISH GYNÆCOLOGICAL SOCIETY.

Exhibition of Specimens.—Some Psychological Consequences of Suppressed Menstruation. — Successful Transfusion after Extreme Hæmorrhage.

A MEETING of this society was held on June 11th, Dr. CLEMENT GODSON, President, being in the chair.

Mr. R. O'CALLAGHAN showed two specimens of Fibromyoma of the Uterus removed by the Extra-peritoneal Method of Hysterectomy. Both patients made a good recovery.

Dr. MACPHERSON LAWRIE showed two specimens of Carcinoma of the Uterus removed by Vaginal Hysterectomy.

Dr. FANCOURT BARNES read a paper on some of the Psychological Consequences of Suppressed Menstruation. He recalled the fact that the menopause, whether natural or artificial, was liable to be associated with mental disturbance; and that the natural climacteric had a more marked influence in this respect than the sudden inhibition of menstruation by accidental causes. He then briefly reviewed the process of menstruation from the point of view of the variations in vascular tension which it occasioned and which could be demonstrated by the sphygmograph. He believed that the increased vascular tension was in some measure responsible for the mental disturbances found. This was illustrated by the following case. The patient was aged twenty-seven and was single. A year before coming under observation she had a great shock from the death of her father, whereupon menstruation ceased. She became very depressed and weak-minded, while her physical condition deteriorated. She had undergone the routine medical treatment for amenorrhœa, so he advised examination under ether with a view to surgical intervention. Finding the os uteri not well developed, he divided the cervix bilaterally and applied tinctura iodi to the endometrium. A similar application was made twice a week for the next three weeks. A month after the operation menstruation came on freely and painlessly. She at once began to improve mentally and physically, and some months after was perfectly well.—Dr. LEITH NAPIER said he had seen cases such as that recorded in the paper, and thought Dr. Barnes's argument a sound one. He recalled the case of a young girl in whom the sudden suppression of menstruation following on a chill was associated with severe neuralgia and complete blindness. The latter shortly passed off and menstruation was re-established. In another case, after removal of the appendages, the patient menstruated regularly for two and a half years; as the flow then became profuse he curetted the uterus. Menstruation ceased and symptoms of the menopause came on. They were so severe that he ordered an emmenagogue; the flow returned and the symptoms ceased. When she left off taking the medicine amenorrhœa again resulted, with the same symptoms as before.—Dr. ROBERT BARNES thought the case well illustrated the association between menstruation and the nervous system. In a paper read before the society some years ago he dwelt on the relation of menstruation to insanity. If the present case had got into an asylum she would probably have stayed there, for he regarded it as a great fault in the organisation of our asylums that there was no provision for the examination of such cases. Not only should women be examined before being committed to asylums, but the asylum authorities should employ skilled gynæcologists to attend to pelvic disease occurring among the inmates, whether or not the mental condition was likely to be benefited thereby. As it was he regarded asylum medical officers as among the most absolute of the profession, and once a woman was placed in an asylum she was likely to stay there. He often recalled a precept he learned in Paris in his student days: "Messieurs, interrogez tous les fonctions"; he thought it was one they should always bear in mind.—Dr. ROUTH had seen a great number of these cases where the neurotic condition was so marked that unless the patients were in good hands they were very likely to drift into an asylum. As a rule no one knew less of the gynæcological conditions in the insane than the medical attendants in asylums; more than once he had been called in to see patients and had been able to save some of them from spending their days as lunatics. Dr. Barnes's paper would have done much if it did nothing else but call attention to the fact that many kinds of insanity were due to suppression of the menses.—Dr. MACNAUGHTON JONES said they must remember that suppression of the menses was sometimes the result, and not the cause, of mental disturbance. They should not too broadly impeach the heads of asylums, and some of the remarks made by previous speakers on this point were not just. He knew personally many asylum medial officers, and was convinced that they were just as alive to the coördination of mental and sexual conditions as anyone present, and were just as anxious to arrive at the truth of the matter and secure the well-being of the patients. The question of treatment was often very difficult, for the patient's safety had to be thought of, and it was sometimes necessary to put her under temporary restraint. He remembered a case in which a young girl walked into the river while under treatment for the restoration of her menstrual functions. Dr. Barnes's remarks about the variations in vascular tension were interesting; the high tension might show itself in other directions, as in disturbances of the eyes, ears, nose, or throat.—Dr. FANCOURT BARNES, in reply, said his object had been to show the value of surgical methods in some cases which were generally looked on as purely medical. The case was, no doubt, an extreme one, and of course they would not wish, as a rule, to resort to surgical measures in the case of young girls. He had had good results from similar treatment in cases of dysmenorrhœa.

Dr. E. HOLLAND read a note on a case of Successful Transfusion after Extreme Hæmorrhage. Two hours after an ordinary ovariotomy the house physician at the hospital for Women, Soho-square, noticed signs of severe and rapidly progressive hæmorrhage and sent for Dr. Holland. On his arrival the patient was pulseless. He at once re-opened the abdomen and re-tied the pedicle. By this time the patient had ceased breathing. Dr. R. T. Smith carried on artificial respiration and Mr. Scott Elliott, then senior house physician at the hospital, rapidly and skilfully performed transfusion, whilst he (Dr. Holland) was occupied with cleansing the flooded abdomen. After a pint of saline solution had been introduced a faint sigh was heard and the pulse was felt, thready and unstable. After the second pint it was a little stronger and the hands became warmer. After three pints had fully passed into the veins the patient opened her eyes, rolled her head, and had a well-sustained pulse of 108, and was put back to bed. Chloride of sodium solution was also used for washing out the abdomen and about a pint was purposely left in. The patient sat up in bed on the eighteenth day and left the hospital convalescent on the thirty-fifth day.

EDINBURGH OBSTETRICAL SOCIETY.

Fœtus Compressus.—"The Indigestion of Breast Babies."—Peripheral Neuritis in Pregnancy.—Abortion of Four Fœtuses, one Monstrous.—Cyst on the Back of an Infant simulating the Head of another Infant.

A MEETING of this society was held on June 10th, when, in the absence of the President, Dr. HALLIDAY CROOM occupied the chair.

Dr. J. W. BALLANTYNE exhibited a Fœtus Compressus. It was accompanied by two placental masses with the smaller of which this fœtus was connected. It had evidently died about the third month; the other fœtus reached the seventh month and at birth showed signs of having been dead for some time.

Dr. JAMES CARMICHAEL read a paper entitled "The

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Indigestion of Breast Babies." In alluding to the digestive troubles of bottle-fed infants he advocated the establishment of a milk laboratory in Edinburgh similar to the establishments of the larger cities of America. Sterilised milk was prepared and cream obtained by the centrifugal separator in these places, and milk might be analysed at small cost. A healthy child nursed by a healthy mother only rarely suffered from indigestion, but numerous causes might injuriously affect both. Defective hygienic conditions, low-lying houses, and insanitary drainage might affect the health of the mother and thus act on the child. General debility in the mother interfered with lactation; this might be induced by over child-bearing or it might be the result of the excessive mental training of girls during school life. Poor women who were often overworked and badly fed made inefficient nurses. So, also, many women in the upper classes with its luxury were often unable to nurse their children. Ill-health produced by any disease will interfere with proper lactation. Galactorrhœa or the constant flow of watery milk was evidently due to an over-excitability of the secretory functions and its causation thus associated with the nervous system. The milk was insufficient for the proper nourishment of the infant. Whenever the milk of the mother was defective in quantity or quality the child did not thrive or grow at the normal rate; the infant became soft and flabby, was always crying, and never appeared satisfied. The digestion was upset and vomiting was not infrequent; the stools were generally loose, pale, and often of an ashy-grey or greenish colour and with an excess of mucus. The undigested curd was present in little granular masses. As a rule the indigestion of milk was more frequently intestinal than gastric, diarrhœa being more common than vomiting; this was largely due to indigestion of the fatty and proteid elements of the milk. Irregular suckling was one of the commonest causes of indigestion in infants; it might occur from over-anxiety on the part of the mother, giving the infant the breast whenever the child cried; or it might be due to the milk being too poor in quality. In treating these cases the physician should first ascertain the cause, inquiring into the health of the mother and her habits and carefully examining the breasts, the milk, and the stools of the infant. During menstruation the milk on analysis showed deterioration in quality, and might give rise to a disturbance, often of a trivial nature, in the child. On the cessation of the menses the milk generally returned to a normal condition. In many cases menstruation was not a bar to nursing. It was necessary to wean the child if frequency occurred. The mother should take her usual plain and mixed dietary during nursing and a due amount of open-air exercise. Mothers were sometimes too ready on slight excuse to give up the nursing, but they should always be discouraged from doing so. If the milk was deficient in quantity the medical attendant should inspire the mother with hope that she might be able to nurse her child, and should increase the amount of liquid and easily-digested food she was taking. If there was too much milk the fluids must be reduced and the solids in her dietary increased. Irregular suckling should be prohibited. If the solids in the milk were deficient the child ought to be given the breast more frequently and the mother prevented from over-exerting herself and not allowed to take too much fluid. To decrease the solids the child should be nursed at longer intervals and the mother prescribed more exercise and more fluid nourishment. Increase of fat indicated the need of less animal food in the dietary and the reverse if there was too little cream. If the child was being too frequently applied to the breast some sterilised water should be given at times instead.—Dr. UNDERHILL spoke of the troubles attending the rearing of infants by wet-nurses and of the benefits obtained by giving the mother encouragement as to her capability of nursing the child.—Dr. KEPPIE PATERSON alluded to the necessity of examining the saline constituents of the milk, referring to a case seen in Berlin where the infant had refused the left breast and was being reared on the right. The mother stated that the milk from the left was salt, and on investigation this was found to be correct.—Dr. HALLIDAY CROOM said that in most cases it was not from want of willingness that mothers did not nurse their children, but because they could not, though he believed it was much better for them to do so.—Dr. JAMES RITCHIE, Dr. CHURCH, and Dr. BALLANTYNE also took part in the discussion.

Dr. GEORGE ELDER read a paper on Peripheral Neuritis in Pregnancy. He detailed the history of two cases. One was seen at the eighth month and the other at delivery, and both had suffered since the sixth month from the symptoms. There were tingling and loss of feeling in the fingers and loss of power, as shown in dropping articles from the hands; the hands were cold and there was impairment of the perception of heat. The arms were affected, and in one case the cutaneous nerves of the haunch and in the other the feet were also affected. There was no albumin or sugar in the urine and no evidence of alcoholism or syphilis. Recovery quickly occurred after labour. In referring to the literature of the subject there were two divisions—the polyneuritis of the puerperium and that of pregnancy. The former was due to septicæmia or the direct injury of the pelvic nerves by the pressure of the head or forceps, or by inflammatory exudation involving the nerves. The polyneuritis of pregnancy had symptoms corresponding to ordinary alcoholic peripheral neuritis. It usually began with paræsthesiæ more or less severe in the extremities, then paresis affecting especially the flexors of the wrist and foot, with the electrical reactions corresponding to the rapidity of the disease; and there were also, perhaps, trophic lesions. After eliminating the ordinary causes of neuritis—alcoholism, diphtheria, syphilis, lead, arsenic, &c.—he concluded that these cases were due to the pregnant condition and also because the neuritis disappeared after labour. During pregnancy there was more metabolism and a larger quantity of effete products was present in the blood, and this was the probable cause by poisoning the nerve cells in the spinal cord. There was little doubt that it was a peripheral neuritis, but as to the exact nature of the poison there was not the slightest evidence. Two fatal cases had been reported, and if the disease was seriously advancing it might be necessary to induce labour.—Dr. CULLEN remarked that the rarity of the condition during pregnancy rather pointed to that state acting as a preventive to the disease.—Dr. KEPPIE PATERSON alluded to a case where the symptoms commenced at the middle of pregnancy before there could be any pressure on the renal veins; the neuritis was complicated with anasarca in the later months. No albuminuria was present. The patient was a multipara, and the only explanation was that in this pregnancy she carried twins. He believed this disease to be due to insufficiency of kidney-action; in this case the kidneys had excretory power for one but were over-taxed with two children *in utero*.—Dr. MILNE MURRAY mentioned the case of a patient suffering from neuritis, which disappeared with the recurrence of pregnancy, and after delivery the symptoms returned. The neuritis was ultimately found to be due to the drinking of eau de Cologne.—Dr. LACKIE referred to a patient who had influenza with severe neuritis, and where pregnancy so aggravated the condition that the induction of premature labour was discussed. That, however, occurred naturally, and the patient recovered after a very prolonged convalescence.—Dr. HALLIDAY CROOM believed that pregnancy had some influence in preventing neuritis. A case of Raynaud's disease had been under his care where the symptoms were very much mitigated by the presence of pregnancy.

Dr. GUNSBURG of Charkov, Russia, sent a paper on a case of Abortion of Four Fœtuses, one of which was monstrous; also one on a Cyst on the Back of an Infant simulating the head of another Infant. These papers were translated and communicated by Dr. J. W. BALLANTYNE.

THE ROYAL SOUTH HANTS INFIRMARY AND THE POOR-LAW.—At the last meeting of the South Stoneham (Hants) board of guardians a resolution of much practical utility was arrived at. A letter was received from the management of the above-named institution at Southampton drawing attention to the scheme of alterations and additions to the infirmary which has been already mentioned. The estimate of the cost stands at £19,000. In view of the value of the infirmary to the suffering poor of the county the chairman of the governors appealed earnestly for help. The guardians already subscribe £15 per annum to the funds of the infirmary, but it was felt that its aid to the rates was such that a further grant of £10 per year would be justified. It was unanimously decided to subscribe £25 per year for three years as an aid to the efforts of the governors of the institution.

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Reviews and Notices of Books.

Argon and Newton: a Realisation. By Lieutenant-Colonel W. SEDGWICK. London: W. B. Whittingham and Co., Limited. 1896. Price 7*s.* 6*d.*

LIEUTENANT-COLONEL W. SEDGWICK, late of the Royal Engineers, is most emphatically a materialist or realist, at any rate, in his views of atoms. He believes, with Newton, "that God in the beginning formed matter in solid, massy, impenetrable, movable particles ..... and that these primitive particles being solids are ..... so very hard as never to wear or break in pieces," &c. "Hard atoms," indeed, is his thesis, which, like the atoms, is also hard (to understand). Their existence, however, according to the author, is supported by the discovery of argon and helion. He urged in a previous work ("Force as an Entity") that valent metalloid atoms had undergone a process of shaping, and had been formed out of the atoms of pre-exisiting inactive elements. Now argon and helion have come to show, he adds, that inactive elements of some kind are in actual existence. They are like unshapen bricks, so to speak, which will not take a convenient place in the structure. He attempts to find this place and to put them in proper position, although it should be remarked that their elementary nature is as yet by no means settled; but "this cannot be done without perfect quietness," and "the difficulty of obtaining perfect quietness is undoubtedly great, and we have to plead for it." If only Mr. Jacoby's Street Noises Bill —— "but that is another story." We hope this pleading will not be in vain, but the effort will in no wise be assisted by raising questions (as is done in the preface) of national defence, which the author regards as a related subject of the question of reality. He speaks also "of fluid corpuscles" as the "mediating entities" which Philo employed to form a connexion between God and the world; but they are employed in "Argon and Newton" to form a connexion also between the evil one and the world. Those who desire something funny and incomprehensible to read should secure a copy of this volume.

Middlesex Hospital: Reports of the Medical, Surgical, and Pathological Registrars for the year 1894. London: H. K. Lewis, 136, Gower-street, W.C. 1895. Price 2*s.* 6*d.* net.

THIS volume contains a summary and statistical tables of the various diseases and injuries for which patients were treated during the year 1894. It is thus a valuable contribution to medical literature, and we are able to judge of the effects of treatment, &c., as set forth in an impartial manner. There are no papers by any members of the medical staff; indeed, there is no list of the staff published in the volume. This, we hope, the committee responsible for the reports will remedy in future issues, as it is interesting to know the names of members of a hospital staff during any one year, and we do not know any more satisfactory place for future reference than the report of the hospital for the year. The medical report by Dr. F. J. Wethered shows that 1618 patients were under treatment in the medical wards during the year, and the percentage mortality was 11·42, and the average stay of each patient in hospital 26·77 days. Forty-five cases of diphtheria were admitted and treated, with a mortality of 26·66 per cent. The antitoxin treatment was adopted in 9 cases, 2 of which died. Twenty-four cases of typhlitis were admitted during the year; 3 of these were transferred for operation. Amongst the cases which are specially abstracted we note typhus fever, pyæmia from middle ear disease terminating in recovery without operation, although the hip underwent spontaneous dislocation; Landry's paralysis, from which the patient recovered; actinomycosis involving the skin; actinomycosis of cheek, &c. From the surgical report, by Mr. John Murray, we learn that 1839 cases were under treatment in the surgical (including ophthalmic) wards, the mortality for the year being 8·5 per cent., but exclusive of deaths from malignant disease only 3·3 per cent. The average stay in hospital was 28·91 days. The special abstracts of interesting cases consist almost entirely of diseases of the abdomen, a series of operations on the kidney being especially instructive. There are apparently several cases treated in the surgical wards which in most hospitals are handed over to the gynæcological department. The report of the pathologist, Dr. A. F. Voelcker, contains a short record of 286 necropsies. This is a carefully written abstract; the observations are reported in the order in which they were made and not in a recognised grouping. An interesting table is that of abnormalities found during the post-mortem examinations of the year, the patients having died from other causes. We should like to see a report issued by every hospital on the same lines as this one. At present there are several hospitals where doubtless the practice is satisfactory, but there is no evidence to that effect before the medical profession. All institutions supported by charity where operations are performed or acute diseases received for treatment should give a yearly account of the results obtained within their walls in order that the medical profession may say whether the expenditure is justified.

Foods: their Composition and Analysis. By A. WYNTER BLYTH, M.R.C.S.Eng., F.I.C., F.C.S. Fourth edition, revised and enlarged. London: Charles Griffin and Co., Limited, Exeter-street, Strand. 1896. Price 21*s.*

WITH very few exceptions the adulteration of food is no longer a clumsy practice; it has become an art the resources of which are oftentimes exceedingly subtle, and which aim at precluding as far as possible the analyst from discovering the existence or exact extent of the fraud. In this matter the public owe a debt of gratitude to the Society of Public Analysts for bringing to light new methods of fraud and for placing at the disposal of the public analyst new and more accurate methods for its detection. The same admirable end is advanced by Mr. Wynter Blyth's most valuable work, inasmuch as it affords a safe guide and complete reference on this most important section of the subject. Further, Mr. Wynter Blyth is qualified as barrister, medical officer of health, and analyst, so that his work combines a practical knowledge, not merely of the chemistry of the subject, but also of its legal and its hygienic aspect. It was inevitable that a new edition would have to undergo considerable revision and enlargement in view of the enormous progress made in recent years in analytical chemistry, especially in its application to the examination of foods, but the author has succeeded remarkably well in keeping the dimensions of the volume within the limits of handy size. Nor is this at the expense of useful material or of latest developments. There are references, we find, as recent as a few months ago—as, for example, to Mr. Dibdin's paper read before the Society of Public Analysts relating to an improved method of microscopically examining and estimating the suspended impurities of water. The chapter on Water is an illustration of the important advances that have been made since the issue of the previous edition in estimating the fitness of a supply for drinking purposes. Thus the cultivation methods which are of service in differentiating pathogenic from non-pathogenic organisms in water are plainly described. In the section on Cocoa we observe that the author does not animadvert upon the use of alkali, while in the chapter on Coffee no reference is made to the so-called "essences." It

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is well known that many of these are worthless, but honest preparations are also to be had. A tradesman has no right to sell a preparation stated to be made from coffee into the composition of which coffee never at any time or in any form entered. Coffee essences, we think, should be subject to the operation of the Act. In the description of the methods used for the detection of adulterated butter the glycerol soda modification of the Reichert process is omitted. The process offers important advantages, not the least of which is the saving of time in effecting complete saponification. A description of Lovibond's tintometer would have been useful in the section on Colour. We believe this instrument will be of distinct service in the valuation of foodstuffs when its merits have been scientifically investigated. Finally, we should like to have found a chapter generalising on the use of antiseptics as preservatives of food. Mr. Blyth's work is simply indispensable in the analyst's laboratory, where it will prove, as we have found it to prove, a constant and reliable source of reference on all matters pertaining to the practical examination of food.

Public Health Laboratory Work. By HENRY R. KENWOOD, M.B.Edin., D.P.H., F.C.S. Second edition with Illustrations. London: H. K. Lewis, 136, Gower-street, W.C. 1896. Price 10*s.* 6*d.*

THIS useful manual has run into a second edition, and the few blemishes (mostly technical) occurring in the first edition have been eliminated, while some processes described before have been replaced by others "and a considerable amount of new material has been added without increasing the size of the book." As its title implies, the work is one essentially for the bench, and the processes described are reliable and the conclusions on the whole are sound. In Chapter IV. the author enters a vigorous and, to some extent, plausible defence in favour of the value of a chemical examination as an aid in diagnosing impure water supplies. He regards organic impurity in quantity detectable by chemical analysis as an inevitable concomitant of specific micro-organisms. This view receives little support, however, in practice, as, for example, in the case of the contamination of the Worthing supply a few years ago, which led to a disastrous epidemic of typhoid fever. A chemical analysis by Dr. Dupré led this water to be regarded as free from reproach, but a bacteriological examination by Dr. Klein reversed this opinion. The author obviously makes a confusion of statement on page 145 when he states that alkaline waters naturally charged with carbonic acid contain sodium carbonate and bicarbonate. The only printer's error we noticed occurs on page 15, where methyl orange is spelt "meltyl" orange. The book very suitably meets the needs of students preparing for examinations in public health.

LIBRARY TABLE.

The Co-Education of the Sexes. By MABEL HAWTREY. London: Kegan Paul, Trench, Trübner, and Co., Limited. 1896.—This is a sensible book by a sensible woman. Miss Hawtrey has gone thoroughly into the subject and comes rightly, we think, to the conclusion that the co-education of the sexes is not desirable except in the case of quite young children or of young men and women, but that for boys and girls during the years when they are developing it is unsuitable. There are two separate chapters upon the education of boys and girls respectively which are well worth the attention of parents and guardians. Miss Hawtrey disapproves strongly of corporal punishment for girls. It either, she says, damages their nervous systems or else hardens all sensitive feeling so as to destroy their feminine instincts.

Practical Chemistry. By STEVENSON MACADAM, Jun., F.I.C., F.C.S. Second edition. Edinburgh: Printed at the Darien Press. 1895.—The object of this "short treatise" is evidently to enable the student to proceed to practical work, as the examination of simple salt, before he has grasped general principles. This is clear, from the remark in the preface that the formulæ expressing the nature of the reactions have been relegated to the end of the book, "so that the student, while doing actual practical work, may not be troubled (*sic*) with matter which is not practical and which he cannot properly comprehend till he has become somewhat advanced." We do not approve of this topsy-turvy plan, although doubtless the book itself is a good practical guide.

The *London Manual*, 1896-97, published at 125, Fleet-street. Price 1*s.*—London now covers such a large area and the governing machinery is so complicated—we believe there are over 400 governing authorities—that a manual explaining the functions and describing the work of all the public bodies in the metropolis and suburbs must be useful to all citizens. The second edition, which lies before us, contains the names of the vestrymen elected last month, thus bringing this excellent new year-book thoroughly up to date. The book also contains a great deal of information which while not necessarily relating to public bodies is of interest to householders.

Guy's Hospital Gazette (Festival Number).—The editors of this journal, have, with that energy and acumen which characterises them, issued a special Festival Number. It gives a full account of the great festival dinner and an interesting sketch of the history of the hospital. We observe an apology for the cloak-room arrangements at the dinner. That these were very defective there is no doubt, but we see that they were under the control of the Institute authorities who are not infrequently remiss in such matters.

JOURNALS AND REVIEWS.

The Journal of Experimental Medicine. Edited by WILLIAM H. WELCH, M.D. Vol. I., No. 2, April, 1896. New York: D. Appleton and Co. Subscription price per volume £1 1*s.*—The articles contained in this number are: 1. A Study of the Bacillus (Leptothrix?) Pyogenes Filiformis (Nova Species) and of its Pathogenic Origin, by Simon Flexner, M.D., with a plate. This pleomorphic micro-organism is described with much care. It was found in a laboratory rabbit, and the infection appeared to have taken place after delivery by the genital tract. The bacillus stains irregularly with all the aniline dyes. It is non-motile and is killed by exposure for five minutes to a temperature of 55°C. Inoculations made with it proved fatal, many abscesses resulting in different organs. 2. Observations on the Innervation of the Sublingual and Submaxillary Glands, by G. Carl Huber, M.D., of Michigan. Dr. Huber has employed the double Golgi-Cajal and the Ehrlich-Bethe methods of staining with very good results. He is in general accord with Langley in the presence and character of the ganglion cells found in connexion with the chorda tympani and the submaxillary ganglion. The axis cylinder processes of the lymphatic cells of the submaxillary ganglia may be seen to be continuous with small bundles of thin nerve fibres many of which are varicose and run along the side of the ducts. The smaller ducts come to be surrounded by a tolerably dense plexus of fine nerve fibres. From the plexus strands of two, three, or more fibres, or single fibres, are given off and can be followed between the alveoli, where they unite to form a perialveolar or epilamellar plexus. The ultimate fibrils seem to end on or between the gland cells in minute nodules or granules. The sympathetic fibres accompanying the gland artery end on

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the vessels. 3. W. T. Porter: A New Method for the Study of the Intra-cardiac Pressure Curve. This is an ingenious arrangement of two Hürthle membrane manometers, one of which is connected with one tube of a double cannula and can by contact with a pair of cups containing mercury make a magnet close a stopcock connected with the second tube of the cannula. By altering the position of the lever of the first manometer and thus changing the moment at which the wire shall make the circuit and open the second manometer any particular part of the intra-ventricular curve can be studied. 4. The Rotary Properties of some Vegetable Proteids, by Arthur C. Alexander, Ph.D. The proteids examined were hemp globulin and the globulins obtained from flax and the Brazil nut. 5. Thomas B. Aldrich, Ph.D.: A Chemical Study of the Secretion of the Anal Glands of Mephitis Mephitica (Common Skunk), with remarks on the physiological properties of the secretion. 6. F. S. Conant and H. L. Clark: On the Accelerator and Inhibitory Nerves to the Crab's Heart. 7. Lewellys F. Barker: A Case of Circumscribed Unilateral and Elective Sensory Paralysis—that is, one in which only certain of the functions of the sensory nerves are abolished.

In the *Veterinary Journal and Annals of Comparative Pathology* for June is reproduced Nocard's account of An Experimental Study on the Translucent Tubercles of the Lung in Glandered Horses. This is especially interesting from the fact that in animals in which the symptoms of glanders are doubtful, but which react to mallein, there are discovered on post-mortem examination translucent tubercles which contain very few glanders bacilli, and which, therefore, have sometimes been overlooked as resulting from the action of this organism. Glanders in which such tubercles are present can apparently be cured, in a certain proportion of cases at least, by the injection of mallein. Another important point brought out in this paper is that glanders is easily propagated through the digestive organs. A couple of the notes in this number of the journal are strictly controversial and have to do rather with the rivalry which exists between the *Veterinarian* and the *Veterinary Journal* than with the outside veterinary and medical public. The suggested amendment of the Public Health Bill for Scotland as regards the employment of veterinary surgeons in the inspection of live stock in connexion with public health is again alluded to. A case of Tuberculosis in the Horse is described and many clinical cases are recorded. The remainder of the number is made up of reports of various veterinary associations, which seem at present to be concerned mainly with the question of veterinary education.

METROPOLITAN PROVIDENT MEDICAL ASSOCIATION.

A WELL-ATTENDED meeting was held at Surrey House on the 11th inst. to bring before the public the claims of the Metropolitan Provident Medical Association on its support, financial and otherwise. Lord Battersea, who presided, stated in his opening remarks that the Association had now nineteen branches, ten of which were self-supporting; it had about 35,000 members enrolled, who contributed nearly £5000 a year in periodical payments. Lord Stamford moved the first resolution, to the effect that the work of the association was thus a great social benefit to the community. Mr. Claude Montefiore, in seconding, gave a clear account of its object, which, he said, was to provide medical aid, not for paupers, or for persons able to pay the ordinary fees of respectable medical practitioners, but for that vast class of people which lay between the two. It had two principles, and must prove that it was carrying out both before it could claim the help of the public: on the one hand it must promote thrift, and on the other it must supply good medical treatment. It must also deal fairly with the medical profession, without whose help and coöperation it could not carry on its work, and must protect the interests alike of its patients and of its medical staff. In view of this latter object it was careful to maintain a wage limit. Referring to the recent loss of that great philanthropist Baron de Hirsch, Mr. Montefiore mentioned that his munificent gift of £3000 made some few years ago had borne good fruit in the establishment of several flourishing branches. Dr. Hett spoke to the resolution from the point of view of a medical officer connected for twenty-two years with a provident dispensary. He spoke strongly of the benefit which had accrued to this dispensary when some years ago it was affiliated to the association, and mentioned with approval the principles which provide for the adequate representation of the medical staff on the local committee and for the payment of the medical men as a first charge on the funds of the dispensaries. He bore testimony also to the cordial relations which had always existed between himself and the members under his care.

Mr. W. F. Lawrence, M.P., moved the second resolution, which stated that the gratuitous and sometimes indiscriminate treatment of persons in the out-patient and casual departments of hospitals results in the creation of a pauperised spirit among the industrial classes, and that this evil is best met by the establishment of self-supporting provident dispensaries in coöperation with the hospitals.

Mr. Lucas, chairman of the Great Ormond-street Children's Hospital, urged the necessity and possibility of coöperation between the hospitals and the association in dealing with the out-patient problem.

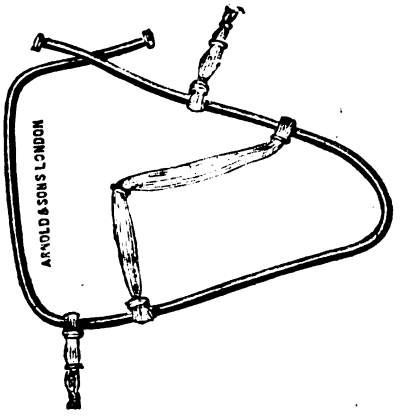
Mr. Bousfield, chairman of the association, in thanking Lord Battersea for presiding, remarked that they had learnt much in their experience of nearly twenty years, and had now, he believed, done a great deal towards solving the difficult and important question of the provision of medical relief for the industrial classes and deserved the support given them by the late Baron de Hirsch, the trustees of the London Parochial charities, and others.

New Inventions.

A CARDIAC CYRTOMETER.

AFTER delimitation by percussion, auscultation, and palpation of the area of cardiac dulness, some physicians have used transparent paper for preserving a permanent reading of the outlines thus obtained. I have found it more convenient in practice to employ a piece of flexible tubing such as that used in Leiter's instruments, or a piece of metal capable of being easily adapted to the area mapped out, just as a similar cyrtometer is used to ascertain the shape of the thorax.

Messrs. Arnold and Sons of West Smithfield have constructed a cardiac cyrtometer for me furnished with strands of silk bearing metal rings which, in addition to enabling



one to note the dimensions of the heart, afford a means of noting accurately the relative position of the organ to such points as the episternal and xyphoid notches and the nipple, and also the extent of the superficial cardiac dulness. This simple instrument occupies little bulk, and by its means the above facts may be transferred by a pen or pencil to an ordinary notebook without the use of transfer paper.

ALEXANDER MORISON, M.D. Edin., &c
Upper Berkeley-street, W.

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THE LANCET.

LONDON: SATURDAY, JUNE 27, 1896.

TEN years have passed since the General Medical Council was reinforced for the first time by representatives sent up to it directly from the whole profession. Until the Medical Act of 1886 the Council was composed entirely of the nominees of the various universities and corporations of the United Kingdom and certain persons selected by the Crown. When the duties which fall upon the General Medical Council are recalled, it will be patent to all that the source from which the addition to its strength was drawn was most reasonable. It is the five-fold business of the Council (1) to supervise medical education; (2) to inspect medical examinations; (3) to issue the British Pharmacopœia; (4) to keep a correct Register; and (5) to purge that Register of unseemly names by sitting in judgment upon the professional behaviour of persons contained in it. The second, third, and fourth of these duties might be efficiently discharged by a deliberative assembly of scientific scholiasts and experienced examiners—we speak in the abstract and without personal reference to the present Council—with adequate clerical assistance, although the general body of the profession would still feel that they had an undeniable right to a voice in a matter of such extreme importance as the conduct of the tests which the aspirant to professional enrolment must undergo. But the first and fifth duties clearly demand from the Council a more intimate knowledge of the practical side of the medical man's life than an assembly whose learned pedagogy was unleavened could be expected to display. To supervise the complete education of the profession requires more than the habits of the schoolmaster or the learning of the professor. It requires a knowledge of the after-life of the rank and file of the profession. The examiners, generally and rightly drawn from the consultant classes, are able to provide that candidates should attain to a certain standard, but they are not able to gauge whether that standard does not sometimes necessitate the learning on the part of those candidates of things that are unnecessary in the real battle of life, while perhaps there have been omitted from their curriculum certain things the knowledge of which would have been found valuable in practice. Direct representatives would rightly look upon it as their more particular charge to warn their colleagues on the Council of the actual equipment required by the general practitioner of the day. In a still greater degree should it devolve upon them to assist the Council in the discharge of its fifth and most painful duty—the management of penal cases. Here the representatives of the general practitioner have been of the utmost use in the deliberations of the Council, for it is the general practitioner who suffers most severely from the evils that are the outcome of improper rivalry and the absence of a high moral tone.

The present occasion is apt to the discussion of the question of direct representation because an election of direct representatives to the General Medical Council is imminent and because there will be on this occasion an introduction of new blood into the Council. Mr. WHEELHOUSE and Sir WALTER FOSTER, whose joint letter to the profession we published last week, have definitely decided not to offer themselves for re-election. These two gentlemen were, with Dr. JAMES GREY GLOVER, the original choice of the profession when first the boon of direct representation was granted. They have served two terms of five years, and in so doing have earned the gratitude of their enormous constituency by their aptitude for business and their devotion to the interests of the profession at large. It is with regret that we have learned their intention to retire, and we desire to record our belief that the reason why direct representation has been a success is as much because of the ready manner in which the first representatives of the profession at large fell into the work of the Council as because the principle on which their admission to the Council was granted is obviously fair and liberal. The profession will therefore have to select for itself two new representatives at least (for Dr. GLOVER, as will be seen by his letter which appears on page 1820 of the present issue, is offering himself for re-election) and at this juncture we cannot do better than repeat the words of Mr. WHEELHOUSE and Sir WALTER FOSTER in their letter of resignation—"..... We would urge you," they say, "to make very deliberate and careful choice of your future representatives, remembering the high order of the duties the Council is called upon to exercise, and when you have elected them to give them that moral support without which it is impossible for them efficiently to represent you." It is our duty to further such wise selection, and there is in our mind no doubt whatever that the first essential of a good direct representative must be that he should be in general practice. Let no one consider that this expression of opinion can be interpreted as a slight upon the services of Mr. WHEELHOUSE and Sir WALTER FOSTER, which we are fresh from extolling. Both these gentlemen were fully conversant with the wants of the general practitioner, and should anyone come forward possessing their knowledge of the *morale* and working of the profession his claims to be considered a good candidate would rank very high. But Mr. WHEELHOUSE and Sir WALTER FOSTER were pioneers. The new representatives will have the benefit of their example, and as they will be the choice virtually of the general practitioners of the country it is fitting that they should be themselves members of that order.

Three gentlemen place their names before the profession in our columns this week as candidates for the suffrages of their fellow practitioners, and there will certainly be additions to this number. Dr. GLOVER may confidently expect re-election, we hope. He shares with his two retiring colleagues the honour of having been an original representative and of having worthily supported the principle of direct representation. His work on the Council has been energetic and good, and his critical remarks on the reports of inspectors of examinations (embodied in the form of a statement to the Council under the title of "Gaps in

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Medical Education") led to discussions upon which followed directly the extension of the curriculum to five years. Dr. GLOVER was also chairman of the committee of the Council which investigated the working of the medical aid associations and made itself aware of the evils associated with these institutions. These evils have recently been made very palpable to the profession by the series of articles which has appeared in our columns entitled "The Battle of the Clubs." The great interest which has been taken in this question by the profession proves its extreme importance, upon which we need scarcely lay any further stress; but this fact warrants us in saying that any candidate desiring to represent the profession must have the salient points of the question tightly in his intellectual grasp to be a good candidate. There remains one more reason why the profession would do well to re-elect Dr. GLOVER as one of their three representatives. It is apart from the work that he has done, it is apart from his special fitness for the post, it is a reason of expediency. It would be a pity that all the original direct representatives should be absent from the Council at once. With a break in the line there would be an absence of traditional experience and a loss consequently of power and of knowledge. We hope, therefore, that Dr. GLOVER will meet with the support that he seeks, and that there will be associated with him two practitioners not residing in London. As will be seen, the Lancashire and Cheshire Branch of the British Medical Association have passed a resolution approving the candidature of Dr. GLOVER, Dr. LOVELL DRAGE of Hatfield, and Dr. WOODCOCK of Manchester.

THE Committee which was appointed in 1892 by the Royal College of Physicians of London to revise the "Nomenclature of Diseases" has at length completed its labours, the result being the publication of the third edition of a work which deserves to be regarded as of the first importance to the profession of medicine both at home and abroad. The book, which extends to more than 500 pages, has been issued by HER MAJESTY'S Stationery Office, and we understand that the Treasury has sanctioned the gratuitous supply of a copy of it to every member of the medical profession whose address can be ascertained. The idea that led, nearly forty years ago, to the projection of a nomenclature of disease which should possess a national, or rather an international, character originated in the Army Medical Department, through whose representations, supported by those of the Hospitals Committee of the Epidemiological Society, the Royal College of Physicians of London was induced in the year 1857 to undertake the preparation of a Nomenclature of Diseases, on the understanding that it should be subject to periodical revision. The work was commenced forthwith, but in 1858 the meetings of the committee appointed for the work were suspended for five years in consequence of the passing of the Medical Act and the alterations thereby necessitated in the constitution of the College. The meetings were, however, resumed in 1863, but it was not till 1869 that the first edition of the Nomenclature was published.

The work of revision has evidently on this occasion been an exceptionally heavy one and has occupied four years from its inception in the early part of 1892. The details have been carried out in sections, the various groups of diseases having been dealt with by as many as twenty-four separate sub-committees. From the preface we learn that in the opinion of the Revision Committee one of the chief uses of the statistical registration of diseases on a wide scale is that it must tend to throw light upon the causes of disease, many of which causes, when duly recognised, may be capable of prevention, removal, or diminution. When a general and uniform nomenclature of disease has once been carefully framed, when we are sure that medical observation is occupying itself everywhere with the self-same diseases, the value of statistical tables becomes very high, as representing the course of events in disease under various circumstances of time, place, climate, &c.

The edition of the Nomenclature just issued, like its two predecessors, is suitable to all countries where the English language is in common use. For each name of a disease the corresponding term has been supplied in Latin, the fittest language for a nomenclature common to all the world. The equivalent terms in French and German have also been added as being the modern languages which are richest in medical learning and literature. It has been decided after careful consideration to omit the Italian version, since the Italian names of diseases do not differ greatly from the Latin on the one hand or the French on the other. In settling the list of names of diseases the least possible deviation has been made from those employed in the General Register Office of England, for otherwise the special forms there in use, which in their main features have varied little during the last half century, would require re-modelling or perhaps complete reconstruction. And, worse than this, the comparison of future with past returns would become perplexing, if not impracticable, and a damaging break would be caused in evidence which, in proportion as it is prolonged and continuous, becomes more and more trustworthy.

As regards classification, the general plan of the Nomenclature remains the same as in former editions. Diseases, in the aggregate, are divided into two chief categories—(1) general diseases, in place of the "morbi corporis universi" of the last edition, and (2) local diseases. But further division into groups and sub-groups, after the manner of the previous edition, has, we think, wisely been omitted on the ground that accuracy of nomenclature, rather than pathological classification, is the object to be aimed at in a work of this kind. Among changes made in the present edition in the classification of diseases we notice the restriction of the term "anthrax" to the disease previously named splenic fever or wool-sorter's disease, and the relegation of the morbid condition carbuncle, which had been previously confounded with anthrax, to a separate category. The disease formerly termed epidemic rose rash is now termed "Rubella," in deference to the opinion of physicians specially skilled in the diseases of children, the old name rötheln being still retained as a synonym. Diabetes insipidus (polyuria) and tetanus are now for the first time admitted as new names in the division of general diseases.

The section on Nervous Diseases has been entirely recast,

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and so likewise have those relating to Diseases of the Digestive, Respiratory, and Integumentary Systems. The section on Surgical Operations has been rearranged, as has also the section on Malformations. The enumeration of tumours and morbid growths has undergone fundamental alteration in order to bring this group into harmony with modern classification. The class "cysts" has been retained in deference to usage and to the needs of registration, although it necessarily overlaps some other divisions of the nomenclature.

In the present edition the English has, for the first time, been separated from the Latin index. The English index, which is in some senses the real nomenclature, includes every name used in the work, and the Latin index, which is intended as a guide to those readers who are not conversant with the English language, contains the terms used in the Latin version of the nomenclature. Not being intended for purposes of registration the Latin is less complete than the English index, but it nevertheless contains the names of all distinct diseases and references to the chief divisions of the work. We must not omit to mention that the Latin version of the nomenclature, which had been commenced by Dr. GREENHILL, has been completed since his untimely death by Dr. PERRY, whose well-known ability as a classical scholar is a guarantee for the correctness of his work. The entire volume has been edited by the honorary secretary, Dr. PAYNE, upon whom, of course, has devolved the greater part of the labour of its compilation. In congratulating Dr. PAYNE and his colleagues on the completion of the present edition of the Nomenclature we may remark that it bears evidence of unusual care and thoroughness in its preparation. It is a piece of solid, valuable work, and we cannot speak of it in higher terms than by saying that it fully sustains the high character attained by the two editions which have preceded it.

THE calamitous loss of the *Drummond Castle* off the coast of Brest last week, with its tale of upwards of 240 persons drowned, suggests many reflections of various kinds. Some of these can only be advantageously discussed by navigators and naval architects, yet when these have said their say there will still be lessons to be drawn and enforced which have no reference to any technical questions, but reflect rather upon the system under which ocean traffic is carried on at the present day. It is, indeed, one of the most striking features of the present disaster that, meagre as are the details as yet made known, or indeed ever likely to come to light, they seem to prove conclusively that the terrible accident was not inevitable, but, on the contrary, might have been avoided by the exercise of sufficient caution. In saying this we do not cast the smallest blame upon the master or navigating officer of the ship. If it should hereafter become necessary to throw blame upon them it will be only after careful inquiry and on a basis of fact not yet made public. We do not, as at present informed, doubt that the ship was handled and navigated in accordance with the best professional practice, and it is on that account that we think it necessary to call attention to a state of things more dangerous than mere incompetency on the part of individuals because it is embodied in a system and affects the entire profession of the sea, good and bad alike.

The facts to which we refer are these. The great ship, equipped with most of the appliances that science can provide for the safety of her passengers, was nearing the completion of her voyage. She fell in with rainy weather upon a rocky coast and was carried far out of her course by cross-currents. In all other respects her circumstances were happy, and these are among the slightest and most ordinary of the inconveniences which beset the traffic of the sea. No one could imagine that any serious danger lurked in trifles such as these. Even the proximity of the coast ought not to have occasioned any inconvenience, for the coast is well lighted and the charted course lies at a safe distance from it, although near enough for the ship's bearings to be accurately determined by the assistance of the lights. Under such conditions a serious mishap is a bare possibility and nothing more, and that this is no merely theoretical view but one borne out by experience is proved by the fact that a wreck like that of last week is almost unprecedented, notwithstanding the enormous traffic which passes Ushant every year. Why, then, was the ill-fated *Drummond Castle* an exception to the all but invariable rule? The answer will come at once to light if we consider what precisely was happening on the captain's bridge upon that fateful evening. We have it on the testimony of the survivors that the captain was himself there, and it may be added with confidence that he was looking out for the Ushant light. It is a notably powerful light and can be detected forty or fifty miles away; nor is cloudy weather unfavourable to its efficiency, for at these great distances the light itself lies below the horizon and its whereabouts is betrayed only by the glare which it throws upon the clouds. Thus in cloudy weather it is, other things being equal, visible at a greater distance than when the sky is clear. In thick weather a syren supplements the obscured light. Now the commander of the *Drummond Castle* must have known as soon as darkness fell upon him and the Ushant light failed to shine out that he was out of his reckoning, and he must also have known that he was approaching more or less near to the French coast. The sense of danger must, therefore, have impressed itself upon his mind and the importance of ascertaining his exact position cannot have escaped him. Why did he not do so? The means were ready to his hand, for although sky and lighthouse were both obscured the sea bottom was within thirty fathoms of him, and his sounding line would have enabled him to ascertain his whereabouts just as well as his sextant if that had been available. If those means failed him there was still a perfectly secure course open to him, he might have put about and sailed into the open sea until such time as a view of the heavens gave him the opportunity of determining his position afresh and making a fair start for home. That he contemplated adopting some such course as this may be taken for granted, but unhappily be delayed adopting it until too late. Why this tenacity in the face of danger? Why this hesitation to admit that a voyage prosperous on the whole has not been wholly prosperous?

The answer doubtless is to be found in the success of our modern navigation. Steamers come and go by the

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clock, and even after extended voyages like that from the Cape, they arrive, in the ordinary course, according to appointment with an exactitude that is wholly admirable. But such perfect working involves a certain amount of inconspicuous risk. With a standard of performance such as that to conform to the ship's master shrinks as from a crime from anything that involves the least delay and a deviation from his course seems to him, and naturally enough, to be a disguised calamity. When the alternative is deviation he naturally prefers to take some small risk and if now and again the risk is greater than he knows that is no great blame to him. How often a prosperous voyage is beset by little perils of this sort and is prosperously completed in spite of them sailors alone know. But what the public is concerned to ascertain is that those who encourage and require the mariner to follow the shortest course and keep time with the precision of a clock should also make it clear that he must not trust to his good fortune or economise time and coal at the expense of running even the smallest risk to the life of the ship and her passengers. Had there been a less inexorable rule about the date of arrival in port or a more inexorable one about keeping on the safe side of the charted course the captain of the *Drummond Castle* would not have needed to hesitate so long about taking strong measures with his errant ship and the great sorrow of this terrible shipwreck would not have fallen on two hemispheres.

Annotations.

"Ne quid nimis."

THE CASE OF SURGEON-CAPTAIN FOWLER.

ON the House of Commons going into Committee of Supply on the Army Estimates Sir Walter Foster moved the reduction of the salary of the Secretary of State for War in order to call attention to the case of Surgeon-Captain Fowler. A lively debate ensued, but we fail to see that any satisfactory explanation was afforded in the course of it to justify the severe measure that was adopted in regard to that officer. Surgeon-Captain Fowler had nearly ten years service and an unblemished record when, unfortunately for him, he was sent to Sheerness in June of last year to do duty in the camp there on the occasion of the training of a Militia regiment. The name of this regiment was not mentioned in the debate, but it is quite clear that some proceedings of a disgraceful nature occurred rendering it absolutely necessary to deal very severely with several officers who took part in them. This should not, however, be allowed to prejudice the consideration of the case of Surgeon-Captain Fowler. It appears that this officer's presence on the occasion was accidental and did not extend over a few minutes; that so far from in any way aiding and abetting the officers concerned he at once protested against the proceedings and succeeded in putting a stop to them; and that he appealed to the senior captain present, who at Surgeon-Captain Fowler's instigation undertook to report the matter to higher authority. We fail to see that so far any exception can be taken to the course this officer adopted. A court of inquiry was subsequently held, but we are not informed of what actually took place, or of the exact nature of the evidence given, beyond the fact that it is alleged there existed a sort of conspiracy among the officers concerned to conceal the truth from the authorities. We are not told whether Surgeon-Captain Fowler took any, and if so what, part in this concealment or misrepresentation of the real facts of the case. As far as we can understand—for the Under Secretary for War was very reticent and guarded in his statements—Surgeon-Captain Fowler is stated to have failed in his military duty in not having frankly and conscientiously stated all that he knew of the circumstances, with the names of those who were present on the occasion—of having, in fact, tried with other officers to hush up the whole affair. But it is quite possible that, without any idea of concealment or unworthy motive, Surgeon-Captain Fowler contented himself with stating the course he had already adopted in the matter. Mr. Brodrick did not seek to impute anything against this officer's professional character, but in respect of his sense of military duty and responsibility he did. The case, he added, had been fully considered, and every official, civil or military, felt the necessity of taking severe measures, and he went on to detail the punishments that had been inflicted upon numerous officers in order to show that Surgeon-Captain Fowler had not been exceptionally dealt with. There is no doubt that the matter was a very grave military scandal and that all the actors in it deserved to be most severely punished; but the point to be proved as regards Surgeon-Captain Fowler is whether he took any part in those proceedings beyond promptly protesting against them and stopping them, and reporting the circumstance to the senior combatant officer present and obtaining his assurance as to the action he would take in the matter. Why were not all the officers concerned tried by court martial, or if this were not deemed expedient in the public interest why was not the case—as regards Surgeon-Captain Fowler at any rate—submitted for the opinion of the law officers of the Crown or of the Judge Advocate General? Had either of these courses been adopted no doubt would have existed as to what were the real facts of the case, whereas there is, as Sir H. Campbell Bannerman very properly urged, considerable doubt in the minds of many people as to whether an injustice has not been done to an excellent and deserving medical officer.

THE UNIVERSITY OF LONDON.

A MEETING of Convocation of the University of London was held on Tuesday, the 23rd inst., when technical details of procedure formed the main business before the meeting. The election of a Fellow of the University—i.e., a member of the Senate—also took place, and much curiosity was felt as to the result of the election. By a tacit arrangement a Fellow is alternately selected in Arts and Laws and Medicine and Science whenever a vacancy has to be filled by Convocation. On this occasion it was the turn of the latter faculties, and so Sir Joseph Lister and Mr. Rivington were nominated. Both are graduates of the University, and Mr. Rivington was successful, obtaining a majority of 117 votes: 846 graduates voted for Sir Joseph Lister, and 963 for Mr. Rivington. The contest was throughout carried out on strictly political, as distinct from professional, lines. Sir Joseph Lister was brought forward as a candidate by those graduates who wish to see the present University transformed by having a Teaching University added to it, as recommended by the Cowper Commission, which also recommended that a Statutory Commission should be appointed to carry this out. Mr. Rivington's views are that the existing University should continue its useful work as an Imperial Examining Board and that a Teaching University should be a separate institution. He also urges that if any scheme of reconstitution of the University of London be adopted, it should be by charter in the usual manner and not by the exceptional method of a Statutory Commission. His election on Tuesday evidently shows that this is in accordance with the opinions of the majority of the graduates and will make the Lord President of the Council hesitate still longer before he accedes to the wishes of those who

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urge him to appoint a Statutory Commission forthwith. It is regrettable, we think, that the election of a Fellow to represent the Faculty of Medicine in the Senate should be determined by such sectional differences, but with the existing tension of feeling in the University we see no way out of the difficulty. The Faculty of Arts, with its large and increasing majority of votes, has the decision in its hands, whatever may be the opinion of the medical graduates.

KING'S COLLEGE: PRESENTATION TO PROFESSOR CURNOW, M.D.

LAST Tuesday afternoon the operating theatre at King's College Hospital was the scene of an interesting ceremony on the occasion of a presentation to Dr. Curnow by his old pupils and students on his retirement from the office of Dean of the Medical Faculty after thirteen years' service. The chair was occupied, and the presentation made, by Mr. P. T. B. Beale, F.R.C.S. Mr. Beale, in making the presentation, referred to Dr. Curnow's valuable services in the department, laying particular stress on the kindly sympathy which the late Dean had invariably shown towards students who confided in him. Many a man at present in a position of importance might be said to owe his success in life to Dr. Curnow's kindly guidance and sound advice. The presentation consisted of an illuminated scroll, containing the names of many students past and present who had pursued their studies during his tenure of office, a handsome silver salver suitably engraved, and a complete tea and coffee service of very handsome workmanship and design. The subscribers were limited to those who had been students at the hospital during Dr. Curnow's deanship. Dr. Curnow, in warmly thanking the subscribers and those present for their great kindness, assured them that he would, as in the past, do anything he could to assist them in the pursuit of a peculiarly arduous profession.

THE PERILS OF DOING GOOD.

UPON June 19th, in the Southern Divisional Police-court of Dublin, Mr. Auchinleck of Harcourt-street was charged before Mr. Swifte, Q.C., with having committed an assault on a married woman named Lepper in the month of February last. Mrs. Lepper stated on examination that she was twenty-three years of age, married for about thirteen months, and had no children. Having suffered from illness last February she was recommended to consult Mr. Auchinleck and did so on two occasions, on the second of which she was assaulted. Mr. O'Shaughnessy, Q.C., in addressing the Court said that it was a fortunate thing in the interest of truth and to prevent the occurrence of shameful blackmail actions that he was entitled, under the Criminal Law Amendment Act of 1885, to examine the defendant, who would tell his worship that the woman first consulted him in the ordinary way; that on a subsequent occasion she requested to be examined and was examined, and that he had never used the expressions or done the acts imputed to him. There was a long delay about these proceedings. There were present in court two medical gentlemen of the highest eminence in their profession in the city, who would state that medical men had often the greatest difficulty in dealing with the maladies peculiar to women, and that charges such as had been made on the present occasion were very frequently made against medical men under similar circumstances. Mr. Auchinleck, the defendant, was now examined and deposed to the facts put forward by counsel, stating, moreover, that he had been for twenty-three years practising in the city of Dublin, his practice being largely in connexion with midwifery; that he was married and had a wife and five children who lived with him; and, finally, that in cases of this kind, leaving the question of blackmail out of the question, it was a fact well known in the profession that medical men never knew what women might possibly say or do. Dr. William Josiah Smyly, master of the Rotunda Hospital, and Dr. More Madden, obstetric physician to the Mater Misericordiæ Hospital, were also examined and supported Mr. Auchinleck in his statement that charges of the sort were likely to be made by married women under similar circumstances and that, in fact, it was one of the dangers connected with the treatment of married women suffering from such maladies. Dr. More Madden stated that he considered this woman to be labouring under a hallucination. Mr. Swifte, in dismissing the case, said from the bench that the question for him was whether he thought a jury would convict in the case of a man of irreproachable character favourably known in the city for twenty-three years. He thought that the delay in taking proceedings and the fact that Mrs. Lepper did not give any alarm or make any complaint at the time would weigh very much in the matter and prevent any jury from convicting in the case. We congratulate Mr. Auchinleck upon the result of this case. Charges of this kind are so easy to bring and so hard to refute that we almost think the wisest course would be for medical men to refuse to examine women except in the presence of a third person.

THE POLLUTION OF THE RIVER BRENT.

MOST Londoners, especially skaters, are familiar with that body of water known as the "Welsh Harp" reservoir, but probably it is not so generally known that the "lake" in question, which feeds the Regent Canal, was brought into existence by constructing a dam across the valley of the River Brent. One of the effects of this work has been to divert from the natural bed of this river much of the water which formerly found its way into it, and hence any pollutions of the stream are less diluted than they would otherwise be. The river, if such water as is let out from the reservoir can be dignified by that name, passes through or abuts upon several sanitary districts, and amongst them may be mentioned Willesden, Ealing, and Hanwell urban and Hendon and Brentford rural. Within recent years complaints as to the condition of the river hereabouts have been loud and long, and in 1893 Dr. Monckton Copeman, a medical inspector of the Local Government Board, made an inspection of the river. Dr. Copeman had no hesitation in pronouncing the condition of affairs eminently unsatisfactory. He found the bed of the river for some 300 yards below the reservoir completely dry, with the exception of two small pools some ten feet in diameter, and apparently no water had left the reservoir in this direction for several weeks. On following the bed of the channel for some distance down Dr. Copeman came upon what he states was practically, at that time, the source of the River Brent—i.e., the effluent of the Willesden sewage farm, samples of which contained much suspended matter and gave off a faint sickly smell. A short distance further down "the whole bed of the stream was absolutely black as if a river of ink had been flowing over it," a condition of affairs produced, it appears, by decomposition of the sewage effluent. At the point near to which the Grand Junction Canal crosses the Brent Dr. Copeman found "enormous heaps of London refuse" which, draining into the stream, fouled it to an extent which could only, he says, be appreciated by inspection. Further down the stream other pollutions were discovered, but it is needless to recapitulate them. Suffice it to say that Dr. Copeman reported amongst other things that the sewage effluents from districts abutting on the stream are for the most part "decidedly unsatisfactory," and that throughout the course of the stream crude sewage and putrescent fluids are discharged. In a word, the stream is much polluted and the abstraction

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of water by the Regent Canal Company accentuates the nuisance. This condition of affairs should obviously be put an end to without delay. The fact of pollution is practically established by disinterested testimony. Who is to remedy it? The sanitary authorities whose districts abut on the stream have powers and responsibilities under the Rivers Pollution Acts; the Middlesex County Council has powers under a Local Government Act, 1888; and the Thames Conservancy is surely interested. Inasmuch, however, as some of the sanitary authorities are themselves contributing to the pollution, it appears to us that the authority best fitted to take action in a comprehensive sense is the Middlesex County Council, and we trust that they will awaken to the necessities of the situation. Obviously Dr. Copeman's report will be a most valuable weapon in their hands, and we are glad to see that the Hanwell Urban District Council is endeavouring to stir matters up.

ACTION AGAINST A DISTRICT COUNCIL.

AT Pontypridd, on June 17th, Judge Williams gave his decision in an action in which Mr. Sparnon, a tradesman of Llantrisant, claimed £50 damages from the Llantrisant and Llantwit Vardre Rural District Council for alleged injuries caused by the defendants' employés to his health and business, the action being brought in reference to a drain which was laid down by the defendants under plaintiff's premises, when chloride of lime was used for disinfection. His Honour said that the disinfectant was used in greater quantities than was required, Mr. Sparnon being obliged to leave his house, and the chloride of lime aggravated a disease from which he was suffering to such an extent that, according to the medical evidence, he was confined to his bed for two months and had been ailing ever since; and he further observed that he found that the defendants had knowledge of the plaintiff's state of health, and under the circumstances they should have consulted their medical officer of health as to what disinfectant was proper and in what quantities it should be used, but they persisted in the use of chloride of lime after they had received formal notice of its effects. His Honour assessed the damages at £25 4*s*., apportioned as follows: Personal injuries to plaintiff, £10 10*s*.; doctor's bill, apportioned, £10 10*s*.; one month's wages to the plaintiff's son, £4 4*s*., with costs.

ISOLATION DIFFICULTIES AT CHISWICK.

THE difficulty which sanitary authorities have to face in procuring sites for infectious hospitals is once more exemplified by the recent breakdown at Chiswick. The Duke of Devonshire at first promised to assist the urban council in the matter, although this offer of help was accompanied by conditions which were felt to be serious. Before, however, any attempt could be made to abate the stringency of these conditions he announced that any grant of land by him for the purpose in question would meet with much opposition from the residents and hence he could not voluntarily offer facilities in connexion with the intended scheme. Whether the Duke of Devonshire means that he will oppose any attempt to take his land or whether he wishes simply to imply that compulsory purchase under a provisional order must be resorted to as a matter of form so as to relieve him from responsibility is immaterial, for the expense of the latter method of procedure is in itself a barrier in the way. No one can complain of a landowner who feels that to sell land for an infectious hospital will not only depreciate the value of his estate but also cause great discontent on the part of those who have already erected houses on that estate; nevertheless the time must come when public health authorities will have to be afforded greater facilities in this matter. In the case of Chiswick no question of small-pox arose, so far as we can learn, and there is abundant evidence to show that, apart from small-pox, an infectious hospital which is properly administered does not involve any danger to the surrounding community; and, happily, we have in the case of small-pox an infinitely more potent means of prevention than small-pox hospitals have thus far shown themselves to be. It is, indeed, only with the steady advance of vaccination that the Gloucester epidemic has been dealt with to the extent already achieved, and the town council of that city admitted long ago that the attempt to get rid of the epidemic by means of isolation and disinfection had failed. It is essentially in regard to scarlet fever that the need of hospital accommodation for Chiswick has been shown to be wanting, and in England and Wales, whilst small-pox has of recent years only slain its tens or its hundreds, scarlet fever has numbered its victims annually by thousands.

THE CASE OF MR. R. B. ANDERSON.

WE learn with much pleasure that the Worshipful Society of Apothecaries has decided to receive a deputation of the Civil Rights Defence Committee, to be introduced by Lord Stamford, to place fully before the Master, Wardens, and Court of Assistants the facts of Mr. Anderson's case that amount to an infringement of the charter of the Hall and an invitation to unite in the work of the committee in defence of the rights of the Society. Such an infringement seems so incredible that we cannot wonder that the Society of Apothecaries has taken some time to grasp the reality. The reception of the deputation does not in itself, of course, pledge the Society to adopt any line, but we cannot doubt that when the Society realises the nature and extent of the violations of its charter it will decide to act constitutionally but vigorously in defence of its own rights and those of a grievously injured Licentiate and especially claim, as it is entitled to do, the coöperation of the other guilds and the Corporation of the City of London in the necessary measures to protect the rights of a city charter.

THE SECRETION OF THE SKUNK (MEPHITIS MEPHITICA).

AN interesting article on this subject appears in the second number of a new American journal, the *Journal of Experimental Medicine*, written by Dr. Thomas B. Aldrich. The investigation is all the more deserving of praise since it is one of the most repulsive that can be undertaken. The offensive character of the secretion has become a byword. It is discharged from two oval pouches about an inch long, situated on the sides of the rectum close to the anus, by two ducts which terminate at the top of little papillæ just inside the sphincter ani. The wall of the pouches consists of a fibrous investment, a muscular coat of striped fibres, a submucous coat, and a mucous membrane; the masses of glands are situated in the submucous layer. The glands are tubular and lined by cubical epithelium. They present strong analogies to the sudoriparous glands. The disgusting odour of the secretion is so intense that one of Dr. Aldrich's predecessors having collected a little for examination the whole College of the Johns Hopkins University rose in revolt, and he had to get rid of his material. Dr. Aldrich was more fortunate and was permitted to pursue his examination without interruption. The fluid secretion is clear, limpid, and golden-yellow or amber-coloured, having a characteristic penetrating and most powerful odour; its specific gravity is 0·939; it remains fluid at −13° C.; and its reaction is neutral. The vapour is highly inflammable and burns with a luminous flame, giving off sulphur dioxide. It is readily soluble in alcohol, ether, and chloroform. A 50 per cent. solution of sodium or potassium hydroxide dissolves the fluid partially, the odour almost disappearing, but returning on the

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addition of sulphuric acid. Its reactions justify the assumption that one or more mercaptans or thio-alcohols are present. It contains about 30 per cent. of sulphur. Experiment showed that when so far diluted that the air inhaled only contained $\frac{1}{50000000}$ in each cubic centimetre it was still perceptible to the smell. It is a powerful anæsthetic. When inhaled without the admixture of a large amount of air the victim loses consciousness, the temperature falls, the pulse slackens, and if the inhalation were prolonged fatal results would probably ensue. Introduced into the conjunctival sac it produces intense pain and sets up acute inflammation. The fumes of this liquid are overpoweringly pungent and extremely irritating to the glottis.

MEDICAL CERTIFICATES AND BOARD SCHOOLS.

IN another column will be found a letter referring to the case of the West Ham School Board and Mr. R. B. Hunt upon which we commented in our issue of May 30th. We are glad to be able to congratulate the chairman of the West Ham School Board upon his eminently sensible remarks, only we would point out to him that not only have school boards no right to demand the nature of a child's illness, but also no right to demand a certificate at all. We have been fighting this and kindred matters with the London School Board for over a year, and we trust that body will issue a pronouncement to enthusiastic divisional superintendents on the subject, and will ponder well the remarks of the chairman at West Ham.

THE CHEMISTRY OF WHISKY.

THE commonly prevailing ideas as to the chemistry of whisky are evidently confused. The public notion has always been that crude or freshly distilled whisky was injurious and that it required the mellowing influence of age to make it fit for consumption. In other words, new whisky was held to be deleterious because it contained fusel oil, and that the reason why old whisky was more wholesome was because this fusel oil changed in course of time to the so-called œnanthic ether. To put it chemically, the amyl alcohol (fusel oil) oxidises slowly into amyl ether, which is not only thought to be innocuous but to improve the flavour. The Deputy Principal of the Inland Revenue Branch of the Government Laboratory would remove these notions at one sweep. Thus, in reply to a question before the Liquor Commission on Tuesday last he stated—and it was a repeated statement—that it was a mistake to suppose that new spirits contained more fusel oil and were more unwholesome than old. With the former part of his statement we will not now deal, but to the latter we distinctly demur. It cannot be supposed that whisky merchants take the trouble to store their whisky for years unless they know that it is thereby improved from the dietetic point of view. Again, it is well known that so convinced are the authorities of the Canadian Government of the unwholesomeness of new whisky that we believe they have a regulation in force prohibiting the sale of whisky that has not been stored for a certain number of years. Fusel oil is admittedly injurious—indeed, poisonous—according, at least, to the experiments of several observers. In one case, for example, 1 part of amyl alcohol in 500 parts of water caused anæsthesia in frogs in twenty minutes, the heart's action becoming slower, the skin dark, death occurring in about two hours, and the cardiac pulsations gradually ceasing. The common effect of fusel oil is to produce intense headache, and it must be borne in mind that in the case of whisky the action of alcohol must be added to that of the fusel oil. The amount of fusel oil, we believe, in whisky averages about 0·2 per cent. These observations hardly bear out the statements made before the Commission. Incidentally we may add that it is exceedingly satisfactory to find that the consensus of opinion of the witnesses before this Commission appears to be that there is an undoubted decrease in drunkenness in the metropolis, but this decrease, it is noteworthy, is less among women than among men.

SHORTHAND IN MEDICINE.

THE Oxford Shorthand Society has memorialised the General Medical Council, through the Education Committee, to grant the prayer of the Society of Medical Phonographers and include shorthand in the syllabus of the preliminary examinations for medical students, but to decline to in any way favour any one system of shorthand to the detriment of others, such a course being, in the society's opinion, equally opposed to shorthand progress and the public interest, and calculated, moreover, to defeat the primary object of the Society of Medical Phonographers. The memorial is influentially backed by a large number of headmasters and others.

THE LONDON WATER-SUPPLY.

THE hybrid committee appointed to consider the London water companies Bills dealt on Tuesday last with some of the most important measures concerned—viz., the Staines Reservoir, the Grand Junction, and the New River Water Companies. The decision was announced by Sir J. Pease, who stated that the Bills would be passed after the elimination and alteration of certain clauses. The committee were not prepared to grant power for additional lands irrespectively of those necessary for the construction, supply, and discharge of reservoirs. Exception was taken, and we think very rightly, to the deficiency in storage in the case of the Grand Junction Company, and it was felt that this company should be required to give an undertaking that a specified proportion of water run into their filter beds should be for storage purposes. A limit of 80,000,000 gallons per diem was placed on removal from the Thames, and the power to forward water down the conduit must likewise be limited to 30,000,000 gallons per diem on the average of any one month. Mr. Pope, in opening the case for the New River Company, stated that six new wells and three new reservoirs would be constructed, raising the present supply of 46,500,000 gallons to 60,000,000 gallons, or nearly 10,000,000 gallons in excess of the quantity requisite in ten years' time. The committee adjourned till Friday.

THE MIDDLESEX HOSPITAL.

THE inauguration of the new convalescent home at Clacton-on-Sea, which has been founded in connexion with the Middlesex Hospital, is to be celebrated by a *fête* in the hospital garden and medical school on Wednesday, July 1st. The afternoon *fête*, from 5 to 7 P.M., will be graced by the presence of their Royal Highnesses the Duke and Duchess of York, and in the evening the gardens will be illuminated. The members of the *fête* committee, of whom the Marquis of Breadalbane is chairman, have drawn up an excellent programme for the entertainment of the visitors. The musical arrangements are under the direction of Mr. Wilhelm Ganz, and several well-known artistes have offered their services. It is hoped that the result of the *fête* will go far to meet the heavy outlay occasioned by the building of the convalescent home, the maintenance of which will be chiefly met by the munificent bequest of the late Mr. Henry Spicer to the Samaritan Fund. We hope to publish next week a

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full description of the new building, of which the architect is Mr. Keith D. Young. It is interesting to note that last year the Middlesex Hospital completed the 150th year of its existence which commenced originally in Windmill-street, the present building being erected a few years later in "Marybone Fields," where the foundation stone was laid by the Earl of Northumberland, first president of the hospital. The hospital, therefore, came into existence about twenty years after Guy's foundation, and is coeval with the London Hospital in the east and St. George's Hospital in the west.

TECHNICAL EDUCATION AND HEALTH.

"TECHNICAL Education: a National Necessity,"[1] a paper read before the Cork Young Men's Society last year by Professor Corby, M.D., has now been printed in pamphlet form, and we heartily commend its perusal, for the author possesses a thorough grasp of his subject. England is far behind continental countries in the matter of technical education, and we hope the lecture will receive the attention which it deserves by those who have at heart not only the commercial prosperity of the country, but the welfare of the rising generation. One suggestion which Professor Corby throws out is worthy of consideration apart from its technical aspect, for it would have an important bearing upon health. "Plots of ground," says the author, "should be attached to every national school in the country on which the teacher could give his students practical instruction in agriculture." This of course applies to Ireland, but we think that with certain modifications the idea would be beneficial to other parts of the British Isles.

THE DANGERS OF STREET MUSIC.

WE have frequently animadverted upon the undoubted nuisance occasioned by the itinerant grinding of street organs. This time we have a very serious complaint to make against their use when coupled with the assistance of a dancing troupe. This mode of employing piano-organs to attract public notice is largely on the increase. We protest against this modified form of music-hall performance in our public highways because, as we ourselves have witnessed, it may give rise to very great danger to the passers-by. What might have been a very serious occurrence of this kind happened in Garrick-street this week and we quote it as a case in point. A troupe of four, including a girl gaudily and gaily dressed in brilliant colours, were dancing somewhat wildly to the jaunty airs of a piano-organ. A large crowd lined both sides of this busy street to witness the performance. At length it was the girl's turn to dance alone, which she did effectively enough and evidently to the spectators' delight. After her gyrations had proceeded for a time a hansom cab came along, the horse of which immediately shied on seeing the gestures of the brilliantly coloured dancer. Careering over to the opposite side, which was the wrong side that should be taken in the direction the vehicle was going, the wheels came into contact and interlocked with the wheels of another cab waiting for a fare, with the result that the former, after dragging the latter some distance along, was eventually completely overturned. The crowd was panic-stricken and ran in all directions. The occupant of the cab luckily escaped with slight contusions and some cuts from broken glass, for which he was treated at Charing-cross Hospital. We should like to know whether the police are blind to the dangers of such a show, and if not, why they allow it to go on. We trust that the authorities at Scotland Yard will not fail to take notice of this matter and exercise an increased vigilance in this direction. The possibilities of risk to life and limb through an occurrence of the kind we have described are, it is evident, extremely great, and afford one more argument to spur the Government to the passing of Mr. Jacoby's Bill.

[1] Published by J. Mahony, Cook-street, Cork, price 3d.

A JOINT ISOLATION HOSPITAL AT EAST GRINSTEAD.

AFTER having acquired a site and waited long months in default of any agreement as to terms, a settlement between the East Grinstead (Sussex) urban and rural district councils seems likely to be reached with respect to a much-needed isolation hospital. Each council has decided and made initial arrangements to erect a hospital actually on the same site for its own district respectively, but this anomaly was too startling and it is hoped will be obviated. At a meeting of the urban council it has been decided to appoint a joint sub-committee to carry out arrangements under the following suggestions—viz.: (1) that a joint hospital board be formed on the terms usual in such cases; or (2) that the urban council build two wards of four beds each, and also the larger administrative block, laundry, and mortuary, sufficient to serve both hospitals, in accordance with the sanction of the Local Government Board; that the rural council build two exactly similar wards on their land; and that the urban council manage the hospitals, the rural council to pay half the annual expenses of maintenance and management in addition to the sum of £50 per year as rent for the share of the use of the buildings erected by the urban council. Finally it is suggested that each authority should pay the expenses of their own patients while in hospital. The matter has been so long delayed that it is to be hoped a settlement may soon be arrived at on equitable terms, which should not be hard to arrange.

HOSPITALS AND THEIR MANAGEMENT.

A CORRESPONDENT who signs himself "A Suffering Working Man" complains, through the medium of an evening contemporary, that he has been unable to obtain admission into four London hospitals, three of which refused him on the grounds that there were no vacant beds and a fourth because the case was not a suitable one. On the strength of this he wants to know what becomes of the enormous sums which are raised for the benefit of these institutions, and he further hears, "on good authority, that the staff of these institutions live in ease and luxury on the money which is given by the generous public, whilst the welfare of the patients is a secondary consideration." A more silly letter than this can scarcely be imagined, showing, as it does, a deplorable ignorance of the most elementary facts of hospital management. Anyone who takes the trouble may easily find out that the reply that there are no vacant beds is only too true, not because the staff are rolling in luxury, but because every possible nook and corner is full of patients, and if in some hospitals valuable space is lying idle it is only because sufficient funds are not available to use it. Then, again, this impetuous correspondent seems to forget that hospitals are managed by a board of gentlemen selected from the public. These boards control and check all salaries and hospital accounts and frame the rules of the hospital, and, as far as we know—and we have it also on "very good authority"—while managing fairly, they are the last people to encourage their staff to live in ease and luxury. It is a pity that any paper should insert such absurd views as these; it seems to us better to risk hurting the feelings of "a constant reader" rather than let such nonsense appear in print. It is so easy to generalise an accusation. Let this suffering correspondent name the institutions and the individuals who are thus using public

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money to their own advantage and only looking upon the patients as secondary considerations. If he can prove the truth of this allegation against any institution he will be doing a beneficial act to the public and medical profession alike; if he cannot do this he will show less ignorance of the subject by keeping silence.

THE DIRECT REPRESENTATION OF THE PROFESSION AND THE LANCASHIRE AND CHESHIRE BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE Lancashire and Cheshire Branch of the British Medical Association, as will be seen in our correspondence columns, nominated at their meeting on Wednesday at Southport the following gentlemen: Dr. Glover, Dr. Sam Woodcock, J.P., of Manchester, President-elect of the Lancashire and Cheshire Branch of the British Medical Association, member of the Council and of the Parliamentary Bills Committee of the British Medical Association, and President (re-elected) of the Manchester Medico-Ethical Association; and Dr. Lovell Drage, of Hatfield and St. Albans. Dr. Drage was a distinguished student at Oxford and house surgeon and midwifery assistant at St. Bartholomew's Hospital, and is the writer of several letters on medical politics.

"UNEVENTFUL MIDWIFERY."

IT is always a pleasant duty to us as medical journalists to have to review the work of a general practitioner, hard in its character and extending over a good series of years, especially when the results are satisfactory and the practitioner himself survives in comparative youth and strength. Last week we published the report of the proceedings of the Islington Medical Society, which included an account of his midwifery work by Mr. Jago, under the happy heading "Uneventful Midwifery." We wonder what those who consider medical practice an easy matter would think of the facts so succinctly told by Mr. Jago and of the attendance on over 4700 cases in twenty-three years, not as a sole occupation, but as one of the multifarious duties of a general practice in a populous and not over rich neighbourhood. The number gives an average of about 204 cases a year, and in most of the years doubtless a much larger number. The record and the results are such as any practitioner may be congratulated on. Take the most important point of all—that of mortality. There is nothing more pathetic than the death of women owing to the function of childbirth, and no medical man is worthy of his profession who does not take every pains and make every sacrifice to avert such a result of parturition. Mr. Jago has obviously taken such pains. We have all heard, indeed, of obstetric practitioners who never had any mortality. They never lost a case. But we have rarely known such. We prefer such possible records as Mr. Jago's—excluding two cases of advanced phthisis—a mortality of 7 in 4700 cases, or 1 death in about 671: two cases of death from hæmorrhage, 1 from embolism, 1 from privation, and 3 from septic infection. There is possibly an element of luck in obstetric as in other practice. But it is the business of the accoucheur to control the process of labour and to counteract the element of ill-luck, and this he must chiefly do by early detection of complications and untoward accidents and their early correction, and by the exclusion of all uncleanliness and infection. The element of luck or chance is illustrated by one very remarkable fact in the series of cases now under notice. The complication of shoulder presentation only occurred once to Mr. Jago, and in that case he was sent for by a midwife, who was trying to deliver by pulling upon the arm. It is surely very rare for a practitioner of such large experience to have seen so little of cross presentations. An almost equally strong illustration of the element of luck in midwifery is to be found in the fact that Mr. Jago in his 4700 cases only remembered one case of prolapsed funis. Churchill collected 98,512 cases of labour in which this accident occurred 401 times, or once in 245·5 cases. Mr. Bland, quoted by Dr. Lusk, met with it once in 1897 cases. Allowing for the fact that Mr. Jago has not kept elaborate statistics, which would be almost impossible in such circumstances, and that he may have encountered two or three more of these abnormalities than he can remember, it is still remarkable that he has encountered them so seldom as he has done. We may say the same of his cases of placenta prævia and of the need to perforate, which occurred only once.

DR. KLEIN, F.R.S. will continue on Wednesdays, July 1st and 8th, at 4 P.M., at King's College, Strand, at the instance of the British Institute of Public Health, the Harben Lectures, having as their subject "Recent Researches in the Identification of the Typhoid Bacillus and the Cholera Vibrio." All who may be interested are invited to attend. The first lecture on the subject was given on Wednesday last, but notice of its impending delivery was not sent to us.

THE annual dinner of the Cambridge Medical Graduates' Club will be held at Limmer's Hotel, Conduit-street, W., on July 2nd, the first day of the Inter-University cricket match, at 8 P.M. Dr. W. H. Dickinson, the senior Vice-President, will be in the chair. The annual general meeting for election of officers and other business will be held at 7.30 P.M. Each member may bring two guests; tickets 10*s.* 6*d.*, exclusive of wine.

THE DUCHESS OF CONNAUGHT, who was accompanied by the Duke of Connaught, opened at Queen's Hall, Langham-place, on Tuesday afternoon, a rose *fête* and bazaar in aid of the North-Eastern Hospital for Children, Hackney-road, Shoreditch.

THE Colonial Office has learned by telegram from the Governor of Hong-Kong that there were twenty-one fresh cases of bubonic plague in the week ending June 23rd, and twenty deaths from the plague during the same period.

THE PRINCESS OF WALES, accompanied by the Princesses Victoria and Maud, paid a visit to St. Mary's Hospital on Tuesday last. They were conducted through the wards by Sir William Broadbent.

DR. D. J. GALLOWA has been granted the royal licence to wear the insignia of the Order of the Crown of Johore of the Second Class conferred upon him by the Sultan of Johore.

THE PRINCE OF WALES has signalled his Derby victory by forwarding a donation of fifty guineas to the honorary secretary of the Epsom and Ewell Cottage Hospital.

THE DUCHESS OF YORK will open a "Princess May's Ward for Children" at the Royal Hospital, Richmond, on Wednesday, July 8th.

WE congratulate Dr. Longstaff, L.C.C., upon being alive and sympathise with him on the death of his relative.

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THOMAS WAKLEY,

THE FOUNDER OF "THE LANCET."

A BIOGRAPHY.[1]

CHAPTER XXV.

The First Ten Years of THE LANCET: *A Recapitulation.—A few Details of Private Life.—The Kindness of Mr. Goodchild.—The Move to Bedford-square.—Wakley resolves to Contest the Borough of Finsbury.*

IT may be remembered that, for the present, consideration of the doings of THE LANCET was to be restricted to the events of the first ten years of its existence.[2] During these ten years the paper passed from obscurity to notoriety and thence to wide-spread recognition as the organ of the medical profession. With the series of drawn skirmishes between the College of Surgeons and Wakley which was enumerated in the preceding chapter this first decade comes to a rather abrupt conclusion; but before passing to the next phase in Wakley's career—that of Parliamentary life—it will not be amiss to recapitulate briefly the actual outcome of his stormy ten years in occupation of the editorial chair.

THE LANCET was started in the interests of the profession at large inclusive of the students, and was designed to show that the great hospitals of the metropolis were managed to the advantage of a few rather than of the community, and that medical men as a body were wronged by their leaders. The establishment by the action at law with Abernethy of the right of THE LANCET to publish the lectures delivered to hospital classes was much more than the solution of an undecided question in copyright. The privileges of copyright would have prevented, and actually did prevent, Wakley from printing the lectures. But when he proved the lectures to have been delivered in a public capacity he gained his point, and in doing so damaged the unearned prestige of many eminent teachers and got his journalistic foot for the first time into those fastnesses of privacy—the metropolitan hospitals.

The articles against malpraxis among hospital surgeons immediately followed and reached their climax in the sensational case of Bransby Cooper *v.* Wakley. They did good and harm. They roused a wholesome distrust in the minds of the profession of the system under which such mishaps were possible. They sounded a revolt against a nepotism that nowadays seems too monstrous to have existed, but which appeared seventy years ago to be natural and void of reproach. They stirred up in the minds of the profession at large a determination to be better treated and only to be ruled by those who were worthy to rule them. All this was effected by Wakley, and almost immediately a purer and better state of things was brought about within our hospital walls. The harm that these articles did was much less than the good, but must not be overlooked. The public dissemination in THE LANCET of such bitter criticism on lecturers, surgeons, and administrators in the well-known hospitals of London brought the profession of medicine into public and unequivocal disrepute. THE LANCET speedily became a purely medical journal, but others besides medical men read it, and learned with some shattering of their idols that the great Abernethy desired not to give his students fair measure in return for fees, that the great Cooper considered the indispensable qualifications for an appointment at Guy's Hospital were relationship or apprenticeship to himself, and, finally, that a medical staff selected in accordance with these principles, not only at Guy's Hospital, but at all the metropolitan hospitals, more than occasionally failed to attain to the high standard of skill and knowledge that was to be expected of them and with which they were generally credited. A second disadvantage to the profession that followed on Wakley's revelation of hospital mismanagement was the stirring up of bad blood. Some men were for Wakley and some were against, but his excessively plain speaking and downright methods of conducting a dispute made it imperative that those who were on his side should quarrel outright with those who were not.

From reviewing and criticising the administration of the hospitals Wakley passed natually to the consideration of the corporation which granted the diploma most sought after by the students. This, the Royal College of Surgeons of England, was officered by the very hospital surgeons whose scientific methods left in Wakley's opinion so much to seek. The Council of the College were hospital surgeons wholly or in large majority. They were chosen for life and nominated their own successors. They selected examiners from among themselves and took no certificates save from hospital surgeons. Here THE LANCET did solid good even in the first ten years of its existence, but this phase of Wakley's work suffers a little from being told piece-meal in accordance with a time limit. The first ten years of THE LANCET saw the end of its Editor's principal legal quarrels. They witnessed his distinct victory over the narrower and more jealous of those responsible for hospital management, and during their passage he collected round him a staff of ardent and able writers capable of maintaining his journal in the position to which he had brought it, capable of carrying out his schemes for the breaking down of monopolies and furthering the cause of the profession at large. But his determination to bring about reform in the College of Surgeons, although in no wit abated, and although not even at this early stage of the struggle fruitless of result, had not at the end of the first ten years reached any definite stage of success. Wakley had roused a wide-spread feeling among the Members against their Council; he had exposed the unsoundness of the constitution of the College; he had criticised certain of the by-laws in such a way as to ensure their repeal; he had summoned the first public meetings ever held by the Members, and had dominated those meetings; he had placed the College on its defence, and had elicited from the Council a poor refutation of the charges brought against them; he had organised a petition to Parliament for State assistance in his schemes for reform; and he had come into personal conflict with the Council in an attempt to assert on behalf of the Members a right to meet in the theatre of their College to discuss matters of professional interest. All these things he had accomplished, but at the end of ten years the position of the Members was not appreciably improved. The reform party had been chilled by their slow advance and by the loss of the help of Mr. William Lawrence; the petition to Parliament had ended in nothing, and the concessions made by the Council to the Members amounted to but little more. An extension of the time from the ten years which are under consideration to twenty years would show that the seed sown was to result in a fair harvest; but to deal more diffusely at this period with Wakley's career as a journalist would be to trespass upon space which must be allocated to other phases of his life. The discontinuance of the story of his relations with the College of Surgeons seems abrupt, but this cannot be avoided.

Wakley's public career has bulked so largely that almost nothing has been said of his private life. Nor is there very much to say. The rise of THE LANCET from a

[1] Chapters I., II., III., IV., V., VI., VII., VIII., IX., X., XI., XII., XIII., XIV., XV., XVI., XVII., XVIII., XIX., XX., XXI., XXII., XXIII., and XXIV. were published in THE LANCET, Jan. 4th, 11th, 18th, and 25th, Feb. 1st, 8th, 15th, 22nd, and 29th, March 7th, 14th, 21st, and 28th, April 4th, 11th, 18th, and 25th, May 2nd, 16th, 23rd, 30th, June 6th, 13th, and 20th respectively.

[2] See Chapter IX. of this Biography.

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young man's journalistic venture to an assured and serious success was, it need hardly be said, accompanied by a commensurate rise in the private fortunes of the Editor. These when they were last the subject of mention[3] were, it may be remembered, at a low ebb. The disastrous fire had consumed his goods, which were not insured to their full worth, and the Hope Fire Assurance Company, by resisting his claim for compensation, had kept him out of his money until his practice was ruined. The fire cost him £1600 and a practice of £700 per annum, for which a large sum in ready money had been paid. He received in compensation all that he could legally claim—viz., £1200, and was unable to make up his mind how to use this sum to the best advantage. His father-in-law looked askance upon him, not desiring to support his daughter's husband, yet thinking that the possibility of his having to do so was far from remote. The ready-money practice that he purchased in Norfolk-street, Strand, did not give him congenial occupation, and, much as his wife loved her husband, she did not conceal from him that she had a cordial dislike of his profession. She was also aware that her wealthy parents desired for her a fitter environment than was afforded by Norfolk-street. She had now two children, Thomas and Elizabeth, who were respectively six and five years old, and for their sakes as much as for her own she wished to reside in a pleasanter and more suitable neighbourhood.

This was the state of their domestic affairs when THE LANCET was first published, but the paper proved almost immediately a pecuniary success. The circulation was shown in one of the earlier libel actions to be 3000, and this was considerably increased by the Editor's attitude towards the College of Surgeons.

From a journalistic point of view his resolute stand against corruption in that body was his greatest coup, as it was the most important achievement of his life. The other successes of THE LANCET were smaller and more personal. However earnestly Wakley might plead that his actions and counter-actions at law had all been undertaken in defence of the broad principles of reform, a certain proportion of his readers would be unable to see how their interests were advanced by his pugnacious tactics. They might hope that he would win in the magnanimous way that outsiders generally desire victory to go to a gallant fighter against odds, but it was more or less as outsiders that they had watched the contests. Now the attack on the College of Surgeons was so clearly made in the interests of the profession at large that the feeling of being merely interested as spectators disappeared from the mind of his readers and was replaced by a very definite and properly selfish partizanship. In his crusade against the College Wakley was obviously fighting the battle of all the medical men in the kingdom save a few privileged persons, and his list of subscribers at once increased rapidly, while his own position rose from that of a journalist who catered capably to the wants of his public, and now and again furnished them with a thoroughly enjoyable sensation, to that of a leader of a liberal movement attended from the first with success and promising greater things in the future. Upon the more general recognition of Wakley as a single-minded reformer followed a vast improvement in the position of his paper. It gained in power and importance, its opinion had to be reckoned with, while its intolerance and scurrility—the occasional presence of which cannot be denied—were seen not to be its essentialities.

One of the first persons to recognise the great position that Wakley was securing for himself and his paper was Mr. Goodchild, his father-in-law. The very business qualities in that gentleman which had led him to bitterly resent the failure that had attended Wakley's fortunes consequent on the Argyll-street outrages made him prompt to recognise the quick passage of his son-in-law from unmerited discredit to a position of influence and responsibility that was rapidly passing to one of power. The instinct of the successful commercial man warned him that in THE LANCET Wakley had a great property, and that the shrewdness, humour, and force that were displayed in the editing must secure him a prominent public career. He was, moreover, casting about for a fitting opportunity to come to the succour of his daughter, and the rising position of THE LANCET, together with the storminess of its career, afforded him an excellent one. It would be generous to help, and it would not be foolish, so he approached his son-in-law and offered to assist him in his literary venture. This timely aid completely turned the scale of fortune in Wakley's favour. As soon as circumstances warranted his doing so he gave up the house in Norfolk-street and took a larger one in the pleasanter neighbourhood of Thistle-grove, which had the attraction for himself, his wife, and children of possessing a large garden. Thistle-grove was then almost a country lane, but now it is a street called Drayton-gardens, in the heart of that thickly populated part of Brompton and Chelsea that delights to disguise itself under the name of South Kensington, though it still preserves many of the features of suburban villadom. Here his two younger children — Henry and James — were born, and here he stayed until 1828, when he moved into No. 35, Bedford-square, the house which is associated with all his public life as Member of Parliament for Finsbury and coroner for Middlesex.

The neighbourhood of his new address was chosen for a very definite purpose, and one which was approved of by Mr. Goodchild in a practical manner—which means to say that he helped Wakley to find the necessary money to make so important an alteration in his domestic affairs. Wakley's intention now was to offer himself as political candidate for the borough of Finsbury, and Bedford-square was fortunately situated for the purpose, being near the office of THE LANCET, situated at this time in Essex-street, Strand, and also on the edge of the enormous Parliamentary district which he aspired to represent. Immediately upon his establishment in his house he set about using it in accordance with his designs. An open-handed, cheery, and humorous man he delighted in good company, and it must not be supposed that all the profuse hospitality which at once became the rule in the domestic management of 35, Bedford-square was the outcome of a design upon the minds of his possible electors. But while he revelled in the entertainment of his friends he was assiduous in the reception of his political allies, medical and lay. At his fortnightly gatherings for whist or chess he gathered round him a large number of staunch friends who were attracted by his eloquence, his audacious defence of popular rights, his determination, self-confidence, and kindliness of manner. And most of his guests believed in him and prophesied for him a speedy success in the political world, thereby confirming him in his intention and endorsing the opinion of his once angry father-in-law.

(To be continued.)

[3] Chapter VII., Feb. 15th, 1896.

LITERARY INTELLIGENCE.—Amongst Mr. H. K. Lewis's announcements are new work by Dr. E. W. Goodall and Dr. J. W. Washbourn, "A Manual of Infectious Diseases," and a fourth edition of Professor Crookshank's "Bacteriology," which is virtually a new work, having been entirely re-written, as its title, "A Text-book of Bacteriology, including the Etiology and Prevention of Infective Diseases, and an Account of Yeasts and Moulds, Hæmatozoa, and Psorosperms" shows. Also "Notes on the More Common Diseases of the Eye," by R. W. Doyne, F.R.C.S.Eng., and "Disease and Defective Sanitary Arrangements," by W. H. Corfield, M.D.Oxon.

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METROPOLITAN HOSPITAL SUNDAY FUND.

WE continue below our record of some of the principal amounts received at the Mansion House, the lists of which have been received at THE LANCET Office, up to the time of our going to press on Thursday, when the total sum received amounted to nearly £31,500. At the corresponding period last year the total was £31,000 :—

	£	s.	d.
Trinity Presbyterian Church, Notting-hill	44	3	1
St. Gabriel, Warwick-square	57	19	9
St. Philip's, Sydenham	31	17	6
St. Paul's, Canonbury	45	0	7
St. Mary's, Shortlands	48	1	0
St. Saviour's, Paddington	99	7	5
Marylebone Presbyterian Church	65	17	2
St. Augustine's, Queens-gate	83	19	0
Gray's Inn Chapel	53	14	3
Wanstead Churches	44	2	1
Bromley, Kent, Parish Church	84	4	2
Hammersmith Parish Church	30	1	0
Hampstead Parish Church	74	0	6
St. Pancras Parish Church	55	6	5
Beckenham Parish Church	69	18	9
Chipping Barnet Parish Church	39	6	4
All Saints', Hatcham Park	56	9	0
Mr. Julian, senior	21	0	0
Box outside Mansion House	27	18	3
St. Mary's, Boltons (with additions)	90	0	0
St. Matthew's, Denmark-hill	91	11	4
St. Andrew's, Stoke Newington	85	11	4
All Saints', Clapham-park	70	0	0
St. James's, Hatcham	80	0	0
St. Mary Magdalene, Peckham	36	5	3
St. David's, West Holloway	20	10	5
Christ Church, Southgate	41	5	6
Church of the Annunciation, Chislehurst	88	10	4
St. Mary's, Spring Grove	28	9	2
Nutley-lane Church, Reigate	28	0	0
St. Paul's, Finchley	46	16	6
Holy Trinity, Kilburn	41	0	2
St, Luke's, Battersea	38	18	7
St. Mary's, Aldermanbury	20	19	3
St. Mary's, Stoke Newington	73	10	6
St. Michael's, Betchworth	35	3	1
Mitcham Parish Church	29	10	10
St. John the Evangelist, Westminster	53	11	3
Allen-street Congregational Chapel, Kensington	92	4	1
Holly Park, Crouch Hill, Wesleyan Church	27	5	0
Emmanuel, West Hampstead	27	14	2
St. Mark's Reigate	61	19	11
Dartford Churches	36	10	6
Central-hill Chapel, Upper Norwood	53	12	9
Archway-road Wesleyan Church	27	16	5
Maze-hill, Greenwich, Congregational Chapel	22	18	0
St. Philip's, Regent-street	66	4	11
Camden-road Presbyterian Church	32	0	0
St. Michael's, Paternoster Royal	20	5	3
St. Peter's, Eltham-road	50	14	0
St. Thomas's, Brentwood	22	2	0
St. Luke's, West Holloway	42	10	2
Crouch-hill Presbyterian Church	34	1	5
St. John the Evangelist, Penge	80	10	0
Ewell Parish Church	25	7	0
St. Paul's, Upper Norwood	73	9	10
St. John's, Sidcup	27	2	5
Christ Church, Lancaster-gate (with additions)	1304	14	7
St. Michael's, Chester-square (with additions)	1508	0	0
All Saints', Ennismore-gardens	502	4	0
St. Paul's, Beckenham	167	6	7
Christ Church, Hampstead	227	10	0
St. Stephen's, Hampstead	34	1	4
St. Mary's Parish Church, Putney	31	16	0
St. John's, Putney	62	13	3
St. Mary-le-Bow, Cheapside	20	2	11
St. Matthew's, Bayswater	178	14	8
St. Andrew's, Fulham	74	0	9
St. Bartholomew's and St. Matthew's, Sydenham	166	8	3
St. Paul's, Wimbledon Park	28	16	1
St. John's, Upper Norwood	43	10	2
Christ Church, Chelsea	30	1	0
Gordon-square Catholic Apostolic Church	25	17	10
All Saints', Friern Barnet	40	5	6
Parish of St. Mary Abbott's, Kensington :			
St. Mary Abbott's Church ... 344 1 5			
St. Paul's, Vicarage-gardens ... 100 18 2			
Christ Church, Victoria-road ... 85 17 10			
	530	17	5
Acton Parish Church and Mission	43	0	3
St. German's Church, Blackheath	53	10	10
St. Mary's, Plaistow, Kent	41	17	6
Immanuel Church, Streatham-common	101	18	2
St. James's, Holloway	69	10	6
St. Mark's, Hamilton-terrace	211	7	10
St. Paul's, Kilburn	36	12	3
St. John's, Hackney, and Mission	43	7	6
All Saints', Notting-hill	28	1	6
St. James's, Marylebone	59	10	4
St. Paul's, Old Charlton	21	14	10
St. Mary's Old Parish Church, Lewisham	61	3	2
St. Paul's, Knightsbridge	308	11	10
St. Mary's, Graham-street	100	11	1
Holy Trinity, Upper Chelsea	265	13	9
St. Saviour's, Upper Chelsea	98	19	10
St. Luke's, Chelsea	46	7	7

	£	s.	d.
St. Mark's, Kennington	36	5	4
St. Stephen's, Wandsworth	68	9	8
Keston Parish Church	29	8	3
South End Chapel, Catford	20	17	0
Chiswick Parish Church	27	1	0
St. George's, Perry-hill	30	11	2
Portman Chapel	110	0	0
St. James's, Piccadilly	122	13	9
St. George's, Tufnell-park	55	19	0
Box outside Mansion House	7	16	6
St. Paul's, Onslow-square	509	12	3
South Kensington Presbyterian Church	47	4	0
New Court Congregational Church, Tollington-park	20	0	0
Christ Church, Woburn-square	26	0	11
Highbury Quadrant Congregational Church	68	3	4
All Saints', Finchley-road	63	8	1
St. James the Less, Westminster	24	2	1
Stamford-hill Congregational Church	101	8	9
St. Stephen's, Ealing	71	15	10
St. Mary's, Leyton	23	17	3
Wesleyan Church, Tooting	23	19	8
From Tooting Beck Golf Club	2	17	7
St. John's Wood Presbyterian Church	100	0	0
St. Peter's, Bayswater	142	3	7
St. John's, Ealing Dean	22	4	0
St. Stephen's, Portland Town	34	10	7
St. Andrew's, Stockwell	21	7	8
Chislehurst Wesleyan Chapel	32	6	2
St. Michael, Highgate	60	18	8
St. Luke's, Redcliffe-square	60	0	0
Highgate Presbyterian Church	37	1	1
Downs Baptist Chapel, Clapton	24	7	6
Willesden Parish Church	21	1	6
St. Paul, Forest-hill	61	8	6
Laleham Parish Church	21	15	6
Eltham Parish Church	23	9	0
F. (a further)	50	0	0
St. Peter's, Dulwich-common	48	5	11
Streatham Parish Church and Mission	73	3	3
Christ Church, Harlesden, Reformed Episcopal	20	17	4
Colebrook-row Presbyterian Church	20	5	2
Trinity Church, Hampstead	109	11	5
St. Anne's, Highgate-rise	26	12	0
Loyal United Friends	50	0	0
Royal Military Chapel, Wellington Barracks	79	6	0
St. Andrew's, Watford	27	0	0
Curzon Chapel, Mayfair	152	10	0
Christ Church, Mayfair	138	6	7
St. George's, Westcombe-park	44	16	11
Lyndhurst-road Congregational Church, Hampstead	64	0	0
St. Luke's, West Norwood	23	5	5
Wesleyan West London Mission, St. James's Hall	40	18	8
Streatham-hill Congregational Church	29	6	8
St. Paul's, Camden-square	63	15	5
Regent-square Presbyterian Church	110	10	6
Holy Trinity, Knightsbridge	58	10	0
St. Peter's, Dartmouth-park-hill	23	17	6
St. Paul's, Great Portland-street	63	10	5
St. Augustine's, Kilburn	54	6	6
St. Dunstan's, East Acton	26	4	6
St. Mary's, Hornsey Rise	38	9	3
St. Mary's, Kilburn	101	2	1
St. Mary's, Balham	62	1	6
Holy Innocents, Hornsey	33	10	0
Heath-street Baptist Chapel, Hampstead	51	10	0
Aldenham Parish Church	60	8	0
"F. G. D." (a further donation)	50	0	0
St. Philip's, Kensington	111	3	9
St. Paul's, Herne Hill, and Mission	48	5	8
Holy Trinity, Anerley	66	13	0
St. Clement's, Notting-hill	20	6	0
All Saints', Blackheath	63	0	11
St. James's, Paddington	106	13	7
St. Stephen's, Westbourne-park	151	12	4
St. John's, Downshire-hill, N.W.	41	6	3
The Wimbledon Churches :—			
St. Mary's Parish Church ... 47 16 6			
Christ Church ... 76 0 11			
St. John's ... 37 14 5			
St. Mark's ... 10 13 3			
St. Matthew's ... 3 13 11			
	175	19	0
Dutch Church, Austin Friars	88	16	6
St. Barnabas, Pimlico	33	4	6
Camden Church, Camberwell	68	17	1
Park Church, Highbury Presbyterian	37	15	0
Wanstead Society of Friends	41	9	0
Brixton Unitarian Church	65	8	2
St. Michael's, Blackheath	71	14	0
St. George's, Hanover-square (with additions)	189	11	9
St. Mary's, Bourdon-street			
Blackheath Congregational Church (with additions)	128	2	5
Wandsworth Parish Church	84	1	6
Holy Trinity			
St. Paul's, Knightsbridge (with additions)	318	11	10
St. Matthias's, Earl's Court	53	17	7

Other amounts have been received and will be published in our next issue.

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THE NEW INFANTRY SWORD EXERCISE.

As we have already announced,[1] during the progress of the Military Tournament some members of the profession in London interested in fencing visited the Agricultural Hall, Islington, at the invitation of Colonel Malcolm Fox, Inspector of Gymnastics, for the purpose of examining into the practice and theory of the new infantry sword exercise (1895). This exercise is that of Il Cavaliere Ferdinando Masiello, the Florentine *maître d'armes*, and the system was first introduced into this country in 1893. Since that period its followers claim to have carried all before them in the various tournaments held throughout the country.

Colonel Fox explained the main points of this system to those present and illustrated his remarks practically upon Sergeant-Major Palmer, Army Gymnastic Staff. This warrant officer afterwards gave a series of lessons, both simple and advanced, to various non-commissioned officers who had been victorious in this year's tournament. The pupil taking the lesson was, in the majority of cases, stripped, so that the muscular actions involved were easily demonstrated. The main differences between this and other systems were shown to consist in: 1. The grip of the sword, in which the whole hand is used as a claw, thus securing the maximum degree of prehensile force. The thumb is placed along the back of the handle and serves to accurately direct the point. If a penknife be taken in the hand to cut a point to a pencil the fingers and thumb instinctively take the Masiello sword-grip. 2. Circling cuts, which are a series of exercises in "cutting" that tend to develop in the highest degree power over the weapon; and enormous force can be put into these cuts, since the hinge-joint of the elbow is the centre of a circle of which the distance from the elbow to the point of the sword is the radius, for in this system the wrist-joint is never allowed to move except in the action of adduction—at the finish of the delivery of a cut. The wrist, being a universal joint, is capable of any form of error in making a cut; whereas the elbow-joint, having one motion only, cannot possibly deflect the edge from its objective. Consequently a cut made in accordance with Masiello's system cannot be delivered otherwise than with the edge leading. 3. Parries. These are all, except the fourth, made with the arm straight on the completion of the formation of the parry, and with the point on, or almost on, the adversary's body. In many cases the formation of a parry is at the same time a "riposte," and the value of this will be obvious to any practical swordsman. In passing from one parry to another the arm is very slightly bent, thereby gaining a forward motion when meeting the adversary's blade that greatly adds to the power of the defence. Nor can the shock of the adversary's attack be ever met at a right angle as in the old method, consequently the blow loses five-fifths of its force, since it runs along the blade down to the hilt instead of being received on one single point of the blade. 4. The position of "on guard." This is wider than of old, the distance between the heels being about two and a half soles' length, according to the length of a man's thigh, instead of two soles' length as hitherto. This increased distance gives a much firmer base with a greatly increased facility for rapidly advancing towards or retiring from an opponent. 5. The lunge. In this system the body is inclined as far forward as possible when lunging; thus a gain of about twelve inches in actual reach is obtained, and the recovery to the position of "on guard" is rendered much easier than in the old method, where the body was kept upright for obvious anatomical reasons that have already been explained in THE LANCET.[2] 6. The jump. This is an action somewhat difficult to explain but very easy to perform. It is a rapid means of getting to the rear out of reach of an opponent. It is an action peculiar to this system, and consists in pressing strongly off the right foot, carrying it to the rear, and at the same time carrying the left foot an equal distance to the rear, so that when the feet are again on the ground the correct position of "on guard" is assumed.

The above were the chief points touched upon, and then an interesting series of lessons with sword and foil were gone through. In conclusion Colonel Fox drew attention to Masiello's series of corrective exercises with the sword, exercises designed to prevent any tendency to spinal curvature that might be induced by constant lunging. He also drew attention to the fact that a military system of swordsmanship must have for its object the defence of a man's life and his power to disable his adversary. He claimed for Masiello's system that it fulfilled these conditions.

Some staff-sergeants of the gymnastic staff were then shown and were seen to be men of admirable physical development. Sandow's system of "Light Dumb-bell Exercises" was demonstrated, also a few exercises without apparatus.

At the conclusion of the display Sir William MacCormac cordially thanked Colonel Fox for the opportunity he had afforded him and his colleagues of examining into the new system of swordsmanship—a system that appeared to be thoroughly sound, both practically and theoretically.

Among those present were the following members of the medical profession:—Mr. W. H. Bennett, Dr. Champneys, Mr. Clinton Dent, Dr. J. H. Drysdale. Mr. Muirhead Little, Sir William MacCormac, Mr. Howard Marsh, Mr. J. H. Morgan, Mr. W. H. Staveley, Dr. Frederick Taylor, Mr. J. H. Waring, and Dr. Dawson Williams.

[1] THE LANCET, June 13th, 1896.
[2] THE LANCET, Nov. 30th, 1895, March 28th and April 11th, 1896.

CHOLERA IN EGYPT.

"NEVER since 1865—not even during the memorable summer of 1883—has Egypt been afflicted with such a terrible outbreak of cholera as she is now experiencing. It is generally accepted (though denied by the doctors) that the disease is endemic in the country in a more or less inconspicuous way."

Our readers who may not have seen the original will doubtless be surprised to learn that the above sensational statement is taken from the usually well-informed *Pall Mall Gazette*. It is, of course, possible that the present outbreak of cholera in Egypt may increase in severity, and that eventually it may prove more destructive than its precursors, but up to the time of writing nothing has occurred to justify the grave note of alarm sounded by our contemporary. On the contrary, the epidemic has so far shown itself amenable to control and from the latest returns it appears that the number of cases is decreasing both in Cairo and at Alexandria. A certain amount of panic did, and probably does still, exist, for cholera and panic are notoriously inseparable; but if the homeward-bound steamers are filled to overflowing, it must be remembered that this is the season of the year when the usual exodus takes place on account of the summer heats. The inhabitants of Egypt, foreigners as well as natives, have every reason to repose the fullest confidence in the zeal and energy of their sanitary guardians, but unfortunately these officials are beset and hindered in many ways. They are expected to make headway against a deadly foe, but the weapons supplied to them for the combat can only be described as totally inadequate.

Cholera at Cairo and Alexandria is steadily declining, but the disease seems to be slowly extending in the provinces. The number of deaths reported on the 19th instant was 10 at Cairo and 3 at Alexandria. Elsewhere there were 189 fresh cases and 170 deaths. The total number of cases reported in Egypt since last September is 5193, and of deaths 4776; the mortality rate of those attacked has therefore been very high. According to a Central News telegram an outbreak of cholera had occurred in the 5th Battalion of the Egyptian army, stationed at Korosko. There have been 14 cases returned, with 7 deaths, and the occurrence has naturally given rise to some anxiety lest the disease should spread to the troops engaged in the Soudan campaign. It is, of course, quite possible that it may do so, but we do not think that any grave apprehensions need arise in regard to this. The troops are in the desert, which is the best place for them to be in the event of their being attacked, they are encamped on clean and healthy sites, their water-supply is believed to be good, and all hygienic requirements are carefully attended to. We believe the health of the British troops at Alexandria and Cairo and in the Soudan to be quite satisfactory at the present time.

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THE GENERAL MEDICAL COUNCIL AND THE CIVIL RIGHTS DEFENCE COMMITTEE.

THE following letter has been addressed by Mr. Timothy Holmes, as chairman of the Select Committee of Medical Defence in the Civil Rights Association, to Sir Richard Quain, as President of the General Medical Council:—

"5, Mitre-court, Temple, London, E.C., June 20th, 1896.

"SIR,—As Chairman of the Select Committee on Medical Defence I am requested by my Committee, in reference to previous correspondence and especially to the letter of your Business Committee dated June 6th, 1896, and to a letter of your solicitor dated Nov. 25th, 1895, to point out the following errors or misconceptions. The letter of the Business Committee dated June 6th, 1896, quotes the solicitor of the Council as saying that Mr. Anderson's case is wholly outside the functions and powers of the Council. Now this is not what the solicitor said. His reply runs thus: 'It is wholly beyond the province of the Council to take part in an endeavour to obtain for an individual his civil rights, and the fact that the individual claiming them is a medical practitioner does not in any way alter the position.' We do not ask the General Medical Council so far to depart from their functions as to endeavour to defend civil rights generally, but we believe it to be a part not only of their functions, but also of their duty, to defend the professional rights which they have themselves confirmed to Mr. Anderson by their registration, which they would be bound to deprive him of if he were guilty of infamous conduct in a professional respect, and of which they, and they alone, on such grounds alone, have by the Medical Acts the power to deprive him.

My committee desires in this relation to point out that for what is asked there cannot in the nature of things be either authority or precedent; since so remarkable a state of facts could not be anticipated or provided for and has not before occourred. There can, my committee submits, be no obligation, however, on any member of the General Medical Council to continue to issue misleading and illusory certificates of registration holding out on behalf of the Crown promises of rights now by the Crown, acting through the judges, declared to be no rights at all, but to depend on the arbitrary will and pleasure, or even malice, of the judges. It could not be compulsory on any man to hold office under such conditions; but far short of resignation we submit that there is nothing in the Medical Acts to fetter your inclinations; and no conditions either in law or in morality, than can render it improper for you to take corporate action to ascertain that the promises of which you are the channel are not broken to those to whom they are made. This my Committee ventures to submit is not a question of law, but of those natural obligations which are above and beyond expressed law, and of which the law is the more or less imperfect embodiment. The rights to which I here allude are solely those which your Council confirmed to Mr. Anderson.

"My Committee asks of you that a meeting of the executive council be convened and a deputation of this Committee be received by which the case and our views may be fully placed before you, and that this be followed by a special meeting of the Council to consider an interpretation of the law that seriously affects the nature and value of every certificate of registration issued, and gives to every man entering the profession, as well as those who have already been admitted, the right to ask you, 'Have I under this certificate the right to recover reasonable charges for work and services rendered and the right to render or refuse my services? Or can I, for withholding or withdrawing my services be punished by damages, costs, and imprisonment and be arbitrarily and maliciously denied all right to recover reasonable charges for services actually rendered?'

"This is a question in the answer to which we venture to submit that the General Medical Council as a body, and each member of it individually, is so far concerned in honour as that no legal technicality or equivocation can relieve him.

"I have the honour to be, Sir, your obedient servant,

"TIMOTHY HOLMES,

"Chairman of the Select Committee on Medical Defence."

There can be no doubt that Mr. Holmes makes out an excellent case why the Executive Committee of the General Medical Council should receive a deputation from the Civil Rights Defence Committee, and we hope that this letter will receive a favourable answer.

THE HOLIDAY SEASON.

(*Continued from p. 1743.*)

THE tours arranged by Messrs. Thomas Cook and Son and by Messrs. Henry Gaze and Sons, "conducted" and "independent," offer many advantages to the traveller both at home and abroad. The total cost of any particular journey can be accurately estimated, or given a certain sum of money the best possible tour that can be taken for that amount can be readily supplied. In addition to these advantages the tourist has the benefit of interpreters where necessary, and none but the best hotels are recommended; the best routes only are selected and the tours are mapped out in such a way that all the chief points of interest in a given itinerary can be seen in the smallest possible space of time by those whose period of holiday-making is limited. There are many other advantages to which we have not space to refer, but a letter to either of the agents will be promptly attended to and bring forth any information relative to travel the applicant may desire. So "prodigious," as Dominie Sampson would have said, is the amount of printed matter issued by these two firms that we are unable to give even an abridged list of all the tours or combination of tours by either firm, but we may mention a few among the many booklets which can be obtained on application.

THOMAS COOK AND SON.—The Programme of Summer Tours to Various Places of Interest in Great Britain and the Continent at moderate and inclusive charges, combining railway ticket and hotel and other accommodation, contains some capital tours for those whose time is very limited, including Saturday to Monday trips to the seaside and other summer resorts. "Tours in the Emerald Isle" and "Tours in Scotland," both illustrated and containing brief descriptive notes, should prove useful to those who have decided to spend their holidays in either of these portions of the British Isles. Italian Tours, with maps, embrace the chief cities of Italy, with extensions to the Italian lakes, the Island of Sicily, &c., with breaks of journey. Independent Tours in Normandy and Brittany, in Norway, Sweden, and Denmark, Conducted Tours in Norway, Sweden, and Denmark, in Holland and the Dead Cities of the Zuyder Zee, in the Ardennes, in Iceland and the Land of the Midnight Sun, Paris, Switzerland, Normandy and Brittany, Holland, Belgium, the Rhine, and The Black Forest, are the titles of some of the gratuitous pamphlets. Intending visitors to the National and International Exhibitions in Berlin, Geneva, Budapest, Innsbruck, and Kiel should obtain the small books giving the tours arranged in connexion with these places. Those interested in the forthcoming solar eclipse should obtain the special programme of steamer cruises to the Norwegian Fjords, the Mediterranean, West Indies, Canary Islands, Azores, &c. Cook's Excursionist and Home and Foreign Tourist Advertiser is too well known to travellers to need any description from us.

HENRY GAZE AND SONS.—Gaze's Indian Tours, comprising the principal points of interest to tourists in India, Burmah, and Ceylon, should be consulted by those about to visit these parts. Cheap Italian tours are detailed in Gaze's Cheap Italy, and Switzerland, the Rhine, Paris, Brussels, Amsterdam, the Ardennes, &c., are countries and places to which special conducted tours may be made. Of special note are the ten-guinea Swiss tours to Grindelwald and the Bernese Oberland or Davos Platz and the Engadine. A special cruise for the total eclipse of the sun on Aug. 9th, by the ss. *Norse King*, leaving London on July 25th, is announced, and also a special pleasure cruise with the same object by the ss. *Kong Harald*, leaving Newcastle on July 30th. Gaze's Shipping Programme gives lists of sailings by all principal lines of passenger steamers to all parts of the world, pleasure cruises, through overland fares, and advice and rates for emigrants; and the well-known *Tourist Gazette* contains particulars of many cheap and interesting tours, including some cheap week-end excursions.

SHIPPING COMPANIES.

SHAW, SAVILL, AND ALBION COMPANY, 34, Leadenhall-street, E.C.; Glasgow agents: 15, St. Vincent-place, Glasgow.—This Royal Mail Steamship line between London and New Zealand, Tasmania, and Australia issues a handbook of information for passengers with brief notices on the places touched on the outward and homeward journey, which is made in from forty to forty-five days. The book contains all the information the traveller is likely to need. Fares to or from New Zealand range from £68 to £15 15*s*., Australia £72 to £16 16*s*., South Africa from £28 to £8 8*s*., and Teneriffe from £15 to £7. The return fares are as follows:—

Class.	To and from New Zealand or Tasmania.	To and from Australia.	To and from Teneriffe.
	Per adult.	Per adult.	Per adult.
First saloon	£100	£110	£25
Second saloon	65	70	20
Third-class, 2 berth cabin	36	38	16
Third-class, 4 berth cabin	32	34	14
Third-class, open steerage	28	30	12

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ROYAL MAIL STEAM PACKET COMPANY, 18, Moorgate-street, E.C. — "Tours in the West Indies," issued by this company, is a tastefully printed and illustrated booklet giving details of the various first-class tours arranged by the company. Full information for passengers by the Brazil and River Plate route is given in a small pamphlet. During June, July, and August very pleasant voyages can be made to Brazil and the River Plate, as during that season the weather is comparatively cool. The cost of return tickets to Buenos Ayres is £52 10*s.* and £60, the voyage taking seven weeks, or to Brazil and back £45 or £52 10*s.*, the time occupied on the voyage being five weeks. The vessels on this route are of about 6000 tons, with all the latest improvements of modern ships. During the winter the company organise special trips to the West Indies at the very moderate charge of £65 for sixty-five days.

THE ORIENT STEAM NAVIGATION COMPANY.—The cruises arranged by this company embrace Norway and the North Cape for the Midnight Sun, Lapland for the solar eclipse in August next, Spitzbergen, Copenhagen, Stockholm, St. Petersburg, Moscow, Kiel, the Baltic Canal, and Heligoland. The last-named cruise provides an opportunity of visiting the fair at Nijni Novgorod. In addition to these short trips may be made by the mail steamers of the Orient line to Gibraltar, Naples, and Egypt. Pamphlets giving full particulars can be obtained on application. A pamphlet entitled "Pleasure Cruises to the Land of the Midnight Sun" is compiled in the manner of that excellent book for ocean travellers, "The Orient Line Guide." The following quotation heads one of the chapters in the pamphlet:—"To know what to observe, when and how to look for it, and to be able to recognise it when seen, is one of the most important qualifications of the traveller, and is that wherein intelligent guidance may be of the greatest service." This is the keynote of both the Orient Line Guide and the pamphlet referred to.

ALBION S.S. CO., LIMITED, 4, Lombard-street, Newcastle-upon-Tyne.—"Yachting Cruises in Norway by the Yachting Steamer *Midnight Sun*" is the title of this company's handbook giving the itinerary of the cruises, together with plan of her cabins, showing the prices of the berths from 12 to 25 guineas. Although the cabins differ in prices, chiefly in accordance with their more or less favourable position in the steamer, all passengers (first-class passengers alone are carried) share alike the other privileges of the steamer.

THE PENINSULAR AND ORIENTAL COMPANY.—For India, China, Japan, Australia, Tasmania, and New Zealand the handbooks issued by this company give all necessary information.

MISCELLANEOUS.

The Tourist Guide to the Continent (price 6*d.*), edited by PERCY LINDLEY, is a well-known guide issued by the Great Eastern Railway Company. The cycling routes in Holland, Belgium, and Germany should prove useful to knights of the wheel. Among the new features of the seventeenth annual issue of the Guide is a series of Continental maps and a chapter giving particulars as to the cost of Continental travel.

Summer Tours in Scotland. Price 6*d.* Published at 119, Hope-street, Glasgow.—Those who prefer to spend the best part of their holiday on the water will find ample opportunity for doing so by taking advantage of the excursions arranged by David MacBrayne's Royal Mail steamers *Columba*, *Iona*, &c. Where these steamers go and what is to be seen there the illustrated handbook before us well describes.

On Sea and Shore.—This little book describes a summer holiday ocean trip to the Highlands by the Aberdeen Steam Navigation Company, of Aberdeen Wharf, Limehouse, and 102, Queen Victoria-street. The voyage and the tours through Scotland are chattily described and well illustrated. A useful map accompanies the book.

A Summer Holiday in Holland. By CHANTREY CHURCHILL. Price 6*d.* (H. Grube, 12A, Paternoster-row, and G. Vickers, 1, Angel-court, Strand.)—This is really a guide to Scheveningen, the Dutch Brighton, but it also describes the towns and places of interest which can be easily reached from that popular holiday resort. For the tourist who visits Holland for the first time no more interesting and instructive guide-book could be desired.

The Little Man Island. By HALL CAINE. This charming guide to the Isle of Man can be obtained upon application to the Isle of Man Board of Advertising Office, 27, Imperial buildings, Ludgate-circus, E.C. With the aid of this little book and the *Sailing Arrangements* of the ISLE OF MAN STEAM PACKET COMPANY those in search of a novel and pleasant holiday field should be able to find what they require.

In bringing to a close our notice of the facilities afforded to travellers by the various railway and steamship companies we would point out that the space we have allotted to each individual company is not necessarily a measure of its importance. In some cases we have been supplied with quite a large quantity of holiday literature, while in others we have received only a few handbills.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On Enteric Fever at Helmsley, by Dr. BRUCE LOW.[1]—The inquiry as to a prevalence of enteric fever in this small market town, with a population of 1350, at the end of the Vale of Pickering, was made on the request of the local medical officer of health in view of the difficulty experienced in arriving at a cause of the outbreak. There had been no enteric fever in Helmsley for some years, but in August, 1895, no less than 34 attacks took place, and before the end of September there had been 43 cases and 8 deaths. A few other cases occurred in two neighbouring districts, raising the total attacks to 60. The three conditions that had to be thought of in connexion with the origin of this outbreak may be considered separately. One was the influence of insanitary conditions, including deficient sewerage. This is discussed at great length, and it is clear there was much to be found fault with as regards sewerage, house drainage, and privy-middens; but though these may somewhat have favoured the spread of the disease, the unwholesome conditions referred to do not appear to have affected the diffusion in any marked degree, and the only defect that could be looked upon as having had any general or substantial influence on the health of the place was the state of the beck with its accumulation of filth in dry weather. Notably was this the case when after such accumulations a sudden flood spread this filth over the sides of the stream, and the stuff mingled with sand and gravel was used to repair a certain footpath near houses. The water-supply and its alleged pollution had next to be considered. The water comes from a spring about a mile outside the little town, the supply being piped, and supplemented on occasion by other springs. After a connexion had been made with an additional spring some flags had been disturbed, and pollution by human excreta must almost necessarily have occurred. Indeed, there was much in the ultimate distribution of the fever to implicate the water-supply; but by this time a more definite explanation, and one that sufficed better to meet the difficulties involved, had been made out. This third point was the specific contamination of a particular milk-service. Enteric fever in an obscure form was imported into one of the milk-seller's households, and it spread under circumstances that made its diagnosis very uncertain at the time; but there is little doubt that there was community of tending the sick and of milking cows and other dairy operations which can hardly have failed to lead to contamination of the milk. That the milk-supply did become infected must be accepted as proved, and that as a consequence enteric fever was spread amongst the consumers of the milk cannot be open to doubt. Exceptional incidence of the disease was also noticed in the neighbourhood of the dairy whence it is known that a considerable number of persons took their milk-supply. Dr. Porter, the medical officer of health, had already suspected this milk-service, and he arranged that the duties of supplying milk should be forthwith transferred to other hands. Within a fortnight of this the disease came to an end. We have only glanced at a report which, with its plates, &c.,

[1] Eyre and Spottiswoode, East Harding-street, E.C.; John Menzies and Co., Edinburgh and Glasgow; Hodges, Figgis, and Co., Limited, Dublin. 1896. Price 9*d.*

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covers nearly twenty pages, and which embodies the story of a very careful piece of etiological research; a study of the complete document will be of interest especially to those engaged in the public health service.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Cheltenham Urban Sanitary District.—Dr. J. H. Garrett has had the common lodging-houses of Cheltenham re-measured and re-ticketed during 1895, but he relates that on a night visit of one of the inspectors the by-laws were found in several instances to be flagrantly contravened and that four lodging-house keepers were prosecuted. In commenting upon the need for improved supervision of dairies, cowsheds, and milkshops, Dr. Garrett expresses the opinion that the frequent inspection of the houses and of testing for tuberculosis of the milch cows by a veterinary surgeon is the only procedure likely to materially guard against the sale of tuberculous milk. The corporation have installed electric light in Cheltenham, and this fact, Dr. Garrett observes, affords to owners and occupiers of factories and workshops the opportunity of avoiding the pollution of air by the consumption of gas. The corporation has also, with a view to abolishing private slaughter-houses, applied for a provisional order for the compulsory closure of these places, there being in Cheltenham a good public abattoir. Dr. Garrett, in speaking of the Gloucester small-pox disaster, remarks that this town, by its "anti-vaccination craze," has become a standing danger to every other town around with which it has communication. Considerable additions have been made to the Delancey Fever Hospital during the year under review, and we learn from the annual report of that institution that a new wing for the accommodation of scarlet fever and enteric fever cases was opened in July. Diphtheria is not yet provided for, but it seems that next year the isolation of this disease in the hospital is to be arranged for by the erection of a diphtheria block.

Maidstone Urban Sanitary District.—Mr. M. A. Adams reports that in his district the mean age at death for the year 1895 was 36·95, a rate which exceeds the average of the previous seventeen years by 3·73. The main causes of this excess were, Mr. Adams points out, the relatively few deaths among young children, especially during the second quarter of the year, and the excessive mortality among the very aged during the extremely low temperature of the first quarter. Mr. Adams draws attention to the fact that the cold had apparently no commensurate fatal effect upon infant life, and that, probably owing to the care taken by mothers, infants get through the severe weather well. In dealing with the interesting subject of measles Mr. Adams observes that there would appear to be an increased rather than a diminished tendency towards the prevalence of that disease, a fact which he regards as in all probability due to facilities for infection as afforded by the elementary schools. Certainly there has not gone hand-in-hand with compulsory education a sufficient regard for the control of this dangerous disease. Mr. Adams is apparently not in favour of the notification of measles unless it can be accompanied with *compulsory* hospital isolation, and even in regard to isolation he doubts whether it would be practicable to deal with such young children apart from their parents. We must confess we are not entirely in accord with Mr. Adams on either of these points, and, while fully recognising the difficulty and perhaps impossibility of controlling measles in such a satisfactory fashion as is possible with some other infectious diseases, we think much good might be done by notification even as apart from hospital isolation, more especially in the way of excluding from school the children from infected houses and of thus preventing the necessity for school closure. Mr. Adams reports that 18 cases of enteric fever were notified to him during 1895, and in one of the cases the evidence tends towards incriminating certain oysters eaten at Southend. The facts are these. Five persons went for the day to Southend, and the patient above referred to was the only one who ate oysters and the only one who was subsequently attacked with typhoid fever. Mr. Adams states that he has good reason for believing that this case is not the first instance of typhoid fever occurring at Maidstone which was to be traced to the consumption of infected oysters at Southend. We are glad to see that Mr. Adams has continued his very valuable records of the movements of subsoil water at Maidstone and that he has embodied the figures for 1895 in his report. A considerable portion of the interesting report before us is devoted to a consideration of the death-rate of Maidstone for the past twenty-six years, and a comparison of it with that of England and Wales for the same period. Mr. Adams shows that a large number of lives have been saved in Maidstone through the reduction of the death-rate during the period he deals with, and he demonstrates by an analysis of the figures the important fact that the chief reduction in the death-rate of Maidstone has taken place during the warmer months in each year—i.e., at a time when the effects of wise sanitary measures would be most likely to be apparent. This part of Mr. Adams's report will be read with much interest by those to whom the subject is important in Maidstone.

Southampton Port Sanitary District.—The port of Southampton is, Mr. Wellesley Harris states in his report, rapidly increasing in prosperity, and in a proportionate degree the risks of the importation of infectious disease are also multiplied. The sanitary authority is urged to draw up and adopt regulations under Section 125 of the Public Health Act similar to those in force at Liverpool and other large ports. During 1895 four cases of small-pox were imported by ships, but in each case the patient was removed from the vessel off Netley and conveyed to the Port Sanitary Hospital. Before the hospital was in use small-pox had to be isolated in the worst portion of Southampton, and the infection, Mr. Harris reports, rapidly spread from the hospital to the inhabitants living in the immediate vicinity. It is interesting to note that several cases of Beri-beri were brought by ships into Southampton Docks, and Mr. Harris was able to arrange for their admission into Netley Hospital. The small area of cubic space for seamen, as fixed by the Merchants Shipping Act, 1867, is made the subject of comment by Mr. Harris, who urges the desirability of increasing it. He points out that it is a difficult matter for the port sanitary officials to insist on improvement in structural details when they have already been passed by the Board of Trade. Doubtless the plan proposed by Dr. Collingridge in the report which we recently noticed in these columns would very materially assist in bringing about a better state of affairs. Arrangements are made at Southampton with the shipping companies frequenting the port for removal of small-pox cases prior to the arrival of the infected ship in port and for disinfecting infected articles and cabins. Mr. Harris refers to the prospect of the Quarantine Acts being repealed, and he not unnaturally suggests that part of the money saved by the disestablishment of the machinery of quarantine should be devoted to assisting port sanitary authorities in their work.

Bacup Urban Sanitary District.—Dr. John Brown reports that during September, October, and November, 1895, there were several cases of lead poisoning of a mild type in his district. Colic and anæmia, he states, were the chief symptoms. The cases were, it seems, associated with the public water-supply, and Dr. Brown suggests that the water committee should make experiments with lead piping lined with a non-metallic substance with a view to adopting it if it appears satisfactory. Most of these devices are somewhat costly and difficult to manage when bending is necessary.

Warrington Urban Sanitary District.—Mr. John Gornall, in referring to the necessity for providing a separate small-pox hospital as remote as practicable from the population, warns the Warrington sanitary authority in these words: "I would call to your remembrance the importance of the separation of a small-pox hospital from centres of population and remind you of the painful lesson that followed the contravention of this principle in our own case in 1892." Mr. Gornall quotes from the recent Memorandum on Isolation Hospitals issued by the Local Government Board, in which suggestions are made in reference to the conditions which should be observed in selecting a site for a small-pox hospital, with a view of diminishing as far as seems practicable at present the dangers which must necessarily attach to the establishment of such hospitals in the vicinity of towns. Mr. Gornall and the borough surveyor have, it appears, provisionally chosen a site which conforms to these conditions, and a map is supplied in the report showing the houses in the several zones around the site. It is surely unnecessary to insist that the Warrington sanitary authority should act without delay on the advice of their medical officer of health and not again expose their district to avoidable risks. Mr. Gornall reports that during last summer the river Mersey near Warrington gave off "most filthy emanations," which were a source of discomfort to the occupiers of the adjoining houses. The condition of the Manchester Ship Canal, owing to its proximity to Warrington, is a matter of much concern to the inhabitants of that borough, more especially as the

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town is developing southward towards the canal. Up to the present there has been, Mr. Gornall states, but little to complain of in the condition of the Canal.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6261 births and 3598 deaths were registered during the week ending June 20th. The annual rate of mortality in these towns, which had been 17·8 and 16·7 per 1000 in the two preceding weeks, rose again last week to 17·3. In London the rate was 16·2 per 1000, while it averaged 18·1 in the thirty-two provincial towns. The lowest rates in these towns were 10·2 in Derby, 11·0 in Croydon, 13·2 in Swansea, and 13·7 in Bradford; the highest rates were 21·0 in Portsmouth, 21·6 in Birmingham, 21·9 in Sunderland, 22·4 in Manchester, and 23·0 in Salford. The 3598 deaths included 591 which were referred to the principal zymotic diseases, against 559 and 541 in the two preceding weeks; of these, 210 resulted from measles, 114 from diarrhœa, 111 from whooping-cough, 71 from diphtheria, 46 from scarlet fever, 39 from "fever" (principally enteric), and not one from small-pox. The lowest death-rates from these diseases were recorded in Blackburn, Swansea, Plymouth, and Brighton; and the highest rates in Leicester, Manchester, Salford, Oldham, and Hull. The greatest mortality from measles occurred in West Ham, Nottingham, Sheffield, Manchester, Oldham, Gateshead, and Hull; from scarlet fever in Salford; from whooping-cough in Sunderland, Cardiff, and Huddersfield; from "fever" in Birkenhead; and from diarrhœa in Salford and Leicester. The 71 deaths from diphtheria included 40 in London and 13 in Manchester. No fatal case of small-pox was registered during last week in any of the thirty-three large towns. There were 41 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 20th inst., against 19, 25, and 27 at the end of the three preceding weeks; 18 new cases were admitted during the week, against 3, 8, and 9 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2811, against 2679, 2717, and 2781 on the three preceding Saturdays; 309 new cases were admitted during the week, against 297, 318, and 352 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had declined from 230 to 183 in the three preceding weeks, further fell to 162 last week, and were 56 below the corrected average. The causes of 59, or 1·6 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Bradford, Newcastle-upon-Tyne, and in fourteen other smaller towns; the largest proportions of uncertified deaths were registered in Bristol, Swansea, Birmingham, and Liverpool.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·2 and 18·5 per 1000 in the two preceding weeks, rose again to 18·9 during the week ending June 20th, and exceeded by 1·6 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 15·6 in Edinburgh and 15·7 in Paisley to 23·9 in Perth and 24·4 in Greenock. The 553 deaths in these towns included 33 which were referred to measles, 18 to diarrhœa, 16 to whooping-cough, 5 to scarlet fever, 5 to diphtheria, and 5 to "fever." In all, 80 deaths resulted from these principal zymotic diseases, against 81 and 69 in the two preceding weeks. These 80 deaths were equal to an annual rate of 2·7 per 1000, which was slightly below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 25 and 21 in the two preceding weeks, rose again to 33 last week, of which 26 occurred in Glasgow and 5 in Dundee. The 18 deaths from diarrhœa showed a slight further increase upon recent weekly numbers, and included 5 in Glasgow and 4 in Edinburgh. The fatal cases of whooping-cough, which had declined in the five preceding weeks from 38 to 23, further fell to 16 last week, of which 13 occurred in Glasgow. The deaths referred to scarlet fever, which had been 8 and 4 in the two preceding weeks, were 5 last week, and included 2 in Leith. Of the 5 fatal cases of diphtheria, 2 were recorded in Glasgow and 2 in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 93 and 82 in the two preceding weeks, rose again to 87 last week, and were within 10 of the number in the corresponding period of last year. The causes of 34, or 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 19·8 and 23·7 per 1000 in the two preceding weeks, declined again to 22·5 during the week ending June 20th. During the past twelve weeks of the current quarter the death-rate in the city has averaged 23·1 per 1000, the rate during the same period being 3·2 in London and 1·9 in Edinburgh. The 151 deaths registered in Dublin during the week under notice showed a decline of 8 from the number in the preceding week, and included 18 which were referred to the principal zymotic diseases, against 8 and 10 in the two preceding weeks; of these, 6 resulted from diarrhœa, 5 from whooping-cough, 4 from scarlet fever, and 3 from "fever." These 18 deaths were equal to an annual rate of 3·7 per 1000, the zymotic death-rate during the same period being 3·2 in London and 1·9 in Edinburgh. The 6 fatal cases of diarrhœa exceeded the number recorded in any recent week. The deaths from whooping-cough, which had been 1 and 4 in the two preceding weeks, further rose to 5 last week. The 4 fatal cases of scarlet fever also showed a further increase upon recent weekly numbers. The deaths referred to different forms of "fever," which had declined from 5 to 2 in the three preceding weeks, were 3 last week. The 151 deaths in Dublin last week included 25 of infants under one year of age, and 38 of persons aged upwards of sixty years; the deaths of infants showed a decline, while those of elderly persons slightly exceeded the number in the preceding week. Three inquest cases and 5 deaths from violence were registered; and 49, or nearly a third, of the deaths occurred in public institutions. The causes of 8, or more than 5 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE ARMY MEDICAL STAFF.

BRIGADE-SURGEON-LIEUTENANT-COLONEL BARRY, M.D., Senior Medical Officer at Curragh, will retire from the service next month on his reaching the age of fifty-five.

ARMY MEDICAL STAFF.

Brigade-Surgeon-Lieutenant-Colonel Henry Stannard retires on retired pay.

INDIA AND THE INDIAN MEDICAL SERVICES.

The following appointments have been made:—Surgeon-Major Addison, A.M.S., to Medical Charge of the Station Hospital at Kirkee. Surgeon-Captain C. E. Sunder, Resident Surgeon, Eden Hospital, Calcutta, to act as Civil Surgeon of Rangpur, during the absence on deputation of Surgeon-Major J. H. T. Walsh. Surgeon-Lieutenant C. R. Stevens, on supernumerary duty in connexion with anti-choleraic inoculation, to be Resident Medical Officer of the Medical College Hospital, Calcutta, vice Surgeon-Captain C. E. Sunder, transferred. Surgeon-Lieutenant Kukdy is transferred from the Poona to the Deesa District.

MILITIA MEDICAL STAFF.

Surgeon-Lieutenant-Colonel J. H. Wright, 3rd Battalion the Duke of Wellington's (West Riding Regiment): resigns his commission, also is permitted to retain his rank and to wear the prescribed uniform on his retirement.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant Walter A. Atkinson, M.B., to be Surgeon-Captain. Surgeon-Lieutenant Henry George Outram Collett, 1st North Riding of Yorkshire Volunteer Artillery, to be Surgeon-Lieutenant. Surgeon-Lieutenant Samuel John James Kirby, 2nd Volunteer Battalion the Suffolk Regiment, to be Surgeon-Lieutenant.

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VOLUNTEER CORPS.

Artillery: 7th Lancashire (the Manchester Artillery): Surgeon-Captain R. A. S. Daly to be Surgeon-Major. 8th Lancashire: Joseph David Wright, M.B., to be Surgeon-Lieutenant. *Rifle:* 13th Middlesex (Queen's Westminster): Bertram H. Lyne Stivens, M.D., to be Surgeon-Lieutenant. 1st Volunteer Battalion the Manchester Regiment: Surgeon-Lieutenant W. F. O'Grady to be Surgeon-Captain. 5th (Deeside Highland) Volunteer Battalion the Gordon Highlanders: Surgeon-Major G. Cran, M.D., to be Surgeon-Lieutenant-Colonel.

VOLUNTEER MEDICAL STAFF CORPS.

The Maidstone Company: Surgeon-Captain H. F. H. Barham resigns his commission.

THE RISING IN MASHONALAND.

There has been a good deal of hard fighting in Mashonaland, and the news generally is far from satisfactory, for it shows that the native rising has greatly extended. From the present aspect of affairs it looks very much as if reinforcements from this country for South Africa would be required. It is curious how little we know of the hospital arrangements and of the condition of the wounded in connexion with what is taking place. It seems that the experience obtained in Matabele in regard to the Lee-Metford bullet is very similar to that which was found to have been the case in Chitral—viz., that the bullet is defective in "stopping" power. The natives assert that unless the bullet struck a vital part it did not prevent the Matabeles from continuing the fight, although numbers of them died subsequently from the effects of the wounds inflicted by the Lee-Metford rifles. Experiments conducted in India and this country have led to some alterations by which this defect has been satisfactorily overcome. The alteration proposed in India will not, it is alleged, interfere with the present sighting of the rifle.

THE SOUDAN CAMPAIGN.

Since our capture and occupation of Firket and Suarda there has been little or no fighting in the Soudan. All who have had an opportunity of seeing the country around these places seem to be agreed as to the correctness of the information obtained by the Intelligence Department of the Egyptian Army. The rule of the Dervishes has been one of terrible cruelty; the country, once so fertile and cultivated, has been quite laid waste; all trade has been destroyed, and the native population generally are only too glad to welcome an expedition which will rid them of the oppressive rule under which they have been living. The government of the Egyptians when they held the country was no doubt also very bad, but we may confidently believe that under English guidance it will soon be very different and that the unfortunate people will be allowed to follow their agricultural pursuits in peace. The Anglo-Egyptian expedition is healthy, and the hospital and sick transport services are working satisfactorily.

RETIREMENT OF SURGEON-LIEUTENANT-COLONEL CARLESS OF DEVIZES.

Surgeon-Lieutenant-Colonel E. N. Carless, M.B., C.M. Aberd., the medical officer of health for Devizes, who has been associated with the 2nd V.B. Wilts Regiment as medical officer for nearly a quarter of a century, has just resigned his commission, and has been granted permission to retain his rank and continue to wear the uniform of the regiment on retirement. He has the volunteer officer's decoration, and has rendered much useful service at regimental and brigade camps and he inaugurated the ambulance movement in the battalion, which has since led to the establishment of a properly equipped bearer company for the brigade. His retirement is much regretted.

FEMALE DEVOTION REWARDED.

The French War Minister has awarded medals of honour to two ladies in connexion with the Madagascar Expedition. The recipients are Madame Jay (in religion Sister Zénaïde), Superior of the Saint Joseph de Cluny Mission, who throughout the operations exhibited the utmost devotion in the hospital at Majunga, and who, moreover, reckons upwards of fifteen years' service in the island; and Miss Christina Byam, for thirteen years the directress of the English hospital at Soavinandriana. The latter establishment served as an annex to the military hospital at Antananarivo, being utilised chiefly for sick officers and wounded soldiers.

SURGEON-MAJOR-GENERAL TAYLOR.

We are glad to learn that Surgeon-Major-General W. Taylor, M.D., is to remain supernumerary pending his absorption in due course when the officer who stands next senior to him as Surgeon-General is promoted. It is only a fair and just arrangement to the medical service generally that the State should not reward an officer at the expense of other officers by retarding their promotion. It is quite right that an officer should be rewarded for services rendered, and Surgeon-Major-General Taylor's work in the late campaign in Ashanti was fully entitled to recognition. We have only to add our congratulations on his promotion.

Correspondence.

"Audi alteram partem."

THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

To the Editors of THE LANCET.

SIRS,—In formulating any scheme for the improvement of the constitution of the Council it is clearly evident that one must have regard, in the very first instance, to the *raison d'être* of the College itself. This has been set forth, first in the Charter of 1800, and repeated in many subsequent Charters, as being for "the promotion and encouragement of the study and practice of the art and science of surgery." This duty was entrusted to a body which has had various names and is now known as the Council of the College. It was given the privilege of admitting men under certain conditions to the Membership of the College, and thereby of licensing them to earn a living by becoming practitioners of surgery. Until the year 1844 the members of the Council (twenty-one in number) were self-elective—i.e., when a vacancy occurred it was filled up by the votes of the remaining members from the general body of Members. A council so constituted could, of course, have no claim to the confidence of the general body of Members, and, as might have been expected, abuses of many kinds were rampant in the management of the College. By the Charter 7th Victoria, 1843, however, a master hand in diplomacy altered this state of affairs. By this charter a new class of Members was created, who were to be known as "Fellows."

The Council was given power to elect before the expiry of one year from the date of the charter such Members of the College as seemed to them fit and proper persons to be created "Fellows"; and after this period no person was to obtain the Fellowship unless he had attained the age of twenty-five and complied with the regulations of the Council, nor unless he had passed such special examination as the Council might from time to time think fit. Among these regulations one of the most important was that of the extension of the usual period of study. It was further declared by this Charter that, while the already existing twenty-one members of Council were to hold office, as heretofore, for life, in July of the following year three new members were to be added to the Council, and that as vacancies occurred by the death of original or life members these were to be filled up in the same manner as the additional three of 1844. Now herein comes the master stroke of far-sighted diplomacy. These new members of Council were to be elected by the general body of Fellows, and, further, from their number only. In this way perhaps the greatest impetus to the "promotion and encouragement of the study and practice of the science and art of surgery" was given which the annals of the College can boast of. Men of good parts were directly encouraged to spend a longer time at their studies and to aim at a higher diploma. As inducements to this they were made eligible for membership of the Council, and they alone were empowered to vote for members of this body. While this encouragement to the pursuit of higher surgery was given, the old-time, close, and utterly objectionable constitution of the council was abrogated, and not only so, but security was given that future members of it should be chosen only (as far as could be done) from those who, broadly speaking, were the best educated Members of the College, who had shown themselves to be the most enterprising and energetic, and who perhaps took the greatest interest in the affairs of the College. I need hardly pause here to say that most undoubtedly there are many men among the ranks of "Members" simply who are in every respect as worthy of the rank of Fellow as if they possessed it, but who through

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force of circumstances have chosen to remain Members only. I speak in a broad sense.

It is proposed now that "Members" of the College, as such, should also elect representatives on the Council. For what object? And what will be the result if the proposal be carried out? The use of the word "representative" in connexion with Members of the Council is very singular. An examination of the Charters gives no warrant for it whatever. The Council is a body created or chosen to carry on the work of the College. No Member of it has any warrant for saying that he is such as representing the interests of any portion of the body corporate. He represents the entire body—the College itself. There are no interests of the Fellows apart from those of the Members, nor have the latter any apart from those of the former. The Council is an academic body with objects and functions apart from those of the profession generally. They have to admit candidates into the ranks of the profession, to maintain the library, museum, &c., and to uphold the interests of those who hold their diploma. Can it be truly said that they fail to fulfil those duties? As has been said by Sir Wm. Erichsen, "The only way to establish the claims of the Members would be to rest their case on the only ground that would be unassailable—namely, that the Council has been negligent of, or indifferent to, the conduct of its affairs, and that its interests, material, educational, and scientific, have consequently suffered in its hands."[1] Can this be truly said of the Council at the present day? I confess that when I first took my seat as a Member, I was somewhat prejudiced against it as a body, partly by reading *ex-parte* articles in the medical journals, but above all by the gratuitous difficulty which was thrown in one's way in voting for members of the Council. For eleven months in the year one was left in peaceful happiness. Then came the time of an election, with a most roundabout, troublesome system of voting, which was agonising and blood-boiling, and led one to think that the articles one had read must be true, and that the Council was a conservative, out-of-date body of men. Happily, this is now all changed, and the manner of voting is simplicity itself. Having uttered this growl I am happy in making the *amende honorable*, and declaring that I have found the Council most anxiously solicitous to carry out its duties in a business-like manner. Indeed, the very opposite of my previous ideas now possesses me, inasmuch as it appears sometimes over anxious to appease its critics, and to "wear its heart upon its sleeve for daws to peck at." I hold that a member of Council should be free to act as his best judgment advises him, and not to feel hampered as the nominee or representative of some party which has "carried him in" to support some line of policy. But if in the future "representatives" of the Members be sent to the Council, what then? After a little while some of those gentlemen would begin to ask themselves, Why are we here? The result would be the introduction of topics for discussion wholly apart from those pertaining to an academic body, but which rightly belong to the whole republic of the medical profession, wheresoever its Members may have gained admittance to it. These are subjects for the consideration of voluntary societies, such as the British Medical Association, the Medical Defence Union, and so on, and are concerned with the furtherance and protection of the interests of their members, individually or as a whole. To introduce such subjects—most legitimate in their proper place—would inevitably tend to lower the position of the Council.

An argument for the representation of Members has been used which appears to me to be the veriest clap-trap. It is said that taxation means representation. But when a man prepares to enter the medical profession and makes up his mind as to which portal he will pass through he knows what the costs are. He pays his fees and he receives his *quid pro quo:* he receives a Licence to practise and to earn his livelihood by the practice of surgery. The expenses of the institution which gives him his Licence must be provided for, and if not by these Licentiates, then by whom? Notwithstanding all the able articles which have appeared in the columns of THE LANCET to the contrary, I cannot believe that there is any widespread desire on the part of Members of the College to be represented on its Council. It appears to me that the agitation is kept up by a mere handful of men in and around London, who meet over and over again. Nor is there any extensive knowledge of "College politics" either among the Members or Fellows. Most of them to whom one speaks on the subject say, "What is all the row about?" or something equivalent.

Finally, I feel very strongly that if this movement be successful it will be a distinctly retrograde step. Men will think twice before undergoing the severe ordeal for the Fellowship, with its barren honours. They will think, Why all this when I can get as much by being a Member? And hence the promotion of the science and art of surgery will suffer. I appeal strongly to my colleagues in the Fellowship to do all they can to resist this movement.

I am, Sirs, yours faithfully,

Manchester, June 20th, 1896. JAMES HARDIE.

*** Our own views are, as is well known, diametrically opposed to those set forth above by our correspondent. But we are always desirous to give fair hearing to both sides, and willingly publish the letter of a distinguished provincial surgeon, who is himself a member of the Council of the College.—ED. L.

[1] Rivington: The Medical Profession. 1887.

DIRECT REPRESENTATION ON THE GENERAL MEDICAL COUNCIL.

To the Editors of THE LANCET.

SIRS,—As my esteemed colleagues in the representation of England and Wales have thought that the time has come for announcing their resignation, it is but respectful to my fellow practitioners that I should take this early opportunity—by your favour—of saying that it is my intention to solicit again the honour of re-election at their hands. Though a bad judge, I am not conscious of having done anything in the Council to discredit the principle of direct representation, or to forfeit the kindness and confidence of the profession which have twice placed me there as one of its elected representatives. Other opportunities will soon occur of stating my views to the registered practitioners of England and Wales; but I shall ask you meanwhile to kindly publish the following correspondence, which will explain my opinions on some questions of importance. I may be allowed in one sentence to say that, whatever the choice of the profession at the next election, I consider the loss of Mr. Wheelhouse and Sir Walter Foster a very real one to the Council and to the profession.

I am, Sirs, your obedient servant,

Highbury, N., June 23rd, 1896. JAMES GREY GLOVER.

Incorporated Medical Practitioners' Association,
Registered Office, 11, Adam-street, Strand, June 15th, 1896.

DEAR SIR,—I am directed by the Central Council of this association to say that as it is reported that you may probably present yourself as a candidate for election as a direct representative on the General Medical Council at the forthcoming election, my council would be glad to know your views on questions of importance to the medical profession. The council would therefore feel obliged if you would favour me with an answer to the following questions at your earliest convenience. Thanking you in advance.

I am, dear Sir, yours faithfully,

Dr. J. G. Glover. FRANK GREAVES, Hon. Sec.

1. Would you, if elected, support a motion in the General Medical Council advocating a complete reform of the Medical Acts?
2. What action would you take in the Council concerning a proposal to register midwives as independent practitioners?
3. Would you support any motion in the Council condemning the holding of appointments under medical aid associations which make a profit out of their medical officers, and which canvass from door to door for patients?
4. Would you support a motion in the Council asking for the appointment of further direct representatives upon the Council, as provided for in the Medical Act of 1886?

25, Highbury-place, June 19th, 1896.

DEAR MR. GREAVES,—As it is my intention to offer myself again as a candidate for the office of direct representative of the profession—to which the profession has twice done me the great honour to elect me—I gladly respond to your letter as the Hon. Sec. of the Incorporated Medical Practitioners' Association inquiring my views on four specific questions. Yours very truly, J. G. GLOVER.

1. Would you, if elected, support a motion in the General Medical Council advocating a complete reform of the Medical Acts?

I should support an amendment of the Acts in the way of strengthening and making more clear and effective the clauses against all false, fraudulent, and unqualified forms of practice as well as against the misleading use of titles, and of increasing the proportion of direct representatives of the profession.

2. What action would you take in the Council concerning a proposal to register midwives as independent practitioners?

While impressed with the necessity of saving poor lying-in women from death and disease at the hands of midwives ignorant of the first principles of puerperal hygiene, I should be strongly opposed to any Bill which did not make clear the non-medical function of the midwife and the need for her being supervised by a medical practitioner in all unusual cases.

3. Would you support any motion in the Council condemning the holding of appointments under medical aid associations which make a profit out of their medical officers and which canvass from door to door for patients?

Such methods of practice are inconsistent with justice to private practitioners, with the best traditions of the profession, and with the

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real interests of the public. Primarily the condemnation of them is the duty of the qualifying bodies of the profession. (I have taken some pains in the Council—not without some success—to quicken in all the qualifying bodies the sense of responsibility for the use of their disciplinary powers.) But I have already proposed or supported their condemnation in the Council, and should do so again if necessary.

4. Would you support a motion on the Council asking for the appointment of further Direct Representatives upon the Council as provided for in the Medical Act of 1886?

I should support such a motion with pleasure.

To the Editors of THE LANCET.

SIRS,—At the annual meeting of the Lancashire and Cheshire Branch of the British Medical Association held to-day it was resolved to recommend and support the candidature of Dr. Samuel Woodcock, Dr. Glover, and Dr. Lovell Drage as Direct Representatives of the medical profession in the General Medical Council.

I am, Sirs, yours faithfully,

Southport, June 24th, 1896. JAMES BARR, Hon. Sec.

To the Editors of THE LANCET.

SIRS,—I read in THE LANCET of to-day that Sir Walter Foster and Mr. Wheelhouse will not seek re-election on the General Medical Council. I regret this step on the part of Sir Walter, as I have thought it useful to have a member in Parliament on the Council. Sir Walter, in conjunction with his colleagues, Mr. Wheelhouse and Dr. Glover, have done much useful work in the interest of the profession and in the cause of the general practitioner, but I think with the voice of the great majority of the profession, as they evidently do think, that the three direct members of the General Medical Council should all be general practitioners. As a probable candidate I have enclosed you my answers to the questions submitted to me by the honorary secretary of the Incorporated Medical Practitioners' Association. At the last election I obtained 4818 votes; should I again seek the honour this encouragement with many promises of support that I have received from my friends must be my apology.

I am, Sirs, yours very truly,

FREDERICK H. ALDERSON, M.D.,

Vice-President of the Incorporated Medical Practitioners' Association, Hon. Vice-President of the West London Medico-Chirurgical Society.

June 20th, 1896.

Dr. Alderson's Reply to Questions submitted by the Hon. Sec. of the Incorporated Medical Practitioners' Association.

[COPY]

1. Yes, the amendments proposed by the British Medical Association meet with my approval and with a few additions might be desirable to accept and all perhaps that would be attainable.

2. I should oppose any Bill that would create a new order of partly qualified practitioners, and thus violate the principle of the Bill of 1886. At the same time I am not opposed, and believe some legislation is necessary to control and prevent the present unlicensed (and in many cases lamentably ignorant) practice of midwives in poor neighbourhoods. The midwife should be known and legally described as an obstetric nurse and the term midwife should never be used officially; and in my opinion it is desirable that the practice of the obstetric nurse should be under the supervision of the general practitioner, and in the present crowded state of the profession is quite feasible. I am in favour of the suggestion of Dr. Fraser as mentioned in THE LANCET of Feb. 29th, and especially as to the need for the registration of still births.

3. Yes, I am strongly opposed to medical aid associations that make a profit of the skill and labour of their medical officers and which canvass from door to door. It is this practice that has proved so inimical to the interests of the general practitioner, but in my opinion the only effectual remedy is to render the practice illegal by the General Medical Council.

4. Yes, I have advocated in my speeches and by writing for many years for an increase to the number of the direct Members to the General Medical Council, and this effort shall have my strong support.

June 16th, 1896. FREDERICK H. ALDERSON, M.D.

To the Editors of THE LANCET.

SIRS,—Since the announcement in your issue of Saturday last that Sir Walter Foster and Mr. Wheelhouse do not propose to offer themselves for re-election as direct representatives on the General Medical Council I have received numerous inquiries as to whether I purpose to again come forward as a candidate. I shall feel obliged if you will allow me to state through your columns that when the proper time arrives I intend to issue an address to my brother practitioners soliciting their support at the forthcoming election.—I remain, Sirs, yours faithfully,

GEORGE BROWN,

Ex-President of the Incorporated Medical Practitioners' Association.

Charing-cross-road, W.C., June 24th, 1896.

To the Editors of THE LANCET.

SIRS,—The announcement in THE LANCET of June 20th that Mr. Wheelhouse and Sir Walter Foster will not seek re election on the General Medical Council is hardly a surprise. That they should have been willing to fight for ten years the battle of the profession on a Council in which the direct representatives are outnumbered as five to one proves two things: (1) their *patience*, and (2) their *fighting capacity*. But it must have been a weary warfare in a hopeless minority, "supported" by that disorganised rabble called "the profession." And I wonder how much encouragement, how many "votes of thanks" they have received? ("Thanks" cost little and should be plentiful.) I noticed lately in the pages of the *British Medical Journal* that Dr. Lovell Drage had been invited to become a candidate in opposition either to Mr. Wheelhouse or Sir Walter Foster, on the ground that a "general practitioner" was required. Now, I have the highest regard for Dr. Drage, but to those who invited him to oppose—if they be general practitioners—I would say they are guilty of base ingratitude. No two men could have more honourably and faithfully carried out the duties entrusted to them by the vote of general practitioners than Mr. Wheelhouse and Sir Walter Foster. But, Sirs, the purpose of this letter is not to praise those who are beyond praise, but to ask, Is it really worth while filling up the vacancies on the General Medical Council which will occur next November?

I suggest the negative for the following general reasons: (1) That the Government of the profession by the General Medical Council is virtually "government by schoolmasters"; (2) that the work done by it fails to justify its existence; (3) that if the profession at large elect members (direct representatives) they by so doing recognise an effete body.

Better let it severely alone—"let it stew in its own gravy"—and I only hope that Dr. Glover and Dr. Bruce will follow the lead of Mr. Wheelhouse and Sir Walter Foster.

I am, Sirs, yours faithfully,

June 22nd, 1896. COLIN CAMPBELL.

THE ROYAL MEDICAL BENEVOLENT COLLEGE.

To the Editors of THE LANCET.

SIRS,—May I ask for space in your columns to acknowledge the receipt of 500 guineas collected from his patients by Mr. Hames in aid of the funds of the Royal Medical Benevolent College. I venture to hope that such success achieved by one medical practitioner may incite others to aid by enlisting the active practical sympathy of their patients in their several districts. I would take this opportunity of thanking the members of many of the branches of the British Medical Association for the grants voted in aid of the College. Last week the South-Eastern Branch, with which I have been associated all my professional life, voted £21 to the College and £21 to the British Medical Benevolent Fund. Such aid and such sympathy are simply invaluable to the governing bodies of both charities.

I am, Sirs, yours truly,

C. HOLMAN, M.D.,

Treasurer, Royal Medical Benevolent College.

Soho-square, W., June 23rd, 1896.

"THE CAUSE OF MALARIA."

To the Editors of THE LANCET.

SIRS,—The personal equation has to be discounted in assessing the value of all observations, particularly all microscopical observations. When a statement is made which is in complete opposition to general experience, cautious men, before accepting the statement, require to know something about the capacity and character of the person who makes it. In a matter so special and difficult as blood microscopy the observations of the amateur have a very different value from those of the practised and proved expert. The statements of the former, before they can be accepted, must be carefully substantiated by detailed evidence and, if possible, confirmed by men of recognised capacity, and this more especially if it be sought to overthrow on the strength of such statements so well established a theory and one so pregnant with vast practical consequences to mankind as that which recognises the causal relationship of the phenomena of malaria to Laveran's bodies. The responsibility of leading or misleading

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opinion on so momentous a subject is very grave indeed, and it is the duty of any one who assumes this *rôle* to exercise every precaution in guarding against error and to produce his vouchers when called on.

These remarks are intended to be *apropos* of some of the statements made by Surgeon-Lieutenant-Colonel Lawrie in his paper in THE LANCET of June 20th. Therein he says of a certain patient who had fever for the first time last September that "crescents were discovered in his blood the day after the first attack commenced." He does not mention the name of the observer, and he gives no particulars which would enable a reader to form an opinion on the value of the observation. In common with many others I have always believed that the crescent form of the malaria parasite does not appear in the blood until the end of the first week or during the second or third weeks from the commencement of certain types of malarial fever. This has hitherto been the experience of all careful and practised observers who have given special attention to the point. Not to mention continental names, Thayer and Hewetson remark: "These forms are not seen during the first days, but appear generally during the second or third week." Until we have further details, therefore, Surgeon-Lieutenant-Colonel Lawrie must not expect pathologists to accept this statement so contrary to general experience. Further, if this observation was made by any or all of the "three competent observers" who afterwards failed to find the malarial parasite in the same patient on the first day of a subsequent attack of ague pathologists will be inclined to doubt the capacity of these observers, and therefore the value of the later observation and, of course, the validity of the conclusions Surgeon-Lieutenant-Colonel Lawrie draws from it. Assuming, however, that this last observation was correct (as it very well may be), it by no means follows that the organism which was subsequently found in the blood was the consequence and not the cause of the fever, as Surgeon-Lieutenant Colonel Lawrie has argued on *post hoc* principles. Spleen and liver and other organs, and not the peripheral blood, are well known to be the principal habitats of most varieties of the malarial parasite. If this be the case, for all Surgeon-Lieutenant-Colonel Lawrie knew and for all he has advanced, or, rather, not advanced, Laveran's bodies may have existed in the spleen or liver at the very time when his "three competent observers" searched in vain for them in finger blood. Why should an organism confined to the spleen not cause fever? A streptococcus in the skin gives rise to the fever of erysipelas. Local infections are constantly associated with fever. Why not plasmoidal infection of the spleen?

I would ask Surgeon-Lieutenant-Colonel Lawrie to explain what he means by "swarming movements" The malarial parasite exhibits three or four forms of movement which Surgeon-Lieutenant-Colonel Lawrie seems to have confounded together: (*a*) amœboid movement; (*b*) slow translation of pigment particles while the parasite is alive and within the red blood corpuscle; (*c*) more violent translation of pigment in the crescent-derived sphere and flagellated organism; and (*d*) Brownian movement of fragmented pigment in those intra-corpuscular bodies which from compression by the cover-glass have been forced from the corpuscles and are lying free and probably crushed and dead in the liquor sanguinis. Intra- and extra-corpuscular "swarming" are, therefore, not always the same thing. One is a vital movement, the other—unless in the case of the crescent-derived spheres and flagellated bodies—is simply a Brownian movement of dead, disorganised matter. The "swarming" of leucocytes is, I presume, merely the ordinary vital amœboid movement of these bodies—a movement in no way analogous to the different kinds of movement of pigment in the malarial parasite. What Surgeon-Lieutenant-Colonel Lawrie describes as the evolution of a rosette body is easily explained. When the preparation in question was first put up, doubtless the film of blood was still rather thick, and, in consequence, the only part of the rosette readily seen was the more conspicuous central block of black pigment. After a time the attraction of cohesion between the slip and the cover-glass gradually compressed the corpuscle, spreading it out and rendering its contents more visible, so that the spores of the rosette came gradually and distinctly into view. This is a common occurrence and familiar to all who work with malarial blood. But even assuming, with Surgeon-Lieutenant-Colonel Lawrie, that Laveran's bodies are merely leucocytes inside or outside red blood corpusles, how explain, unless on the ground of imperfect visibility or observation, the fact that this particular leucocyte was not seen from the first? Does Surgeon-Lieutenant-Colonel Lawrie wish his readers to infer that a white blood corpuscle was created under his eyes? The reappearance of what Surgeon-Lieutenant-Colonel Lawrie calls "the original cell wall" I cannot pretend to explain, unless on the supposition that it had never disappeared, only, in consequence of imperfect focussing, seeming to do so. I cannot understand what Surgeon-Lieutenant-Colonel Lawrie means by the disappearance and reappearance of the cell wall of the leucocyte. Has the leucocyte a cell wall?

Those interested in this subject would, I feel sure, be glad if Surgeon-Lieutenant-Colonel Lawrie would re-state more explicitly and in greater detail the facts he argues from, and, above all, if he would give his authorities as well as careful drawings bearing on what he calls "signs of the well-marked relation of Laveran's bodies to the white blood cells." I confess, although I read it very carefully, I was not convinced by his first paper that any such relationship existed.

I am, Sirs, yours truly,

June 22nd, 1896. PATRICK MANSON.

PREVENTION OF DISASTER AT SEA.

To the Editors of THE LANCET.

SIRS,—The time is opportune once again to attempt to open the eyes of the authorities at the Board of Trade to the necessity of securing prompt and effective legislation as regards the prevention of disaster at sea as far as it depends on "colour- and night-blindness in look-out men" on board steamers. This is a special factor in collisions. The recent awful calamity will no doubt stir up engineering art to devise some means of greater precision and security in bulk-head appliances, so that under no circumstances could such an immediate and wholesale disaster occur. Our art is also concerned with prevention. Should two steamers crossing the Atlantic meet in swift opposing contact—which may God avert—there would be such loss of life as to make the nation tremble, and it might be found after the disaster that due attention had not been paid to the "eyes of the ship." Where, then, would this responsibility rest? The chilly reception accorded to the notable deputation of experts by the late President of the Board of Trade no doubt many of your readers remember. *Cui bono?* Unless the present Government is benumbed by the exuberance of legislative work or overplus of majority, it is to be hoped that a beneficent measure aiming at the saving of life from preventable disaster at sea might receive attention if properly brought to Mr. Ritchie's notice. I need only say I turn to THE LANCET as the sentinel of the profession to urge that this most pressing and ever imminent danger be averted which, if pooh-poohed, will some day bring wide-spread destruction and grief. Twenty-five years ago this was foreseen by me, and I make no doubt that hundreds of unrecorded deaths have ensued through neglect of the measures of precaution and prevention then urged, and many unexplained collisions due to similar causes have never been satisfactorily accounted for.

I am, Sirs, yours obediently,

R. A. CALDWELL.

Henrietta-street, Cavendish-square, W., June 22nd, 1896.

"LITHOTRITY: COMPLICATED AND SIMPLE."

To the Editors of THE LANCET.

SIRS,—I have read with much interest the lengthy paper on the above subject recently published in THE LANCET by Mr. Milton of Cairo, and as litholapaxy is an operation I am called upon to perform about forty times every month I should like to offer some remarks thereon. First, Mr. Milton is to be congratulated upon having successfully crushed what is almost certainly the heaviest stone ever thus treated—one of twelve ounces—the largest ever removed in this manner at the Civil Hospital here having been eight ounces, crushed by my predecessor, Surgeon-Lieutenant-Colonel Henderson, I.M.S., and I do not know of any other heavier calculus having been crushed in India. Mr. Milton gives rather faint praise to his own modification of the lithotrite and evacuator combined, and I would add to the objections he already sees to the use of the instrument

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the great danger of presenting the unprotected serrated surface of the projected male blade to the bladder-wall during evacuation; thus the instrument is not only comparatively inefficient, but, what is worse, positively dangerous. The definition given of perineal lithotrity is generous, and the form of the operation effected by Mr. Milton is very slightly removed from that by the old stone crusher, as it is done through what is practically a lithotomy wound and entails as long a stay in hospital as the old lithotomy.

Mr. Milton fails to see what is gained by Keith's primal litholapaxy (the only operation, in my opinion, properly so-called), and then adds that he would "limit its application to cases in which it is impossible to pass the lithotrite down the penile portion of the urethra." If we interpolate the words "of sufficient power" after the word "lithotrite" in the above sentence we indicate precisely the cases for which Keith devised, performed, and recommended the operation, and the experience at Cairo, though small as compared with that at some Indian stations, must supply many such instances both among children and adults. I append the last five years' results of (1) urethral litholapaxy and (2) Keith's operation at the Civil Hospital, Hyderabad, Sind.

Urethral litholapaxy.		Cases.	Deaths.	Perineal litholapaxy.		Cases.	Deaths.
Mortality per cent., 1·31.	1891 ...	221	8	Mortality per cent., 1·97.	1891 ...	79	2
	1892 ...	328	5		1892 ...	45	1
	1893 ...	556	4		1893 ...	46	0
	1894 ...	313	3		1894 ...	56	2
	1895 ...	337	3		1895 ...	26	0
		1754	23			253	5

This represents the work of Keith up to May, 1894, and of Henderson for the rest of the period, and gives results which have probably never been surpassed, and which almost disarm criticism as to the methods pursued, while the figures for single years—e.g., 1893, the last year of Keith's service—are almost phenomenal. My own results since I took charge here on Feb. 1st last are—urethral litholapaxy, 151 cases and 1 death; perineal litholapaxy, 10 cases and 1 death; in all, 161 cases and 2 deaths; but the figures are too small to draw conclusions from.

I am, Sirs, yours faithfully,

RICHARD BAKER, M.A., M.D. DUB.,
Surgeon-Major, I.M.S.; Acting Civil Surgeon,
Hyderabad, Sind.

June 2nd, 1896.

"TOXICOLOGICAL EFFECTS OF CREOLIN."

To the Editors of THE LANCET.

SIRS,—We note in your current issue that you have commented on an article of Professor Hobday's on "Toxicological Effects of Creolin." We need not point out to you the advantages contained in our preparations, as they are too well known to you, and we feel sure also that you are convinced that if our preparations and "creolin" are used in a properly diluted form, as indicated by us in medical literature—viz., in 1 per cent. to 3 per cent. solutions as directed—absolutely no harm can be done. The experiments by Professor Hobday are carried on with "creolin" in practically undiluted form, and of course no one can expect good results; just as much nobody would expect a tenfold dose of any potent drug if taken would pass off harmless; but what we say, plainly, and which we feel sure is correct, is that if our preparations and "creolin" are used in a properly diluted form no harm whatever can arise, and therefore we believe that we are perfectly entitled to quote our preparations "innocuous."—We are, Sirs, yours faithfully,

For Jeyes' Sanitary Compounds Co., Limited,
WM. PLANNER, Secretary.

June 24th, 1896.

MEDICAL CERTIFICATES AND BOARD SCHOOLS.

To the Editors of THE LANCET.

SIRS,—At a meeting of the Council of the London and Counties Medical Protection Society, Limited, held on the 2nd inst. they had before them a complaint of Mr. R. B. Hunt to the effect that the parents of a child attended by him had been prosecuted for the non-attendance of their child at school, notwithstanding that Mr. Hunt had given a certificate of the child's unfitness to attend which the school attendance officer declined to accept as it did not state the exact nature of the child's disease. After discussion the following resolutions were unanimously passed:—

"The Council is strongly of opinion that a medical certificate concerning absence from school without stating the condition of the absentee's disease should be considered satisfactory by the School Board. The Council is also strongly of opinion that in no circumstances should a medical man in his certificate name the disease from which the absentee is suffering unless he *shall* have been requested to do so by the parents or responsible guardian of the scholar."

At a meeting of the West Ham School Board on June 9th the chairman called attention to the above prosecution, and said the school attendance officer exceeded his duty in taking proceedings without consulting the school attendance committee. The chairman also said he would be quite satisfied with a medical man's certificate that a child was unfit to attend school, even though the nature of the illness was not stated—in fact, he did not believe the board had any legal right to demand a certificate as to the nature of the illness and that it might be a breach of medical etiquette to state what the illness was.—I am, Sirs, your obedient servant,

HUGH WOODS,
Hon. Secretary London and Counties Medical Protection Society, Limited.

New-court, Lincoln's-inn, W.C., June 22nd, 1896.

"THE REMUNERATION OF MEDICAL MEN."

To the Editors of THE LANCET.

SIRS,—I read with great interest "M.D.'s" letter on the above subject in THE LANCET of June 20th. There is undoubtedly much discontent and dissatisfaction amongst medical men, and I have heard many medical men say that they were extremely sorry they had ever qualified, not because they were not fond of their work or profession, but because they found themselves after years of hard work unable to pay expenses. It is all very well for hospital lecturers and consultants to din into the student's ears what a noble and glorious profession he has adopted, &c., but they do not consider what those students are to do when they are fully fledged medical men. The consultant, as a rule, has very little notion of what general practice is. I remember some years ago listening to an opening address delivered by a physician to one of our London hospitals in which he made the following statement: "If the practitioner is in any doubt about the diagnosis or is unable to diagnose a case he should never prescribe." This was told to an assembly of students, of whom some 95 per cent. or more would become general practitioners. I fear the gentlemen who acted on this advice would not have many patients to look after at the end of a few months. I think parents and their sons who wish to enter our medical schools should be told before joining of the struggle for existence and the overcrowded condition of the profession which now exists. The leading members of our profession should consider that we are not all in their position, and, to put it plainly, the general practitioner has his living to make. This, I fear, the hospital surgeon or physician ignores, and the great aim and object of our medical schools is to get as many students as they can and not to bother themselves in the least what is to become of them afterwards. The General Medical Council should be increased considerably by members of the profession in general practice; they are far better able to judge of the wants of the general practitioner and also know more about the competition, poor remuneration, and struggle for existence than the medical man in a large consulting practice. I feel certain that many reforms must take place before many years. What is the outlook for the general practitioner at present? The profession already much overcrowded, fees small, the number of men qualifying increasing every year, the club or provident dispensary system, members paying 2*s.* 6*d.* per annum for medicine and advice, &c. The numbers can, and I think will, be reduced, and this can be done by raising the standard of the entrance examination and making it competitive, so that only a fixed number of new men are admitted. I am extremely pleased, Sirs, to see you taking this matter up, and I am sure you will by so doing receive the support and thanks of the whole profession.

I am, Sirs, yours faithfully,

M.R.C.S., L.R.C.P.

June 20th, 1896.

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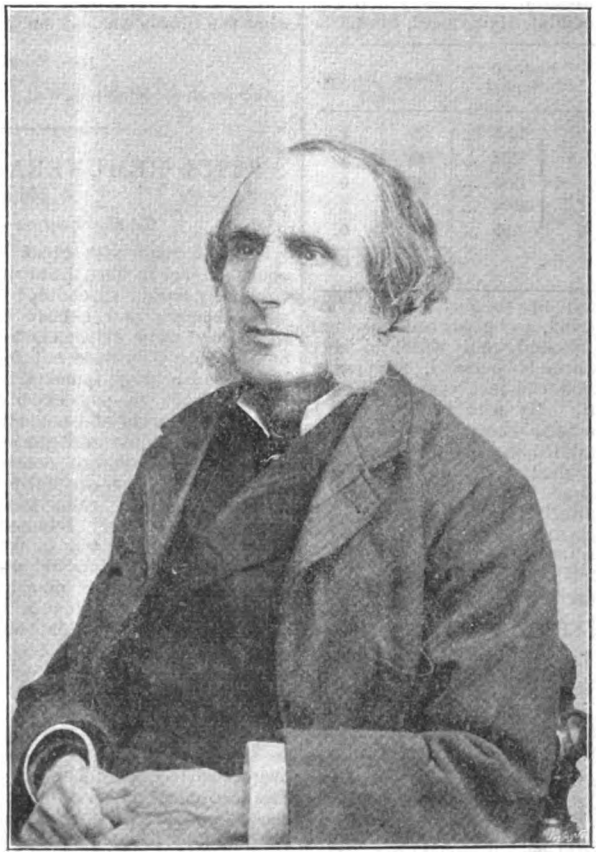
Obituary.

WILLIAM CHOLMELEY, M.D. ST. AND., F.R.C.P. LOND.

ON June 18th the consulting physician of the Great Northern Central Hospital entered into well-earned rest. Dr. Cholmeley was so intimately connected with the Great Northern Hospital from practically its foundation that it seems only right in this notice of his career to make this the most prominent feature.

Dr. Cholmeley was born in 1823 at Waynfleet, Lincolnshire, of which place his father was rector. He received his medical education first of all from a local practitioner, to whom he was apprenticed, and afterwards at St. Bartholomew's Hospital. In 1844 he went to Paris, and after studying there for about a year returned to London and set up as a consulting physician in Russell-square, whence in 1871 he removed to 63, Grosvenor-street. In this year too he married Louisa, the eldest daughter of the late Lieutenant-Colonel H. Ross Gore, C.B., who survives him. From 1873 to 1883 he was editor of the now extinct *Medical Times and Gazette* and was also medical officer of the Eagle Insurance Office from 1871 to 1894. About this latter date his memory began to fail and he had to give up all active work. In this state he remained, with occasional fluctuations for better or worse, until the beginning of 1896, when he began to show signs of a restlessness quite foreign to his nature; and so gradually his strength wore out and he passed quietly away after three days' unconsciousness on June 18th. Of his work at the Great Northern Central Hospital, an institution which for nearly forty years he helped to grow from very humble beginnings to the present magnificently appointed block of buildings, the following extract from an appeal published by the hospital will speak better than any words of ours can do:—



WILLIAM CHOLMELEY, M.D. ST. AND., F.R.C.P. LOND.

(From a photograph by Fradelle and Young.)

"On June 28th, 1856—the eighteenth anniversary of the Queen's Coronation—Dr. Croft and two surgeons (Mr. Statham and Mr. J. L. Statham) held a preliminary meeting, at which it was resolved to establish an institution to be called 'The Great Northern Hospital.' Four weeks later premises were secured at King's Cross and an honorary secretary was appointed. In September it was decided that a Council should be formed, consisting of medical and lay members, and its first meeting for business was held on Dec. 18th, ten members being present. So widely appreciated were the services rendered, even at this early period, that it was found necessary, in February, 1857, to enlarge the building, and on May 18th following the first medical staff, consisting of two consulting physicians, two physicians, three surgeons, four junior surgeons, one obstetric physician, one ophthalmic and one aural surgeon, and two dentists, was appointed. Up to this time there were no in-patients, but on July 29th two wards were opened, containing ten beds for men and six for women. On June 25th, 1858, Dr. Cholmeley was appointed junior physician and Mr. W. Adams surgeon, and in the following year the former was unanimously elected a member of the Council, an event which had a most important influence in the subsequent history of the hospital. Towards the close of the year 1860 external disturbing influences began to manifest themselves. A notification was received from the Metropolitan Railway Company that it was their intention to apply for an Act of Parliament to enable them to acquire the hospital building for the purpose of railway extension. The negotiations with the railway company occupied more than a year, and at length on Jan. 30th, 1862, the Council was informed that the premises must be given up in twenty-eight days. The enforced search for new premises finally led to a temporary amalgamation, on July 30th, of the Spinal Hospital with the Great Northern, and on Oct. 9th the in-patients were removed to the wards of the Spinal Hospital at 84, Portland-road, the out-patients being at the same time provided with temporary accommodation at 286, Pentonville-road, from which place they were again removed, in February, 1863, to 294, Pentonville-road. This arrangement was found unsuitable and unsatisfactory for the permanent requirements of the hospital, and after a long search and lengthy preliminary negotiations it was decided to purchase Pembroke Villa, Caledonian-road, the in-patients being removed there on Jan. 6th, 1864. In order to secure additional accommodation the adjoining premises were from time to time purchased, and during the next twenty years the work was carried on here under great difficulties. With this history is intimately associated the name of Dr. Cholmeley, who has justly been called the 'Father' of the hospital, and who, during thirty-eight years, unostentatiously but freely gave his services and his means at crises when the committee were face to face with threatening failure. His was the hand ever ready to help when help was most wanted. His *foundling* was often *ailing*, but he relieved its infirmities and restored its vigour. It would be the basest ingratitude to allow these valuable and long-continued services to pass unnoticed among the host of good deeds done in silence which are too soon lost to view in the mists of a fast-retreating past.

"In the year 1882 a movement was started to provide additional hospital accommodation in North London, there being then but one hospital bed for each 25,000 of the population. It was at first proposed to erect a new building to be called the 'Central Hospital for North London,' but after various public meetings had been held this scheme was abandoned in favour of one for amalgamating the proposed new hospital with the already existing Great Northern, and thus by one institution to be named the 'Great Northern Central Hospital' to endeavour to meet the lamentable lack of hospital accommodation for the poor of the district. A suitable site was obtained in the Holloway-road and a portion of the hospital erected, consisting of three wards capable of accommodating in all seventy-two in-patients. An out-patient department, by no means the least useful part of a hospital, has also been built."

The following is from the pen of Mr. C. B. Lockwood, one of his colleagues, and well expresses the esteem in which he

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was held by those with whom he worked: "Dr. Cholmeley was a senior member of his profession and the senior physician to the Great Northern Central Hospital, when, fifteen years ago, the writer became one of his colleagues. Although so many years have passed, the simple, unaffected kindness and the gentle courtesy of his reception by Dr. Cholmeley have never faded from his memory. A deeper knowledge of Dr. Cholmeley's character increased the respect and regard which were his due. Very patient and forbearing, he either spoke well of others or was silent. The affection of his colleagues was deep and sincere and was the highest tribute to his upright and blameless life. He was the courteous advocate of patience and forbearance and the never-failing peacemaker. In council such qualities as these, being combined with steadfastness and judgment, made his opinion prevail where others would have failed. In his absence many a proposal was deferred or altered lest it should cause him a moment's pain or regret. Goodness and amiability are at times synonymous with weakness, but this was not so with Dr. Cholmeley. He was accustomed when he disagreed to form an independent opinion supported by well-chosen and temperate arguments and with knowledge and experience gathered in the course of a long and laborious lifetime. Moreover, any argument he advanced carried additional weight because none ever dreamt of questioning his absolute sincerity and truthfulness. It was fully recognised that all he did or thought was prompted by devotion to the hospital which he loved so well, and for which he had done so much, and by the most honourable and loyal feeling towards his colleagues. He possessed, too, a quiet dignity of manner which at once commanded respect. But this carried with it no feeling of constraint, for his eyes shone with a most kindly light, and a very pleasant smile flickered around his lips to tell the least observant that he was humane and sympathetic. His memory will long dwell in the minds of his colleagues and be for them a standard of upright and honourable conduct, and an example of all the virtues which made a good colleague and a sincere friend."

These words are a heartfelt and eloquent estimate of one who was always in the old and fullest sense of the word a gentleman. One other point we may mention and that is the endowment of a bed upon July 15th, 1895, in Dr. Cholmeley's honour by the Ladies' Association of the hospital. Over the bed was placed the following inscription: "The Cholmeley Bed, endowed, through the Ladies' Association, in loving appreciation of many years' devoted and unselfish labour rendered by Dr. Cholmeley to the sick and suffering both as physician to the hospital (of which he was one of the founders) and as honorary treasurer to the Ladies' Association."

The funeral took place upon June 23rd, at St. John's, Ladbroke Grove, and besides various members of the family there were present: Dr. Beevor, Dr. Clifford Beale, Dr. Blandford, Dr. Burnett, Dr. Cook, Dr. Maurice Davies, Dr. Morison, Dr. Ogle, Dr. Symes Thompson, Mr. Peyton Beale, Mr. John Gay, Mr. J. H. Macready, Mr. E. C. Hulme, Mr. W. R. Stewart, Mr. Glenton Kerr, secretary of the Great Northern Hospital, and a large number of patients both well-to-do and poor. So passes one who was gentle, honourable and upright, who spared neither time, money, nor labour in the service of his fellow men. Unobtrusive and modest in all that he did, his memory will ever be kept green by the abiding presence of that house established for the relief of pain and sickness, the Great Northern Hospital.

SAMUEL HOLDSWORTH, M.D. PISA, M.R.C.P. LOND., M.R.C.S. ENG., L.S.A., J.P.

DR. HOLDSWORTH of Wakefield, who died on June 13th at his residence in that city, occupied a prominent position in the West Riding of Yorkshire as a philanthropist and public man. His medical career commenced more than sixty years ago, when he became pupil to the late Dr. Bennett of Wakefield, and he subsequently studied at Guy's and St. Thomas's Hospitals and in Edinburgh and Paris. In 1835 he became qualified as M.R.C.S. Eng. and L.S.A., and in 1839 he graduated as M.D. at Pisa; in 1859 he became a Member of the Royal College of Physicians of London. Dr. Holdsworth was engaged in active practice for only about five or six years, but he was for about thirty-eight years honorary physician to the Clayton Hospital at Wakefield, and he devoted himself assiduously to public duties of many kinds. In 1862 he was elected to the Wakefield town council, and he was three times mayor—in 1862, 1863, and 1868. He was also a Justice of the Peace for Wakefield and for the West Riding, a member of the West Riding county council, and steward of the West Riding Medical Charitable Society. Dr. Holdsworth was an enthusiastic advocate of temperance principles; he was eighty-two years of age, and leaves a widow and family, by whom, as well as by a large circle of friends, he will long be held in affectionate remembrance.

THE BATTLE OF THE CLUBS.—XXXIV.[1]

(FROM OUR SPECIAL COMMISSIONER.)

(*Continued from p. 1756.*)

LEEDS: CLUB PATIENTS AT THE INFIRMARY.—FAILURE OF FORMER EFFORTS TO CONTROL CLUB WORK.—MALINGERING.—METHODS OF COMPETITION.—"SIXPENNY AND SHILLING DOCTORS."—"ONE MARK" VACCINATION.

THE position of affairs at Leeds is scarcely better than at Derby, with this difference, however, that most of the medical men with whom I discussed the matter were more anxious to take action, though none had ventured to move in the matter. The Leeds and West Riding Medico-Chirurgical Society might take the initiative. It is composed of three honorary life members, 104 Leeds members, 191 county members, and eight honorary annual members. There are consequently 306 members in all, and the society has a small balance in hand. This would more than suffice to convoke a general meeting of the whole profession for the purpose of founding a union to deal exclusively with economical and ethical questions. Such an effort is very necessary, for the profession has fallen to a low ebb at Leeds. The medical men undersell each other just as if they were rival tradesmen, losing the sense of professional dignity in the ardour of the struggle. Some will take club patients at almost any price and make it pay by employing unqualified assistants to do the work. Then when they have any really troublesome patient they send him to the hospital. The situation is somewhat complicated by the great popularity and high reputation of the Leeds Infirmary. A number of workmen, though they are members of benefit societies or clubs, prefer going to the infirmary, and thus do not call in their club medical officer. They even ask at the infirmary for medical certificates so that they claim the sick allowance from their clubs. This is evidently an abuse of the hospital, since these men have paid for medical attendance by subscribing to a benefit society or to a medical aid association. But it has been

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Aug. 24th, 1895, Brussels; (2) Aug. 31st, 1895, Brussels; (3) Sept. 21st, 1895, Portsmouth; (4) Sept. 28th, 1895, Portsmouth; (5) Oct. 5th, 1895, Eastbourne; (6) Oct. 12th, 1895, Lincoln; (7) Oct. 26th, 1895, Lincoln; (8) Nov. 2nd, 1895, Grimsby; (9) Nov. 9th, 1895, Bexhill-on-Sea; (10) Nov. 16th, 1895, Hull; (11) Nov. 23rd, 1895, Hull; (12) Dec. 7th, 1895, York; (13) Dec. 14th, 1895, Northampton; (14) Dec. 21st, 1895, Fermanagh Medico-Ethical Association; (15) Dec. 28th, 1895, Northampton; (16) Jan. 4th, 1896, Birmingham; (17) Jan. 18th, 1896, Birmingham; (18) Jan. 25th, 1896, Club Practices in Rural and Mining Districts; (19) Feb. 1st, 1896, The Formation of a Provident Medical Association at Folkestone; (20) Feb. 8th, 1896, The Manchester Medical Guild and Medical Aid Associations; (21) Feb. 15th, 1896, The Leicester and Leicestershire Provident Dispensary; (22) Feb. 22nd, 1896, The Organisation of the Profession at Leicester; (23) March 7th, 1896, Loughborough: Local Efforts defeated by Consultants from Neighbouring Towns; (24) March 14th, 1896, Medical Aid Societies in Small Heath; Medical Clubs at Stockport; (25) March 21st, 1896, General Meeting of the Profession and the Formation of a Union at Nottingham; (26) April 4th, 1896, Nottingham; the London and Manchester Industrial Assurance Company, Limited; the Public-house Medical Aid Clubs; United Action at Lincoln; (27) April 11th, 1896, Leicester and Wolverhampton; a Hastings Dispensary wound up; (28) April 25th, 1896, Walsall, Formation of a Medical Union; the Medical Profession and the Friendly Societies; Trade and Medicine; the Family Clubs; Women's Public-house Clubs; (29) May 9th, 1896, Sheffield: An Ancient Medical Society; Workmen Sweaters; The Old Grievances; Probable Formation of a Medical Union; (30) May 16th, 1896, Lincoln: Medical Protection Fund started; Benefit Societies and Medical Men; Medical Union at Nottingham; (31) May 30th, 1896, Derby: The Abortive Movement of 1872; the Apathy of the Profession; Female Canvassers; the Gainsborough Dispensary; Lincoln Medical Protection Fund; "A Doctors' Strike"; (32) June 13th, 1896, The Bitter Cry of the Medical Aid Associations; letter from a Member of the Manchester Executive; Lincoln: the Provident Medical Association; Lincoln Medical Protection Fund; Fifeshire Medical Association and Medical Aid Appointments; (33) June 20th, 1896, the General Medical Council and the Medical Aid Associations.

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calculated that the cost of out-patients at the infirmary does not exceed an average of 1*s.* 3½*d.* per patient. It would be more trouble to eliminate these cases than to treat them. The economy on 1000 cases would amount to about £65. As the working classes subscribe liberally to the infirmary it would not be worth while for this institution to render itself unpopular for the sake of effecting so small a saving. Nor would the economy cover the cost in time and trouble of carrying out such a reform. On the other hand, this simply means that a great deal of the club practice has to be supplemented by the better and gratuitous care bestowed on the out-patients at the infirmary. Surely this state of things is sufficient to show how urgent is the necessity of a general reform in the whole system of contract work and club practice.

A great deal was said during my various interviews with medical men doing a large club practice about young medical men newly arrived in the town. The position of the latter is often so desperate that they gladly accept club members for 2*s.* 6*d.* a year, for whom the elder practitioners have been in the habit of receiving 4*s.* Sometimes a father wishes to resign his club practice in favour of a son. The club shows its gratitude to their old medical man by accepting the services of his son, but profits by the opportunity to enforce a very much reduced rate of payment. Twenty-five years ago the clubs only paid 2*s.* 6*d.* The medical men then held several meetings and agreed not to accept less than 4*s.* for new societies or when a new medical man was appointed to an old society. In a word, the resolution was not to have a retrospective action; existing agreements were not to be altered. It was, therefore, but a partial reform. For some years this principle was maintained, but in the course of time new men arrived who knew nothing about it and accepted less. Thus it is evident that something more than a temporary union is required. It is not only necessary to unite and establish a rule, but there must be a permanent executive or vigilant committee to see that the whole of the profession is kept well informed as to the conditions established in the district. The moment a new practitioner appears a deputation should wait upon him, explain what are the conditions established, invite him to conform with these rules and join the union. All new arrivals should also be warned as to the consequences that will ensue if he should elect to set himself in opposition to the decisions of the profession and seek to compete unfairly against his colleagues.

Many complaints were made to me of the manner in which club medical officers were made to appear before their committees to answer trivial and unjustifiable charges. Some committees take a special delight in "badgering" their medical man, and complaints are frequent when a medical officer does not readily lend himself to malingering. One amusing case was described to me where, however, the medical man got the better of the patient. A man was constantly claiming his sick allowance on the ground that he was so crippled by rheumatism that he could not work. The way he entered the surgery was a masterpiece of good acting. It was astonishing how a man in such evident pain had been able to come out at all. Knowing the direction which the patient was likely to take on leaving the surgery, the medical man, seizing his hat, went down some by-streets and came upon him at a little distance. He already seemed to be much better and walked with less difficulty. Concealing himself, the medical man followed till the patient was still further away and in a part of the town where he was not known. Here the patient began to walk along with an easy elastic step, smoking a cigar and thoroughly enjoying himself. A few days later the same man appeared at the surgery complaining that he was no better and could hardly crawl along. The medical man with grave face examined him carefully, said it was very serious, ordered him home and to bed, promising to call upon him shortly. Much to his annoyance the malingerer went to bed and managed to present a pitiable aspect when the medical man called. The officer on his side professed to be much alarmed at the serious aspect of the case and forthwith proceeded to apply the actual cautery. The patient, of course, howled lugubriously. He was caught in his own trap and now really suffered where he had only pretended. He ominously never returned to consult the club medical officer, but at the earliest opportunity joined another club. When questioned as to the cause of this defection the medical officer told the whole story, with the result that the other club was warned as to the character of the new member they had acquired. The malingerer was not a little disconcerted when, on consulting his new club medical officer, the latter smilingly suggested the actual cautery as the most effective remedy. It is needless to add that for this one malingerer who was skilfully detected and punished there are many who succeed in fully deceiving their medical officer and are thus able to defraud their club by obtaining sick pay when they are more idle than ill.

In one district of Leeds there were four medical men who did nearly the whole of the club practice for that neighbourhood. These four medical men met and agreed that under no circumstances would they accept less than 4*s.* per annum, and they adhered to this compact. But one of these four medical men brought his two sons into the district. They opened surgeries, one at one end and the other at the other end of this quarter of the town. They, of course, were not pledged to the 4*s.* minimum and by accepting less obtained a great number of the patients whom the old-established practitioners had been in the habit of attending. Here were four medical men. If they had all belonged to a union then there would have been protests, not from three medical men, but from about 300 medical men and with a well-organised union every medical man in the town and neighbourhood would have known immediately what had occurred.

At Leeds, as elsewhere, there are great complaints about the juveniles. Many societies paying 4*s.* a year for adults form lodges of juveniles at 2*s.* a year. The feeling is that as juveniles give more trouble the sum paid should be at least as much as that given for the adults. While, however, some medical men have resigned their position, giving up the adults at 4*s.* so as not to be encumbered with the juveniles at 2*s.*, other medical men have accepted adults and juveniles together at 2*s.* 6*d.* each. Here, again, we find an illustration of the evil effects of competition unrestrained by such professional regulations that a union could establish. There is also a grievance against the London and Manchester Assurance Company. It is said to place its subscribers on the lists of its medical officers without any medical examination; thus many unhealthy persons are insured and have to be attended constantly, though they only pay 4*s.* a year. If a child is assured it is generally an ailing child. One medical officer related to me that when he first came to Leeds he joined the London and Manchester Assurance Company thinking that it was a charity, but he soon found that the canvassers of this company called on his patients and persuaded them to insure their lives, by which means they would secure the services of the same medical man and have to pay only 1*d.* a week. Then he discovered that a number of well-to-do people belonged to the company and expected to receive medical attendance for 4*s.* a year. Some of these wealthy people had sufficient sense of shame to assume false names. On other occasions persons who were subscribers to the assurance company came from another district. The medical officer is apt to mistake these new arrivals for private patients. My informant had attended one such patient for a year. He seemed to be in affluent circumstances, so the medical officer sent in a bill for £22; he received just 4s. The affluent patient was a subscriber to the London and Manchester Assurance Company, but had forgotten to mention the circumstance when sending for the medical officer of the company. Many publicans and other tradesmen who enjoy incomes of from £300 to £400 a year were on the list of this medical officer's club or insurance company patients, and only paid him 4*s.* a year for medical attendance and medicine. Some of these club patients are more difficult to please and more exacting than private patients who pay full fees. But it is not only club practice that reduces the earnings of medical men; there are a great number of "sixpenny doctors" and "shilling doctors" at Leeds, some of whom even offer to vaccinate for 6*d.* and 1*s.*, but many of whom are said to make only one mark. This has the double advantage of economising the calf lymph and reducing the trouble which the child gives to the parents. The parents thus economise in money and in the worry that a child suffering with several pustules occasions. People do not realise the risk that they run. In this respect it is only necessary, for instance, to recall the statistical evidence given by Mr. Marson on 6000 post-vaccinated small-pox cases. He found that among the cases in which one cicatrix was well marked the death-rate was equal to 4·5 per cent., and among the badly marked 12 per cent. On the other hand,

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among those who had four or more vaccine cicatrices the death-rate was less than 1 per cent.; the death-rate among the unvaccinated was 35·5 per cent. Leeds used to be a well-vaccinated town; now it will soon become a badly vaccinated town. Yet what can be done? So long as the medical man says he has vaccinated the child the law is satisfied, and the less effective the vaccination the greater the satisfaction of ignorant parents. This is a serious question and may bring about a recrudescence of small-pox. Yet who is to act in the matter? The consulting physicians do not suffer from this state of affairs; on the contrary, they are constantly employed by the "sixpenny doctors" and "shilling doctors." A strong consensus of opinion must be brought to bear on both extremes of the social scale. There is the struggling practitioner very low down in the scale who, in the ardour of the competition for existence, loses the sense of professional dignity; and there is the very successful consulting physician, who is so prosperous that he is not affected by, and ignores the troubles of, his less fortunate colleagues. Both the one and the other, those who are at the very top of the ladder and those who are at the bottom of the ladder, have to be exhorted to a better sense of the duty they owe to the profession as a whole.

WEST WILTSHIRE AND SURROUNDING DISTRICTS.

We are pleased to see that organisation and a determination to stand together for their rights are spreading among medical men, as the following instances show, although we regret that in the latter of the two cases the medical men were not perfectly unanimous.

In November last one of the principal benefit societies in the neighbourhood of Freshford proposed a change in its rules under which the medical officers would have been called upon to attend children from one year of age upwards and old people after they had been forced to leave the society for all other purposes but medical aid. In consequence all the medical officers met together and decided to object to these alterations, and the result was that the society withdrew the proposals. In February, 1896, a meeting was called of all the medical men in West Wiltshire and adjoining places, sixty in all, to arrange a conference with the various societies in the district, with a view to obtaining a wage or rental limit. The action of the profession was very much hampered by the refusal of two old-established practitioners to act with their colleagues, as their abstention was well known to those delegates attending the meeting. The conference was held upon May 2nd at Trowbridge. Mr. Charles Flemming said (we take the report of his speech from the *Wiltshire Times*): "The abuse of which they complained was this, that certain persons obtained medical benefits of the friendly societies who did not need them, such persons including tradesmen, retired tradesmen, persons of independent means, and others whose incomes were such that they could well afford to pay a medical man his ordinary charges for attendance. They were thus abusing societies which were originated and had been maintained for the use and benefit of *bonâ-fide* working men and poor persons. The abuse was not so extensive in this part of the country as it was in some parts, but they were going on the principle that a stitch in time saved nine. In addition to being an injury to their societies it was also an injury to the profession, because a medical man could not possibly live by club practice alone; he must have a certain amount of private practice. Then if he depended on private patients as well as club practice, and if his private patients became club patients, he could not continue to practise his profession properly. When a medical man found that his private patients were becoming club patients it was only natural that he should complain, but no medical man had any objection to attend a *bonâ-fide* working man as a club patient. Medical men had to live, and if they were forced to enter into contracts with clubs they might be sure they would endeavour to make those contracts pay if they possibly could. If they had nothing but clubs they must have a very large number to make them pay, and they would thus have to see an enormous number of patients in a day. He did not care whether a man was paid four shillings a year by his patients or whether he was paid a guinea a visit, if he had to attend beyond a certain number of patients in a certain time he could not do it properly; he could not give that careful consideration and that quiet, deliberate examination which were absolutely essential for the proper conduct of medical practice. In medicine, as in other things, if made a business, to put it plainly, especially in practice such as clubs, they might be sure they would get only what they paid for; the value of what they got in the long run would be only the equivalent of the price. They might sweat medical men—as they were sweated in some towns—and they might work them until they became mere machines—machines in which they put a penny in the slot and drew out a bottle of medicine, but they would not get skilled medical attendance and advice. If the abuse which now existed was allowed to go on it would become so extensive that it would disaffect the whole medical profession, and they would lose the men they most wanted and undermine those beneficent institutions which were supported and had been maintained and were maintained for the benefit of the poor working man, and all alike would suffer, whether they were innocent or guilty." Other medical men and a number of representatives of societies spoke, nearly all of whom agreed that the medical men had a grievance which ought to be remedied, only they did not quite see how it was going to be done. Finally the following resolution was unanimously agreed to: "That this meeting takes note of the resolution which has been made by the medical men present at this meeting, that £2 a week wages and £15 a year ratable value be adopted as a limit to prevent persons obtaining medical aid by their friendly societies, who by their position do not require it, and that it be recommended by this meeting to the various friendly societies to consider whether any, and if so what, limit can in future be imposed on the membership of friendly societies so as to accomplish this object." We are glad to see that the tone and temper of the meeting were apparently excellent, and we congratulate Mr. Flemming, who called the meeting together, on the measure of the success he has attained.

LINCOLN MEDICAL PROTECTION FUND.

The following is a list of subscriptions to this fund which have been received in addition to those already announced. We notice the growth of the fund with pleasure:—

	£	s.	d.
C. J. B. Johnson, King's Heath, Birmingham	0	5	0
H. B. Walker, Lowestoft	1	1	0
J. E. Molson, Chelmsford	1	1	0
Philip Wilmot, King's Lynn	0	15	0
Jno. Brown, Bacup	0	5	0
Wm. Easby, Peterborough (per month)	0	5	0
Midland Branch, British Medical Association	25	0	0
B. W. Housman, Stockport	1	1	0
W. Macfie Campbell, Liverpool	0	10	6
Alfred Godson, Cheadle	0	10	0
B. Jones, Leigh	0	5	0
H. Shillito, Birmingham	0	5	0
E. F. Bindloss, Melbourn, Royston	0	10	6
J. C. Ellis, Metheringham	0	10	6
D. E. Thomas, Newport, Mon.	0	10	0
B. J. Massiah, Didsbury	0	10	6
A. C. Wilson, Formby, Manchester	2	2	0
C. Macfie, Bolton	0	10	6
G. C. Franklin, Leicester	0	10	6
M. Johnston, Bewdley	0	10	6
P. H. Miall, Bradford	0	10	6
F. Pearse, Southsea	1	1	0
D. H. Kyle, St. Andrews	1	1	0
J. Robinson, Bolton	0	10	6
A. E. Boulton, Horncastle	2	2	0
T. P. Gostling, Worcester	0	10	6
Alf. Freer, Stourbridge	0	10	6
President, Birkenhead Medical Society	2	0	0
F. H. Alderson, Hammersmith	1	1	0
F. H. Alderson, jun., West Kensington	0	10	6
W. H. D. Mence, St. Ives	0	5	0
S. F. Mawson, Bolton	0	5	0
T. C. Askin, Woodbridge, Suffolk	0	10	6
J. C. Worthington, South Lowestoft	3	3	
W. R. Buckell, Cheltenham	2	2	0
H. Malet, Wolverhampton	0	10	6
H. Sankey, Littlemore Asylum	1	1	0
J. Stewart, Clifton	1	1	0
T. H. Cheatle, Burford, Oxon	0	10	6
D. Iles, Gloucester	0	10	6

Previous list ... ... £209 16*s.*

THE ASHANTI EXPEDITION.

(BY OUR SPECIAL WAR CORRESPONDENT.)

VI.[1]

AFRICAN REMITTENT FEVER AND ITS SEQUELÆ.

[THE delay in the publication of this last article has been due to the fact that our correspondent has been suffering from the effects of the malaria of which he gives so graphic an account.]

Having already given a history of the African remittent fever, before leaving that subject perhaps it would be as well if I said a few words respecting its sequelæ—as experienced by a great number of those who have apparently

[1] Nos. I., II., III., IV., and V. were published in THE LANCET of April 4th, 11th, and 25th, and May 2nd and 16th, 1896, respectively.

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recovered from the fever proper to be only again laid low by another complaint that usually succeeds or follows in its wake. First of all there is colic. This complaint is very common amongst those who have suffered from fever, and I question very much if any convalescents from remittent fever of the African type will escape being attacked by colic afterwards unless the greatest care and caution be used. The slightest indiscretion in diet will at once produce it. A change of temperature often, too, brings on colicky symptoms, and so sensible are these patients' bowels of impressions made on the skin that the tenderness would indicate the presence of chronic inflammation or even ulceration of membrane. Diarrhœa is often experienced after fever has entirely passed off; but of all complaints dysentery is the one that has carried off most patients. Dysentery may be an immediate sequence of the fever or it may come on months after the fever has passed away. Hepatic disease not infrequently occurs. Post-mortem examinations have not often been made, but when they have been undertaken have generally shown that the peritoneum and its attachments as well as the intestinal tube exhibited a general yellow tinge, the stomach containing from four to five ounces of a yellowish-green fluid. The mucous coat was invariably softened whether fluid were present or not. Livid patches were also observed distributed over the inner surface of the stomach. These pathological appearances were chiefly in evidence near the pylorus. Lesions were also observed in the duodenum, becoming less evident towards the jejunum. The gall-bladder was in most cases distended with bile of the consistence and colour of tar.

THE HOSPITALS EN ROUTE.

Of these there were several—in fact, one at each rest camp; but the principal or larger erections were at Kwissa, Prahsu, Assin-Yankumasi, Mansu, and Cape Coast Castle. Kwissa hospital was a commodious building constructed of bamboo and thatched with leaves of that plant. It occupied a good, healthy position. There was an excellent supply of wholesome water. The rooms were both lofty and well ventilated, and the latrines, placed at a convenient distance in the rear of the building, were always kept clean and well supplied with disinfectants.

PRAHSU HOSPITAL.

When I first arrived at this place I found a building had already been put up by the colonial authorities, constructed, as they usually are, of cut bamboos. It was about seventy feet by thirty feet and situated at the entrance or south-eastern extremity of the camp, surrounded by dirty, foul-smelling native huts, and not too far removed from some swampy ground. However, this latter could scarcely be avoided considering Prahsu surroundings generally; but the native abominations, with the pigs and fowls and dirty, foul-smelling heaps, might certainly have been done away with before the officials commenced to erect a hospital for the reception of the wounded and the sick. These precautions were not taken, and only on the arrival of our own medical officers, notably Surgeon-Lieutenant-Colonel Blennerhassett and his staff of surgeons and orderlies, were the native huts demolished and the refuse heaps and other pestiferous abominations swept off the surface of the ground. Further than this, the native hospital was soon condemned and a newer and much more suitable one erected in its stead. On my return from the other side of the Prah I was astonished to see what an amount of sanitary improvements had been carried out by Surgeon-Lieutenant-Colonel Blennerhassett, and how painstaking he had been in improving the general surroundings of this swampy place. Not only were the patients well supplied with fresh bread and excellent sweetened and unsweetened milk, but by an admirable arrangement ice manufactured at

FIG. 1.

Entry of the troops into Kumasi.

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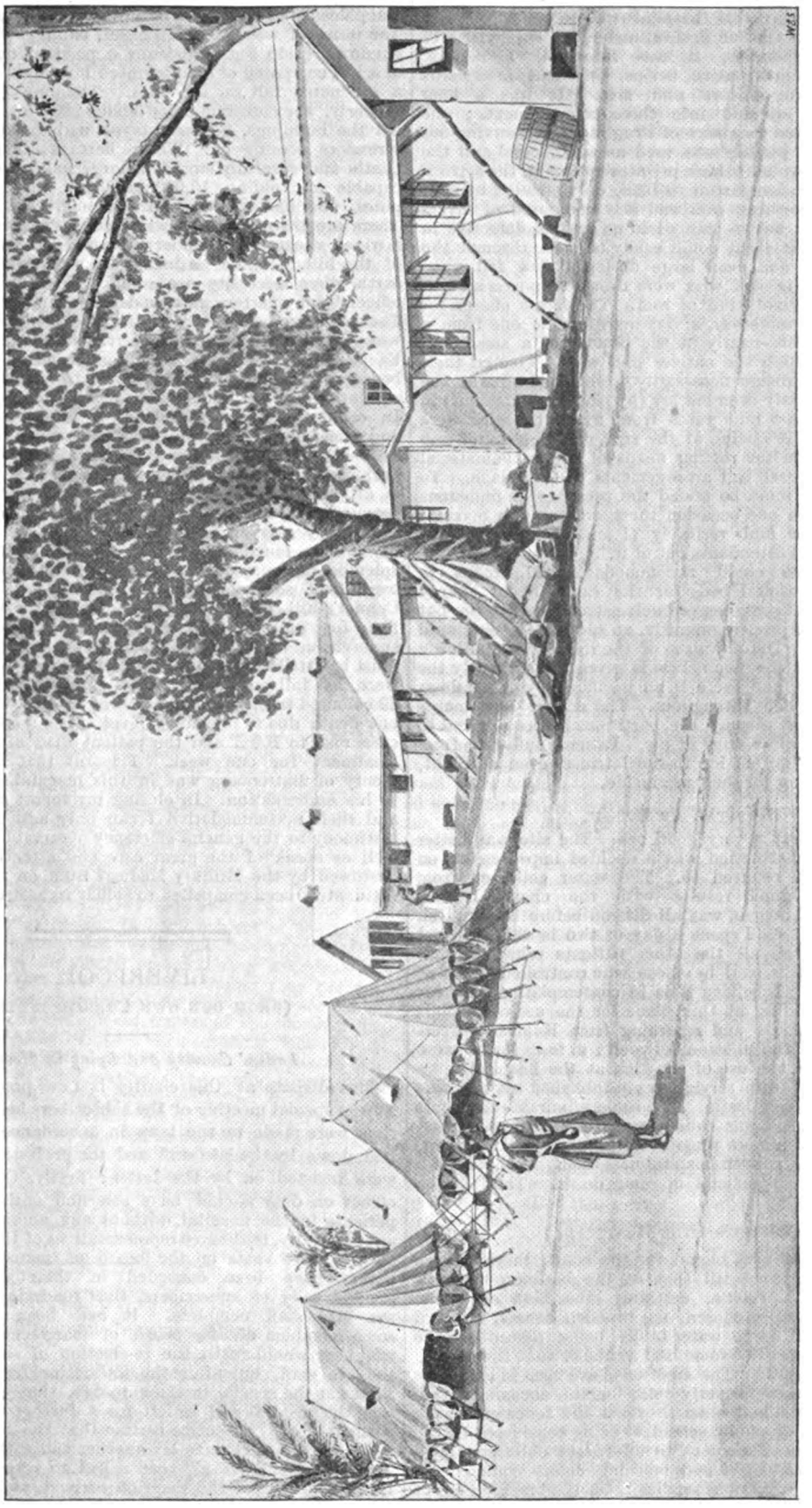

FIG. 2.

The Base Hospital on Connor's Hill, Cape Coast Castle.

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Cape Coast Castle was brought up twice a week or oftener to Prahsu.

HOSPITAL AT ASSIN-YANKUMASI.

On my journey up this hospital was in an incomplete state; erected, like that of Prahsu, under the supervision of the colonial authorities, it was intended, I believe, only for the use of native troops, but was afterwards used by our own officers and men. It was a long bamboo erection divided into three compartments; one of these was devoted to a sort of drug store and serving-out room, the central portion was used as an officers' and the remaining part devoted to sick privates' quarters, the separation betwixt these compartments being only effected by split bamboos. The covering overhead was composed of layers of bamboo leaves, but so thinly laid on and so defective in some parts that daylight could easily be seen through the roof, whilst rain and even large drops of dew fell upon the blankets of the sick who were destined to pass a night under such a defective kind of roof. The *locale* chosen for the hospital was, moreover, a very questionable one from a sanitary standpoint—nearly at the bottom of a small hill on the top of which the natives had wisely erected their own huts. All drainage necessarily flowed to this part; the bush having recently been cut lay (by pace measurement) in festering heaps just nine yards from where the sick were supposed to lie. A latrine at the rear of the hospital and abutting closely on the rotting heaps of vegetable material added to the general bad arrangements of this place. To these discomforts must be added the presence of numerous black ants, and on one occasion these creatures in myriads stormed the place and veritably (I am not exaggerating) drove patients and attendants out of it.

Assin-Yankumasi could accommodate 500 troops in barracks, with hospital beds for the same (about twenty cases). They had some ten or twelve stretchers for use, but had no bed-pan or proper commode, an old oil tin being used for that purpose. The elevation of the roof of the building is fairly lofty, but too much slope is given, consequently the sides are very low and there is an insufficiency of windows and ventilating spaces throughout. The officers' apartments were both dark and gloomy, the partitions before referred to preventing a free circulation of air. Patients suffering from diarrhœa had to go outside to the latrines, even at night, there being nothing for their use inside.

HOSPITAL AT MANSU.

This hospital was a very good one. The site was better chosen and its construction was a decided improvement on that I have just referred to. The water collected from the river gave good results with the chemical tests employed, but, of course, was all filtered before being given to the patients. As I spent a day or two in this hospital I can only say, as all the other patients told me, that every attention was paid by those who controlled affairs at this rest station. I believe it is in contemplation to erect a permanent building at this place for the use of officials and Haussas going to and returning from Kumasi. Fruit was procurable and mutton as well; a few fowls were obtained here for the use of the sick at the hospital. An excellent hospital train service was established betwixt this place and Cape Coast Castle. The same admirable transport for sick or wounded was subsequently extended to Prahsu, and latterly to even more remote stations beyond the river, the bearer company, with hospital cots, being in charge of a Medical Staff Corps official up and down. This was a regularly timed service.

CONNOR'S HILL HOSPITAL.

After leaving Mansu, bound for the coast, there was no hospital of importance till that at the base on Connor's Hill, Cape Coast Castle, certainly the best *en route*. Its site was admirably chosen, the wooden houses, hospital tents, wards, and large water-tanks being placed on the summit of Connor's Hill, some half a mile or so to the N.N.E. of the town. (Fig. 2.) The erections have been in existence some years and were formerly built for the accommodation of coloured troops, and when they left the tenements were utilised as a sort of public school, it being considered by the teaching authorities expedient to afford the children a good healthy walk both night and morning before commencing and on ending their various studies. On the breaking out of the recent campaign the colonial authorities, being possessed already of an excellent stone-built native hospital in the town, offered these habitations to the military authorities, who very wisely accepted the offer, and under medical direction have turned these quondam barracks and class-rooms into what they are at present, the wards, dwellings, and offices of a very good military hospital for white troops. The series of wooden-built houses, painted white with glass windows, (vide Fig. 2) occupy a position on the very top of a hill composed of disintegrated lava and gneiss soil, with a graduated fall on all sides. The prevailing winds are westerly, the elevation being about 200 feet above sea level. All the buildings, &c., are stayed with bamboos in case of tornadoes coming on. Water here is obtained from the Castle and carefully stored in large galvanised metal tanks capable of holding 10,000 gallons. On all sides aloes, pines, and oleander trees are seen growing to perfection. There are three separate, well-built, very carefully cleaned latrines situated just under the brow on the leeward side of the hill. These latrines were regularly filled in with earth when necessity arose for their abandonment. The officers' sick quarters were models of comfort and neatness. The rooms, as shown on the right side of the illustration, were about 20 ft. long and 15 ft. wide, floored with wood. Each room possesses a nice iron bedstead with excellent bedding and protected by mosquito curtains. From the windows can be obtained a charming view of the sea. In each apartment there are a table, two easy-chairs, and chest of drawers. Just off the room is the bath place as well as an earth-closet. I should also say there are fireplaces in each apartment. The ventilation throughout is all that could be desired; the temperature of the rooms during the heat of the day seldom exceeded 88° F. during my stay on Connor's-hill. The men's wards were, of course, much longer and slightly wider, and offered splendid accommodation for the sick and wounded. They were kept scrupulously clean by the hospital attendants. Connor's-hill Hospital is equipped for 75 beds, including five for officers. To Surgeon-Major Wilson's careful supervision the excellent arrangements at this hospital must be attributed. The admissions up to Jan. 28th, 1896, were as follows: 130 white troops, 12 white officers, 89 coloured troops, and no coloured officers. There had been one death due to remittent fever. The temperature in this case rose to 109·2° and the patient died after being under treatment for one week. I learnt that the late Prince Henry of Battenberg was in this hospital two days prior to his embarkation. In closing my report on the hospitals and their accommodation I can only add my very humble testimony to the general efficiency observable throughout, as well as speak of the great care and attention I have seen bestowed by the Military Medical Staff on all who have unfortunately been compelled to solicit its assistance.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Ladies' Charity and Lying-in Hospital.

THE dispute at this charity is now practically settled. At the special meeting of the subscribers held to-day alterations were made in the laws in accordance with the terms laid down by the late staff and the profession. Two points were insisted on by the latter: firstly, that the medical officer on duty should have sole and entire charge of all patients in the hospital, without any ambiguity whatever; and, secondly, that three representatives of the medical board should have seats on the board of management. These points have been conceded in their entirety by the general body of subscribers, thus rendering the victory of the late staff complete. It had been rumoured that some members of the board of management had stated that they would resist the re-election of some members of the late staff, but after the intimation from Mr. Mitchell Banks at the special meeting to-day, that if that were the case the hospital will be left for a further indefinite period without a staff, it became certain that the board of management would not care to try another fall with the profession. The late staff have all been asked to resume their offices. It is a pity that the decision arrived at to-day was not attained months since, whereby would have been avoided all the unpleasant issues which have had the effect not only of impairing the good name but also the usefulness of

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the charity. Not only have the admissions to the hospital been reduced in number owing to the non-existence of a medical staff, but also the classes of instruction to the candidates for the post of midwife have had to be suspended, which has proved a great hardship to them. They have to thank the board of management for the position in which they now find themselves, as the fault has certainly not rested with the members of the late staff. The medical profession here are to be congratulated on the firm attitude they have all along maintained in so loyally supporting the late staff in their uphill fight with this autocratic board of management.

Supply of Hot Water in Public Streets.

The Watch Committee have granted permission to the Hot-water Supply Syndicate of London to construct experimentally three columns, connected with the gas lamps in the streets, by means of which it is proposed to supply the public with hot water on the penny-in-the-slot principle. The syndicate have a patent contrivance for utilising the waste heat from the gas of public lamps for the purpose of instantaneously heating water. During the hours of street lighting water is heated by means of a coil of metal pipe with the flame of the gas. An annular tank is also fixed above the flame and provides a store of warm water ready to be transferred through the hot coil. In the day time, when the street lamps are not lighted, only a small flash light is continuously maintained in the lamp. It is proposed to supply the hot water at a halfpenny per gallon, and when the coin is put into the slot in the daytime the flash light is turned on at full force for a sufficiently long period to heat one gallon of water, which is discharged from a cock at the base of the column. The water can be instantaneously heated in these columns up to 194°, which is hot enough for all domestic purposes other than making tea and such like. If the water could be delivered at the boiling heat it would prove a boon to those desirous of making tea or coffee when the domestic fires were allowed to go out in hot weather.

New School of Pharmacy.

A school of pharmacy has now been added to the other departments of University College. From the names of the college professors and other lecturers appearing on its prospectus there is every prospect of it proving a success. Instruction will be given adapted to the requirements of candidates preparing for the minor and major examinations of the Pharmaceutical Society of Great Britain. A student before entering the classes must have passed the first examination of the Pharmaceutical Society, or an examination accepted in lieu of the same by the society. During the academic year (October to July) there will be a junior and a senior course of instruction in each subject of the curriculum. The first or junior courses include the subject-matter of the schedule for the minor or qualifying examination. A student who enters the school in October may present himself for the minor examination in April. The second or senior courses include the subject matter of the schedule for the Major Examination of the Pharmaceutical Society. A student who enters the school in October and passes the minor examination in April may pass the major examination in July. All students are strongly advised to enter the school at the beginning of the winter session in October. All registered students are allowed to use the College library and reading-room. There are also well-equipped museums of chemistry, botany, and materia medica, which contain a fine herbarium and a collection of drugs from the Pharmaceutical Society. Students are enrolled by the Dean of the Medical Faculty, University College, Liverpool.

June 23rd.

WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The First Hospital Saturday in Bristol.

BRISTOL Hospital Saturday was inaugurated on June 13th, although there is no doubt that for the future it will be an annual event. Everything fortunately contributed to its success. The weather was fine all day. The arrangements for the street collections were excellent. Stations were selected all over the city for placing a chair and a table at which a lady should sit, and offers were made of the use of rooms and offices had the weather been unfavourable. The house-to-house collections by the ladies' auxiliary amounted to over £400 and the street collections have up to the present totalled £460, but a few other boxes have yet to be returned. As the honorary secretary of this fund has recently stated it is useless to compare the Bristol Hospital Saturday with that at London or Birmingham, for at these two places the employers of manufacturing industries, &c., make collections from week to week all the year round for the Hospital Saturday Fund, and the sum obtained is thrown into the street collections on the day that may be appointed for Hospital Saturday. In Bristol this is not done, so comparisons cannot be made. The Bristol factories make collections during the year and forward the sum to the institutions. In 1895 the working men of Bristol contributed £4000 to the medical charities of that city.

The Recent Outbreak of Small-pox in Glamorganshire.

Dr. Williams, the medical officer of health for Glamorganshire, reports that 160 cases of small-pox have occurred in Glamorganshire during the current year, but at present the disease is on the wane. He adds that in districts which had provided isolation accommodation the disease did not spread to any extent. At Bridgend no accommodation whatever had been provided by the sanitary authority, with the consequence that 18 cases occurred. The expense accruing to the Bridgend authority by the prevalence of small-pox in their district would have been sufficient to defray the cost of providing the permanent isolation hospital which is about to be erected by order of the county council. Dr. Williams, in concluding his report, says that isolation and re-vaccination were rigidly exercised wherever possible, but that the threatened prevalence of small-pox in the county, which was the means of providing two additional small-pox hospitals, clearly proved that it is safer and far more economical to have every means and appliances always in readiness.

Crime in Gloucestershire in 1895—a Decrease.

At a meeting of the Gloucestershire Joint Committee to be held at Gloucester on June 23rd, the Chief Constable (Admiral Christian) will furnish a return as to the crime in the county during 1895. Under the head of indictable offences the crimes reported to the police numbered 629, a decrease of 116 as compared with the return for the preceding year. The number of persons apprehended and summoned for these offences was 597 (a decrease of 186); and of these 159 were tried summarily and discharged, 264 were convicted, 86 were committed for trial and sent to prison, 23 were bailed for trial, and 65 were otherwise disposed of. For non-indictable offences, 1253 persons were apprehended, and 5038 summoned, a decrease of 18 compared with 1894. The increase in the number of cases of drunkenness was 13.

A Curious Vaccination Case from Gloucester.

On June 13th at Gloucester Mrs. J. Bryant of Tuffley Court, was summoned for neglecting to have three children vaccinated. Defendant said she objected to the present system of performing the operation, which she said was inoculation not vaccination. She wrote to Mr. W. Washbourn, M.R.C.S., to come and vaccinate her children from cow-lymph. She showed him a cow that had cow-pox, but he would not undertake to draw lymph from the teats and vaccinate the children. She added that she would not consent to her children being inoculated with calf lymph, as calves never had cow-pox, that she could perform the operation and that all the men on her farm had been vaccinated in the process of milking from the lymph of the cow getting into cracks in their hands. The clerk to the magistrate pointed out that the law called the system to which defendant objected "vaccination." Defendant asked if the requirements of the law would be fulfilled if she performed the operation herself, and the chairman of the magistrates said that if she obtained a medical certificate to the effect that it was properly done that would doubtless be sufficient. The usual order to have the children vaccinated was made, with costs.

The Sanitary Condition of Glamorganshire.

At the quarterly meeting of the sanitary committee of the Glamorganshire County Council, Dr. Williams, the medical officer of health, gave an exhaustive report upon the sanitary condition of the county; he stated that the river Ogmore, which he had recently inspected, was the main sewer for Maesteg, Garw, Ogmore, Bridgend, etc., and until these authorities were compelled to provide for the disposal of the sewage, the foul condition of the river would not be materially improved. The condition of the river was foul, the stench unbearable and conducive to ill-health and fever among the inhabitants. He also added that on the occasion of his first inspection of the district three years ago he heard just the same tales

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as on the present occasion: Caerphilly and Pwllypant were to be provided with a better water-supply, Nantgarw, Glanllyn, Taff's Well, &c., were to be connected with the main sewer, the pollution of rivers was to be stopped, and a host of other promises were made, but not kept. When complaints were made by the committee the answer was that the district council was doing its best. Dr. Williams is of opinion that the district council has not fulfilled its promises, and he instances a communication received in March, 1895, from the Llandaff and Dinas Powis authority in respect to connecting Tongwynlais with their sewer. Since that time Tongwynlais has been a hot-bed of fever, and twenty out of the twenty-three cases of typhoid fever notified in the whole district in 1895 occurred there. Dr. Williams adds that this is not to be wondered at, as there is everything ready for the spread of disease.

The Nursing Arrangements at the Cardiff Infirmary.

There has recently been a considerable falling off in the receipts from the private nursing department of the Cardiff Infirmary, for in 1893 the gross earnings of the nurses was £1060 and the profit £574; in 1894 the earnings were £841 and profits £333; and in 1895 £696 was taken and the profits were only £200. With a view to encouraging the nurses to remain for a longer period at the infirmary it was decided at a meeting of the Cardiff Infirmary general committee, held on June 11th, that from July 1st next a trial for six months should be given to the following scheme—viz., that during the second year nurses should receive a salary of £16, the third year £20, the fourth year £25 and 5 per cent. of their earnings if sent out for private nursing, the fifth year £25 and 10 per cent. of the private nursing fees, the sixth year £28 and 15 per cent. of the private nursing fees, and during the seventh year £30 and 15 per cent. of these fees. This seems to be a good plan, and it will doubtless have the desired effect upon the nursing staff of this institution.

Estate of the late Mr. Charles Highett.

The will of the late Mr. Charles Highett, M.R.C.P. Edin., L.S.A. Lond., formerly of Field House, Montpelier, Bristol, who died on April 20th, has been proved in the Bristol District Registry of the Court of Probate. The gross value of the personal estate is £63,737 15*s.* 9*d.* and the net value £63,650 14*s.* 3*d.*

June 24th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Complimentary Dinner to Dr. G. H. Philipson.

A DINNER was given last week to Dr. G. H. Philipson by the honorary physicians and surgeons of the Royal Infirmary, Newcastle-upon-Tyne, upon his retirement from the position of physician to the infirmary. All the staff attended. In replying to the toast of the evening—"The Health of Dr. Philipson"—which was proposed by Dr. Arnison, the senior surgeon to the infirmary and the oldest member of the staff—Dr. Philipson returned thanks in very feeling terms, the wrench he was experiencing in terminating his long services being painfully apparent to his colleagues. The rule under which an honorary officer is compelled to retire at the age of sixty years may be of advantage to those seeking promotion—it obviously is so, but it is difficult to understand why a physician should be called upon to retire at the age of sixty, whilst statesmen, soldiers, bishops and judges are allowed to hold office till they are ten years and, indeed, often more than ten years older. The present Master of the Rolls is more than sixty, and there is no more capable or astute judge upon the bench.

Election of Physician to the Royal Infirmary, Newcastle-upon-Tyne.

The selection committee met in the infirmary on Thursday last and appointed Dr. George Redmayne Murray an honorary physician. A few months ago Dr. T. Beattie was appointed pathologist, so that two new officers are now upon the staff. The charity is open to congratulation upon its having secured the services of two such excellent officials and the medical side of the house is materially strengthened by the addition of another member to the teaching staff. Formerly the pathologist was a full physician; under the present arrangement the duties of the pathologist will be discharged by one who is not otherwise engaged at the hospital. Before the selection committee separated the chairman announced that he had received notice of a motion to the effect that it was desirable that two assistant physicians should be added to the staff. At present there are no assistant physicians, although there are four assistant surgeons.

Lieutenant-Colonel Gowans, M.D.

By the resignation of this officer, who has been connected with the 3rd Durham Volunteer Artillery for eleven years, the service has sustained a loss which will be felt for long. Dr. Gowans has been a most active and useful volunteer and leaves a regiment of 400 men in a very flourishing condition. When he was appointed commanding officer there were only 250 men in the corps and it is owing to Dr. Gowans' energy that the number has been increased to 400.

Report of the Medical Officer of Health for Newcastle-upon-Tyne.

In his twenty-third annual report, Dr. H. E. Armstrong, the energetic and able medical officer of health for Newcastle-upon-Tyne, states that the death-rate of the city, for the past year, has been at the rate of 20 per 1000, slightly below that of the average rate in 33 large towns of the United Kingdom. There has been an increase in the number of marriages, and in the deaths from zymotic disease. Scarlet fever, diphtheria, and typhoid fever have been more fatal than in 1894, but there have been no deaths from typhus or from small-pox. The deaths of infants under one year of age, show an increase of 216 over those of 1894, and 44 uncertified deaths were registered against 37 in the preceding year. 27,628 inspections of tenement property were made during the year and 197 cases of nuisance were heard before the magistrates. The work under the Food and Drugs Act has been more than double that of 1894.

Newcastle Lifeboat Saturday.

A very successful demonstration in connexion with the Lifeboat Fund was held in Newcastle on June 13th. The day was fine and the streets through which the procession passed could hardly have been more crowded. The mayor and mayoress, the sheriff, and other city dignitaries took part in the demonstrations, and among the carriages were three filled with infirmary nurses in their uniforms, who begged persistently and successfully. Mr. John Burdon is chairman of the Saturday Lifeboat Committee, and much of the success of the movement here is due to his zeal. As the result of Saturday's proceedings a goodly sum of money has been added to the funds of the Royal Lifeboat Institution. Mr. John Burdon is a busy medical man in Newcastle, not too busy however to identify himself with this and many other similarly useful movements having for their object the safety and well-being of the people.

Newcastle upon-Tyne, June 22nd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh University Court.

AT the last meeting of the Edinburgh University Court it was intimated that a new Vans Dunlop scholarship had been instituted in Pathology and Medical Jurisprudence, and that a Pattison bursary had been assigned to Clinical Surgery.

The Sanitary Inspectors' Congress.

The Sanitary Inspectors' Association of Scotland held its annual congress in Oban on Friday of last week. The Association was welcomed by the Provost and various papers of interest were contributed by members.

The Death of Dr. C. M. Campbell.

Dr. C. M. Campbell, formerly medical superintendent of Murthly Lunatic Asylum, died in Edinburgh on Saturday. He was a young man, having graduated in medicine at Edinburgh in 1878. Before his appointment to Murthly he had served in the Durham County Asylum, the Friends' Retreat in York, and the West Riding Asylum. He had to resign his position at Murthly owing to ill-health. One of the features of his tenure of office at Murthly was the establishment of an evening school of which the Commissioners in Lunacy spoke highly in their reports.

British Medical Association.

It is understood that steps are being taken in Edinburgh

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with a view to invite the British Medical Association to hold its annual meeting there in 1898.

Glasgow University.

The University Court has decided to recognise Dr. R. M. Buchanan and Dr. J. Edgar as extra-academical lecturers, whose courses at Anderson's College Medical School on medical jurisprudence and midwifery respectively qualify for graduation in medicine in the University. Mr. Jno. C. Willis, M.A., has resigned his appointment as Demonstrator of Botany in the University, and he is to be succeeded by Mr. Wm. H. Lang, B.Sc. The lecturers in the faculties of Arts and Medicine at Queen Margaret College have been re-appointed for another year. The final examinations for graduation in medicine and surgery commenced last week, and the clinical portion of the examination will be continued until July 3rd. On that date the written examinations will commence and those in turn will be followed by the oral and practical lists. The results will be published about July 21st and the graduation ceremony is announced for the 23rd. The number of candidates who have entered for the examination is 132, including nine women candidates from Queen Margaret College. The session which is just concluding will be memorable by reason of the Kelvin jubilee celebrations. The entire functions were altogether successful, the arrangements in every respect being admirable. At the banquet given in honour of Lord Kelvin on the 16th inst. a telegram of congratulation from the Queen was read, and amongst the speakers were the Italian Ambassador, Lord Rayleigh, Sir Joseph Lister, and Professor Gairdner. On the following day the excursions on the Firth of Clyde were somewhat interfered with by broken weather, but a determination to make the best of things was everywhere manifest. These festive proceedings, however enjoyable in themselves, do not create an atmosphere favourable to the steady pursuit of work, and both professors and students to some extent feel their disturbing influence. The present week is to see a further academical function—not, however, of a very thrilling type—as the principal and professors have issued invitations to a reception in the Bute Hall for the 26th inst. in connexion with the Pan-Presbyterian Council at present holding its meetings in the city.

Memorial to a Medical Man.

A handsome memorial has recently been erected in the Howard Park, Kilmarnock, to the memory of the late Dr. Marshall, who was in practice in Kilmarnock for forty-two years and died in 1894. The memorial, which consists of a marble statue of Dr. Marshall placed on a carved granite pedestal, was unveiled on the 21st inst. by Professor Gairdner, who delivered an appreciation of the services which for so many years Dr. Marshall had rendered to the town and district. Though unknown in the great world he had lived up to the ideal of a medical man and had made his influence felt on many lives.

The Health of Aberdeen.

Owing to the prevalence chiefly of measles and scarlet fever there were on Friday night of last week 220 patients in the City Hospital, by far the largest number on record. The cases of zymotic diseases reported for week ended Saturday, 20th inst., however, showed a decline in whooping-cough. Measles numbered 14; scarlet fever, 70; diphtheria, 2; typhoid fever, 1; whooping-cough, 22; and erysipelas, 4; total, 113, of whom 53 were removed to City Hospital.

June 23rd, 1896.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The University of Dublin.

A MEETING of the Senate was held on the 19th inst. for the purpose of considering graces sent down by the committee for confirming degrees. The Rev. Dr. Haughton, Senior Proctor, said that he was instructed to inform the Senate that the Provost and Senior Fellows had passed a grace of the house to confer the degree of Doctor of Medicine *honoris causâ* on Sir Willoughby Francis Wade, a distinguished graduate of the University, who occupied a leading position among the medical men of Birmingham and who had made his name famous by his writings on medical subjects. A similar honour in the shape of the degree of Doctor of Science *honoris causâ* was, on the same occasion, conferred on Dr. John Batty Tuke, the distinguished neurologist and the President of the Royal College of Physicians of Edinburgh.

The Transfer of Lunatics from the Belfast Asylum to the Workhouse.

A discussion in reference to this vexed question has taken place between committees of the Belfast Asylum and the board of guardians, and it would seem that Dr. Cuming, who occupied the chair, and other members of the asylum board, when they were considering the claim to have terms agreed upon pursuant to Section 9 of the Lunatic Asylums (Ireland) Act, 1875, for the support of lunatics sent to the workhouse by the asylum authorities, suggested that before making any arrangement the guardians should be able to present to the governors a statement that the inspector of lunatics was satisfied with the accommodation which the guardians provided for the lunatics and that they could not recommend the payment of any money to the guardians until this was done. Dr. Cuming also suggested that their medical officer should have complete control or supervision over the lunatics who were sent from the asylum to the workhouse. The guardians' committee would not concede the latter terms, but agreed that the parties so sent should receive all the care that was rendered necessary by the Acts of Parliament upon the subject. The guardians' committee stated they would be satisfied with the capitation grant made by the Government for the support of lunatics in the asylum, which was stated to be 4*s.* per head per week. The entire subject will be considered at the next meeting of the asylum governors. It would seem that seventy-seven lunatics are in the workhouse who have been sent down from time to time from the asylum, and they have cost the ratepayers on the lowest calculation £6000. It would also appear there are forty-seven lunatics in the workhouse sent down to that place illegally as they did not belong to the Belfast Union, but came from other districts. If this statement, which was made at the last meeting of the Belfast board of guardians (June 16th), be confirmed then all these forty-seven lunatics should not have been sent from the asylum to the Belfast workhouse, but to the original unions from whence they came.

Belfast: the Coroner's Salary.

At an adjourned meeting of the City Corporation of Belfast in committee on June 22nd it was decided by a majority that the salary attached to the office of coroner of Belfast as it is at present, and as it may be extended, shall be fixed at £650 a year, which shall cover everything except an office to be provided by the council in the new town hall for the transaction of the official business of the coroner.

Poisoning by Carbolic Acid.

An unfortunate case of death from carbolic acid poisoning took place on June 21st in Belfast. It seems that a man, a painter by trade, went to his home on Sunday night after eleven o'clock under the influence of drink, and going upstairs to a bedroom swallowed the contents of a bottle (which he probably thought had whisky or other spirits in it) containing carbolic acid which his mother had bought for sprinkling about the room as a vermin destroyer and had placed on the corner of the mantel-piece. The man died before the medical man, who came at once when summoned, had time to reach the house. The verdict of the jury was death from carbolic acid poison, self-administered by misadventure.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Proceedings at the Académie de Médecine.

THE proceedings at the last meeting of the members of the above-named corporation included the following communications. M. Péan stated that a careful study of the cranial vault has led him to the conclusion that the bones composing the left half are thicker than those of the right, this being in direct opposition to the rule applying to the rest of the skeleton. He also noticed that all the bones of the vault were frequently thickest at the sutures. The thickness of the cranial bones in the healthy differs according to the age, the sex, and the development of the

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skeleton in general, these variations being also found in the following pathological conditions: rickets, hereditary syphilis, hydrocephalus, idiocy, epilepsy, mental degeneration, &c. It is important to bear the preceding facts in mind in view of a possible trephining operation. M. Lejars reported the case of a woman aged twenty-nine years who, having swallowed half a tumblerful of commercial hydrochloric acid on Jan. 11th, 1896, suffered immediately from intense pain and repeated vomiting of dark blood. Feeding became impossible, all food being rejected as soon as swallowed. Milk in quite small quantities was the only nourishment tolerated. Pyloric stenosis rapidly developed, the stomach being considerably dilated, while any food the patient had taken the previous day, together with a large quantity of black fluid, was got rid of by daily washing out the stomach. Emaciation, however, made great progress and the general condition being highly disquieting supra-umbilical laparotomy was practised on March 12th. The greatly distended stomach presented on its anterior surface yellow cicatricial striæ, the pyloric region being occupied by a dense mass. Gastro-enterostomy was performed, a medium-sized Murphy's button being used. The operation, which was quickly over, was well supported. For the first three days nutritive enemata only were given; on the fourth day an egg, bouillon, and milk were swallowed. The patient was discharged in capital condition at the end of April, having gained 5½ kilogrammes in weight. Since her discharge the appetite has returned and she has eaten abundantly. At present she weighs 58 kilogrammes as against 38 kilogrammes, her weight before the operation. M. Lejars called attention to the following points—viz., the limitation of the burns to the stomach, the œsophagus having curiously enough escaped, and the rapidity of the development of the pyloric stenosis. M. Mouchet of Sens reported a case of double ovariotomy in a young woman three months advanced in pregnancy, the course of which was not interrupted, a healthy child being born at term. M. Marc Sée called attention to a mode of exploration of the abominal viscera, which he terms *exploration hydrostatique*. He stated that when this examination is conducted while the patient is immersed in a warm bath palpation is greatly facilitated, the abdominal parietes offering no resistance even in the obese.

The Health of Paris.

I deem it well from time to time to supply information concerning the sanitary condition of this beautiful city, which is just now looking its best. In a population of 2,424,705 (census of 1891) there died in the twenty-fourth week of the current year 844 persons, a diminution of 72 on the figures of the preceding week and of 80 on the average for the time of year. Epidemic diseases are rare. A noteworthy circumstance is the occurrence of only one death from typhoid fever, as was also the case during the preceding week. Measles caused 16 deaths (average equal 32). Scarlet fever is fairly prevalent (120 cases during the week), but it is of a mild type, having caused only 6 deaths. Small-pox is responsible for one death only (one also for the previous week). Phthisis caused 160 deaths and cancer 57. There were 19 suicides and 17 deaths from violence.

The Rôle of the Spleen in the Defence of the System.

M. Courmont and M. Duffan of Lyons communicated to the Société de Biologie (June 13th) the result of their experimental researches on the part taken by the spleen in defending the economy against the attacks of divers microbes. The animal chosen was the rabbit which supports splenectomy without losing flesh. Injections of the streptococcus pyogenes, staphylococcus pyogenes, and the bacillus pyocyanicus were practised on these splenectomised animals and on normal rabbits. Rabbits splenectomised from two to twenty-five days beforehand were found to be much more sensitive to the bacillus pyocyanicus than their normal companions, the animal dying in a few hours, whereas normal rabbits survived longer or altogether. The staphylococcus kills the prepared animal in ten hours in a dose insufficient to bring about a like result in the normal rabbit or which kills only in a week. When an attenuated sample of a very virulent culture of streptococcus was injected into the splenectomised rabbit, the animal splenectomised only a few days or hours previously resisted always better than the normal rabbit. The splenectomised rabbit may even survive altogether when the culture is still further weakened. It would thus appear that the spleen whilst useful in defending the system against the inroads of the bacillus pyocyanicus and the staphylococcus, is positively mischievous in the struggle against the very virulent or attenuated streptococcus. In both cases a focus of production of phagocytes is suppressed.

The tenth session of the French Surgical Association will meet at the Paris Faculty of Medicine on Monday, Oct. 19th, 1896, under the presidency of M. Terrier. The two undermentioned subjects will be discussed: "Surgical Therapeutics of Club-foot," "Treatment of Genital Prolapsus."

The Prefect of the Seine has recently addressed a circular to medical inspectors of schools calling upon them to supply in addition to the usual certificate of recovery of scholars from diphtheria, another issued by the Bacteriological Service of the City of Paris affirming the absence from the mouths and throats of those same children of Loeffler's bacillus previously to their re-admission to school.

The death is announced at an early age of Dr. Girode, médecin des hôpitaux de Paris. He collaborated with Professor Brouardel and Dr. Gilbert in the publication of an important work on Medicine (Traité de Médecine et de Thérapeutique, 1895), the first chapter of the first volume on Maladies Microbiennes en Général being from his pen.

June 23rd.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The New Manicomio.

THE celebrated lunatic asylum (*manicomio*) in the Trastevere overlooking the Tiber is shortly to be pulled down and a new edifice worthy of the capital and of the progress of medico-psychology is in contemplation. Already the leading alienists of the kingdom are suggesting the lines on which the rehabilitated establishment should be laid, and the Commendatore Azzurri's monograph on the subject is attracting the attention due to his high reputation in hygienic architecture. He is very severe on the present condition of Italian hospitals for the insane. So defective are they in all respects that their reform has passed into the first line of the country's needs. Any "stamberga" (ramshackle building), according to the Commendatore, has hitherto been thought good enough for a madhouse; and if the great Roman one, with its successive improvements and its fine "succursali" (dependent quarters), in the Janiculan, is now inadequate, the fact simply throws into stronger relief the imperfections of those which still retain their mediæval character. "Our poverty, but not our will, consents," is the invariable answer of Italians to such criticisms, and I fear the "money consideration" will make itself felt even in the reconstruction of our Manicomio. The pavilion system has many advocates, but the Commendatore Azzurri, fortifying his own opinion with that of more than one authoritative alienist, is almost vehement in his recommendation of the "manicomio-villaggio" (asylum village). Mainly on the lines of Gheel, it must assume, he urges, features of its own in harmony with local and national conditions. Rome, or rather the Agro Romano, should, he thinks, set the example now as formerly, and, with her splendid choice of healthy sites on the Alban or Sabine uplands, might in a few years furnish Italy with an object-lesson which other provinces would gladly be proud to imitate. It is too much the fashion to think the Gheel precedent as *sui generis* owing its success to circumstances not to be commanded elsewhere. The Commendatore Azzurri indicates how it might (as far as Italy is concerned) be improved upon; and in any case he puts it overwhelmingly *en évidence* that almost any system would be better than that now prevailing in the peninsula and islands.

A Soudanese Fortress in Midsummer.

One of the medical inmates of the stronghold at Kassala writes, under date May 30th, that the heat, continuous and well-nigh insupportable, averages from 50° to 52° C. To secure a consecutive sleep of two or three hours it is necessary to lie under a sheet wrung out of cold water. One day, after a violent *kamseen* (wind of the desert), there was nothing to eat because the dinner tables, served in the open air, remained covered with sand, necessitating the prompt removal of all the viands. The wind was followed by a torrential shower which certainly cooled the air; but then, by way of compensation, an hour

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or two afterwards there ensued a regular invasion of toads, snakes, frogs of abnormal bulk, and other specimens of the like *fauna* which consumed the rest of the evening in hunting them back to their haunts. Life in midsummer at Kassala is not (as Albert Smith's surgeon has it) "a bed of *tol. ros. !*"

June 22nd.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Cholera Bulletins.

DURING the past fortnight cholera has been very satisfactorily diminishing in Alexandria, and the average daily number of new cases is now only six, and on two days fell to three. In Cairo the new cases per day have fallen from more than 50 to an average of 28, with a minimum of 20. It is fair to say that the disease is being well kept under in Cairo by the Englishmen employed in sanitary, police, and scavenging work. In one of the quarters a Coptic family was caught burying a corpse without a death certificate, but there is no evidence of burials in the houses and gardens as took place in Cairo in 1883. I regret to have to report a general lighting up of the epidemic in Lower Egypt and in the provinces of Upper Egypt immediately south of Cairo. Excluding Cairo and Alexandria there are now every day from 47 to 106 cases reported from a total of thirty-eight towns and villages. The distribution in the provinces is as follows:—Ghizeh, two districts; Benisouef, three; Gharbiyeh, twelve villages, Behera seven, Da Kahlieh three, Charkieh four, Menoufieh one, and Galioubiyeh, two. But it must be remembered that in addition to these the disease is probably lurking in many country villages where the ignorance or laziness of the local officials has not yet discovered it. Dr. Wilson has now been sent to control the infected districts of Charkieh province, and the three English sanitary inspectors are all very hard at work fighting the disease.

Disinfection Difficulties.

Given a hopelessly ignorant public, a virulent epidemic, and a Government not habitually accustomed to repressive acts at variance with the habits of the people, and we have all the elements necessary to hamper the work of sanitary officials. I have already mentioned an attack in Alexandria upon a cholera ambulance waggon, and a free fight at old Cairo between an Italian disinfector and a hostile mob. Fortunately the native court of justice sentenced six men to prison for periods varying from two to six months for this attack. Then came nine days ago the revolution of about 500 Syrian students in the crowded and very sacred University of El Azhar with its 12,000 graduates of all ages from early manhood to grey old age. A Syrian from this turbulent section was attacked by cholera and removed to hospital where he shortly died. The old myth was at once started that the doctors had poisoned him, and when a second case occurred the doctor was not allowed to remove him. The Sheikhs of the Mosque were all absent and refused to come when invited by the police to quell the riot. Both doctors and police seem to have behaved with the greatest moderation, and fortunately they were all Mussulmans; but when they found that the governor who very pluckily went alone to expostulate with the rioters was severely stoned it was obviously time to put an end to the disturbance. Coles Pasha arrived with twenty picked men with loaded rifles and vainly essayed to open the mosque door, exposed to a storm of paving-stones from the windows of the precincts. He got the door slightly ajar and then fired into the mosque over the heads of the crowd. This was answered by yells and stones, and reluctantly the order was given to fire at the crowd. This produced an immediate disperal and the Syrians flew to their bedrooms to hide. The police dragged them out, arrested about 500, and marched them at once to prison. The next day the bulk of them were released, sixty-five are now being exiled, and fifteen are going to be brought to justice. The Khedive has, moreover, decided to close the Syrian section of the University for one year. The greatest credit is due to both Coles Pasha and the governor for a successful ending of a very dangerous episode, and they have both been publicly thanked by the Egyptian Government. Since that day there has been no interference with sanitary officers in Cairo. But in order to make thoroughly understood the serious and regrettable side of this incident I must remind readers that the theological University of El Azhar is the most renowned in all the East—for the pious a Rome and Jerusalem combined. A hundred years ago no Christian was allowed even to pass before its door, and one of the most hated incidents of the hated French occupation of this country was that Bonaparte converted the mosque into a temporary stable. It is difficult to believe that we shall not hear of this incident again. A very widespread belief is, unfortunately, current both in Cairo and the provinces that low-class Europeans are going about with sweatmeats to poison the faithful, and that this instead of cholera is the real cause of the epidemic. One despairs of finding any method to counteract an unfounded belief of this kind. With the exception of the English workers nearly all sanitary officers are Mohammedans, and the greatest care is being taken to avoid offending any religious feelings.

The Nile Flood.

There is no sign as yet of any rising of the Nile at Akasheh, south of Wady Halfa, and there can be no improvement in the water-supply of Cairo and the Delta for another six weeks. The Sanitary Department still has a very anxious time before it, but the most hostile foreigners and the most ignorant natives all agree in comparing the results of this year as favourably as possible with the supine inaction of the Egyptian "Conseil de Santé" during the cholera of 1883.

The Abbassiyeh Lunatic Asylum.

Although cholera pervades the conversation and demoralises the work of several departments, it is satisfactory to note that in spite of all drawbacks the steady reform of the Abbassiyeh Asylum is continuing. It is really wonderful to witness the peaceful revolution which Dr. Warnock has brought about during the last fifteen months. More than 200 new windows have been opened in the wards, and no longer is there any animal smell, though the wards are more crowded than ever, chiefly because by caring for the sick in a well appointed infirmary the death-rate has been diminished by about half. New baths have been built, the garden has been furnished with verandahs, and new cells have been constructed for excited patients. Best of all, instead of all the men sitting idly upon their beds all day, some 200 out of a total 500 are working every day, mostly as masons and carpenters. I have the authority of the Public Works Department for stating that the work turned out is extraordinarily good, and all the improvements so far have only cost £2000. Work for another £2000 is planned for the present year, and then—what then? Will His Highness the Khedive still insist that Dr. Warnock's appointment must be for only two years?

Cairo, June 10th, 1896.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen were at the ordinary meeting of the Council on Thursday, the 11th inst., elected examiners for the ensuing collegiate year in the subjects indicated, viz:—

First Examination—Membership:

Elementary Biology.—Peyton Todd Bowman Beale, F.R.C.S. Eng., L.R.C.P. Lond., of King's College Hospital; George Alfred Buckmaster, M.R.C.S. Eng., M.D., B.Ch. M.A. Oxford, of St. George's Hospital; Thomas William Shore, M.R.C.S. Eng., M.D., B.Sc. Lond., L.R.C.P. Lond., of St. Bartholomew's Hospital; and Thomas George Stevens, F.R.C.S. Eng., M.D., B.S. Lond., M.R.C.P. Lond., of Guy's Hospital.

Elementary Physiology.—John Rose Bradford, M.R.C.S. Eng., M.D., D.Sc. Lond., F.R.S., of University College Hospital.

Second Examination—Membership:

Anatomy.—Richard Clement Lucas, F.R.C.S. Eng, M.B. and B.S. Lond., of Guy's Hospital; George Henry Makins, F.R.C.S. Eng., L.R.C.P. Lond., of St. Thomas's Hospital; William Johnson Walsham, F.R.C.S. Eng., M.B. and C.M. Aberd., of St. Bartholomew's Hospital; and Alfred Harry Young, F.R.C.S. Eng., M.B. and C.M. Edin., of Owens College, Manchester.

Physiology.—John Rose Bradford, M.R.C.S. Eng., M.D. & D.Sc. Lond., F.R.S., University College Hospital; D'Arcy Power, F.R.C.S. Eng., M.A., M.B. Oxford, St. Bartholomew's Hospital; and Walter George Spencer, F.R.C.S. Eng., M.B. & M.S. Lond., Westminster Hospital.

Final Examination—Membership:

Midwifery.—William Duncan, F.R.C.S. Eng., M.R.C.P. Lond., M.D. Brux., Middlesex Hospital; Montagu Handfield-Jones, M.R.C.S. Eng., M.D. Lond., M.R.C.P. Lond., St. Mary's Hospital; Arthur

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Hamilton Nicholson Lewers, M.R.C.S. Eng., M.D. Lond., M.R.C.P. Lond., London Hospital; and Amand Jules McConnell Routh, M.R.C.S. Eng., M.D. & B.S. Lond., M.R.C.P. Lond., Charing-cross Hospital.

First Professional Examination—Fellowship:

Anatomy.—William Frederick Haslam, F.R.C.S. Eng., L.S.A. Lond., Mason College and General Hospital, Birmingham; Walter Hamilton Acland Jacobson, F.R.C.S. Eng., M.B., B.Ch., M.A., Oxford, Guy's Hospital; Charles Barrett Lockwood, F.R.C.S. Eng., St. Bartholomew's Hospital; and John Bland Sutton, F.R.C.S. Eng., L.R.C.P. Lond., Middlesex Hospital.

Physiology.—Benjamin Thompson Lowne, F.R.C.S. Eng., L.S.A. Lond., Middlesex Hospital; Edward Albert Schäfer, M.R.C.S. Eng., F.R.S., University College, London; Ernest Henry Starling, M.R.C.S. Eng., M.B., B.S. Lond., M.R.C.P. Lond., Guy's Hospital; and William Stirling, M.D., C.M., D.Sc., F.R.S. Edin., Owens College, Manchester.

Diploma in Public Health—Part I.:

Arthur Pearson Luff, M.R.C.S. Eng., M.D., B.Sc. Lond., M.R.C.P. Lond., D.P.H. and F.P. & S. Glasg., St. Mary's Hospital.

Part II.:

Edward Seaton, M.R.C.S. Eng., M.D. Lond., F.R.C.P. Lond., F.C.S., F.I.C., St. Thomas's Hospital.

The following gentlemen having passed the necessary examinations and having conformed to the by-laws and regulations were admitted Members of the College, viz.:—

Carvell, John Maclean, L.S.A. Lond., London Hospital.
Lefevre, John Matthew, M.D. McGill, McGill College, Montreal, and University College Hospital.

The following gentlemen, whose names are arranged in order of seniority as Members in accordance with the by-laws, were admitted Fellows of the College, viz.:—

Tomlinson, William Henry, L.S.A. Lond., Owens College and Royal Infirmary, Manchester; date of membership, Oct. 21st, 1886.
Macnab, Allan James, L.R.C.P. Lond. (Surgeon-Captain I.M.S.), King's College Hospital; Jan. 27th, 1887.
Wood, John Forrester, L.R.C.P. Lond., St. Bartholomew's Hospital; May 9th, 1889.
Waddelow, John Joseph, L.R.C.P. Lond., L.S.A. Lond., King's College Hospital; July 30th, 1891.
Paling, Albert, M.B., B.S. Lond., L.R.C.P. Lond., Middlesex Hospital; May 12th, 1892.
Rayner, David Charles, L.R.C.P. Lond., University College and General Hospital, Bristol, and London Hospital; May 12th, 1892.
Smith, William Robert, M.B. Lond., L.R.C.P. Lond., L.S.A. Lond., King's College Hospital; Aug. 1st, 1892.
Coaker, Francis William John, L.R.C.P. Lond., London Hospital; Feb. 9th, 1893.
Baldwin, Aslett, L.R.C.P. Lond., Middlesex Hospital; July 27th, 1893.
Scrase, Frank Edward, L.R.C.P. Lond., University College and Royal Infirmary, Bristol, and St. Bartholomew's Hospital; July 27th, 1893.
Sharp, Arthur John, M.D. Lond., L.R.C.P. Lond., Guy's Hospital; July 27th, 1893.
Campbell, Robert, M.B. R.U. Irel., L.R.C.P. Lond., Queen's College and Royal Hospital, Belfast; Nov. 9th, 1893.
Maingay, Henry Bertram, L.R.C.P. Lond., St. Bartholomew's Hospital; Nov. 9th, 1893.
Taylor, Edwin Claude, M.D. Lond., L.R.C.P. Lond., Cambridge University and Guy's Hospital; Feb. 8th, 1894.
Adams, Evelyn George Beadon, L.R.C.P., Lond., St. Bartholomew's Hospital; May 10th, 1894.
Dick, John Lawson, M.B., C.M. Ed., L.R.C.P. Lond., Edinburgh University and St. Bartholomew's Hospital; May 10th, 1894.
Parry, Leonard Arthur, M.B. Lond., L.R.C.P. Lond., Guy's Hospital; May 10th, 1894.
White, Charles Powell, B.A. Cantab., L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital; May 10th, 1894.
Lockyer, Cuthbert Henry Jones, L.R.C.P. Lond., Charing-cross Hospital; July 30th, 1894.
Ray, John Howson, M.B., Ch.B. Vict., L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester; July 30th, 1894.
Stone, William Gream, M.B., B.Ch. Oxford, L.R.C.P. Lond., St. Thomas's Hospital; Nov. 8th, 1894.
Bryant, Charles Hilary, M.B. B.S. Durh., L.R.C.P. Lond., Durham University and Guy's Hospital; Feb. 7th, 1895.
Moffat, Henry Alford, L.R.C.P. Lond., Guy's Hospital; May 9th, 1895.
O'Hea, James Patrick, M.B. Lond., L.R.C.P. Lond., St. George's and St. Bartholomew's Hospital; July 29th, 1895.
Cavenagh-Mainwaring, Wentworth Roland, M.B. Adel., L.R.C.P. Lond., Adelaide University and London Hospital; Feb. 13th, 1896.
Woods, William James, M.B., R.U. Irel., L.R.C.P. Lond., Queen's College and Royal Hospital, Belfast, and London Hospital; May 14th, 1896.
Hamilton, George Gibson, M.B. Edin., Edinburgh Royal Infirmary and University, and Royal Infirmary, Liverpool; not previously a member.
Mahon, Ralph Bodkin, M.D., R.U. Irel., Queen's College, Galway, and Royal University of Ireland, Dublin; not previously a member.

One other candidate passed the examination, but not having attained the legal age of twenty-five years will receive his diploma at a future meeting of the Council. Fourteen candidates were referred back to their professional studies.

The following gentlemen having passed the necessary examinations were admitted Licentiates in Dental Surgery:—

Ashby, Edgar, Guy's Hospital.
Barnard, Walter Burrows, L.R.C.P. Lond., Charing-cross Hospital and the Dental Hospital of London.
Bascombe, Ernest Dare, Guy's Hospital.
Beyer, Ernest Fritz Bertram, Owens College and Royal Infirmary, and Victoria Dental Hospital, Manchester.
Bidlake, Luther, Guy's Hospital.
Blomfield, Edgar Athelstan, Charing-cross Hospital and the Dental Hospital of London.
Briant, Wallace Watson, Guy's Hospital.
Byrne, Thomas Wafer, University College, Royal Infirmary and Dental Hospital, Liverpool.
Carter, Stuart, Mason College, Queen's and General Hospitals, and Dental Hospital, Birmingham.
Coltman, Ernest, Guy's Hospital.
Conder, Harold, Charing-cross Hospital and Dental Hospital of London.
Connor, George Washington, M.R.C.S. Eng., Middlesex Hospital and Dental Hospital of London.
Cowles, Hector Charles, Guy's Hospital.
Crapper, Harold Sugden, Guy's Hospital.
Crosby, Alfred Edward Binnington, Guy's Hospital.
Day, Kendrew James, Charing-cross Hospital and Dental Hospital of London.
De Mierra, Albert, Guy's Hospital.
Dunlop, Harry, Charing-cross Hospital and Dental Hospital of London.
Dupigny, Joseph Elford, Guy's Hospital.
Edey, George Russell, Guy's Hospital.
Fisher, Sydney Bailey, Mason College, Queen's and General Hospitals, and Dental Hospital, Birmingham.
Harris, Harold Octavius Whitfield, Guy's Hospital.
Heeson, Edwin Ernest Darley, Guy's Hospital.
Hemsted, Frederick, Charing-cross Hospital and Dental Hospital of London.
Hill, William Edmund, Middlesex and National Dental Hospitals.
Hinchliff, Charles John, Guy's Hospital.
Howe, Albert Frederick Alonzo, Guy's Hospital.
Knaggs, Sydney Angelo, Charing-cross Hospital and Dental Hospital of London.
Lacey, William John Mark, Guy's Hospital.
Mardon, Frederick William, Charing-cross Hospital and Dental Hospital of London.
Moore, Hubert William, Glasgow University, Middlesex and National Dental Hospitals.
Mordaunt, Osbert, Charing-cross Hospital and Dental Hospital of London.
Mudie, Walter, Charing-cross Hospital and Dental Hospital of London.
Mullord, Charles, London and National Dental Hospitals.
Newbery, Ernest Arthur, Charing-cross Hospital and Dental Hospital of London.
Nixon, Arthur Percival, University College, Royal Infirmary, and Dental Hospital, Liverpool.
Oliver, Norman Henry, Guy's Hospital.
Orridge, Alfred Edward Horton, Charing-cross Hospital and Dental Hospital of London.
Padgett, Frank Joseph, Charing-cross Hospital and Dental Hospital of London.
Plumley, Arthur George Grant, Guy's Hospital.
Read, Arthur, Guy's Hospital.
Riches, Charles John Hurry, Middlesex and National Dental Hospitals.
Robey, Arthur Malcolm, Mason College, Queen's and General Hospitals, and Dental Hospital, Birmingham.
Sexton, Walter, Middlesex Hospital and Dental Hospital of London.
Skae, John Walker, University College, Royal Infirmary and Dental Hospital, Liverpool.
Snell, Norris, Guy's Hospital.
Staton, Harry Hamilton, Charing-cross Hospital and Dental Hospital of London.
Stevens, Richard Henry, Guy's Hospital.
Ta'Bois, Leopold, Guy's Hospital.
Tasker, Benjamin George, Guy's Hospital.
Tebbitt, Ernest Reginald, Guy's Hospital.

Sixteen candidates were referred back to their professional studies.

SOCIETY OF APOTHECARIES OF LONDON, JUNE, 1896.—The following candidates passed in the undermentioned subjects:—

Surgery.—C. H. Dearden, Leeds; G. C. Jackson, Cambridge and St. Mary's Hospital; P. R. Lowe, Cambridge and Guy's Hospital; W. McCall, Charing-cross Hospital; G. H. Ormsby, Westminster Hospital; D. F. Roberts, Guy's Hospital; M. Sharp, Royal Free Hospital; E. M. Vernon (Intermediate), Royal Free Hospital; and H. A. Walker, Manchester.

Medicine, Forensic Medicine, and Midwifery.—A. P. B. Ellis, Glasgow and St. Mary's Hospital; P. R. Lowe, Cambridge and Guy's Hospital; W. J. Lubeck, Madras and University College Hospital; B. R. Turner, King's College Hospital; E. M. Vernon (Intermediate), Royal Free Hospital; and W. J. Woodman, St. Mary's Hospital.

Medicine and Midwifery.—J. C. R. Curtis, University College Hospital; and M. K. S. Holst, Royal Free Hospital.

Medicine.—E. R. Bowen, Bristol; and H. Clapham, Sheffield.

Forensic Medicine and Midwifery.—T. S. Biggs, Guy's Hospital.

Forensic Medicine.—J. C. McWalter, Dublin.

Midwifery.—F. L. Angior, Liverpool; and C. H. Dearden, Leeds.

To Messrs. Angior, Bowen, Clapham, Dearden, Lowe, Lubeck, McCall, Ormsby, Roberts, Walker, Woodman, and Miss Holst the diploma of the society was granted entitling them to practise Medicine, Surgery, and Midwifery.

PRESENTATION TO A MEDICAL PRACTITIONER.—Dr. Samuel Lawrence of Montrose, the medical officer of the burgh, on his retiring, after a period covering fifty-four years of active professional service, has been presented by his friends in that town and district with a portrait of himself. It is painted in oils and described as a faithful, striking

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portrait. At the bottom of the frame the following words are inscribed: "Samuel Lawrence, M.D. Presented by friends.—Montrose, June, 1896."

THE FREE HOME FOR THE DYING.—The concert on behalf of this national charity, given at Stafford House on June 9th, by permission of the Duchess of Sutherland, and under the patronage of the Princess of Wales and the Duke and Duchess of York, realised £237 5*s.* 6*d.*, in addition to which a lady sent a cheque for £500 to the honorary treasurer, Mr. William Hoare.

MEDICAL MAGISTRATE.—On the recommendation of the Earl of Cork and Orrery, K.T., lord lieutenant of the county of Somerset, the name of Mr. Edward England Phillips, L.R.C.P. Edin., M.R.C.S. Eng., L.S.A. Lond. (retired), of Sydney House, Bath, J.P. for the county of Essex, has been inserted in the Commission of the Peace for the county of Somerset.

DIPHTHERIA IN LONDON.—The week ended June 13th witnessed a slight fall in the number of deaths registered from diphtheria in London, as compared with the week immediately preceding. The deaths in the three weeks ended June 6th had been respectively 56, 40, and 52; and the number in the week ended the 13th, while having a total 16 in excess of the corrected decennial average for the twenty-fourth week of the year, showed a fall to 49 deaths. Of these 5 were of persons belonging to Camberwell, and 3 of persons belonging to Bethnal-green, whilst several other parishes had 2 deaths each. All but one of the deaths were in young persons aged under twenty years, and 35 were of children under five years of age. The admissions to hospital in the week were 109, as against 132 in the previous week, and the Saturday found 753 cases under treatment, against 710 on the corresponding Saturday of May. In Greater London the deaths in the week from diphtheria were only 3 in number. Last week there was a further fall in the registered deaths from the disease in London, 40 being the total, or 7 in excess of the corrected decennial average for the twenty-fifth week. But the localisation of the disease in a fatal form was more pronounced, Poplar and Camberwell being each credited with 6, and 5 deaths being of residents of Islington. The admissions to hospital were 91, but the total of patients under treatment on Saturday last showed an increase of 2 on the previous week. The same disposition as to ages was witnessed, and the registered deaths from the malady in Greater London rose to 10. In this way the saving of life from this disease in the county of London was almost counterbalanced by the increase of fatal diphtheria in the suburbs.

THE DIFFUSION OF SMALL-POX.—The cases of small-pox arising in the metropolis have in the past two or three weeks shown some evidence of spread of the disease in certain parts of London. In the fortnight ended May 30th the cases removed to the hospital ships down the river numbered 8, and in the next week the same total was reached, followed in the week ended June 13th by 9 admissions. The total for last week was 18, or double that of the previous week. Much of this increase seems to be due to a localised outbreak of the disease in the parish of St. Mary, Islington. In one street in a poor and crowded district close to Finsbury Park there were 5 cases removed on Sunday of last week and several additional cases later in the week from the same street. A case has also been reported at Highgate. The number of patients remaining under treatment on the ships has risen from 19 at the close of May to 41 last Saturday. Figures from Gloucester show a continued decline in the amount of small-pox occurring in that city, the returns for the week ended on Thursday, June 18th, giving 16 fresh cases as the total of fresh notifications. The admissions to hospital were 12, the discharges 15, and the deaths 6 in number. Up to the date in question the aggregate of cases during the epidemic was 1952, and whilst it is locally looked upon as certain that the prevalence will now soon die out, it will probably be only after 2000 cases have been chronicled. Some interesting figures as to vaccination have appeared in the local press. It would seem that there have been performed, as a result of the small-pox prevalence, no fewer than 8400 primary vaccinations and 26,317 re-vaccinations, giving unitedly a total of 34,717 operations. Much credit is undoubtedly due to the vaccination committee of the guardians and—this being especially the case—also to the staff under them, including in the first place Dr. Bond. The task achieved has been an admittedly difficult one, and its accomplishment is matter for congratulation to all concerned. We trust that the amount of work has been equalled by the excellence of the quality. Occasion for further congratulation lies in the fact that the return of the Registrar-General for Ireland for the week ended June 13th contained an intimation that the end of the week found no patient suffering from small-pox in the hospitals of the city of Dublin, the last patient having been discharged that week. This is the first time that the hospitals have been free from cases of the disease since the week ended May 26th, 1894.

Parliamentary Intelligence.

HOUSE OF COMMONS.

THURSDAY, JUNE 18TH.

The Dog Muzzling Order.

SIR LEWIS M'IVER asked the President of the Board of Agriculture whether, having regard to the facts that the muzzling order had now been in operation in London for four months, that during that time all the stray and ownerless dogs had been destroyed, and that the muzzle caused great torment and discomfort to dogs in this hot weather, he could now recommend a relaxation of the order.—Mr. Walter Long replied that during the last four weeks twenty-two cases of rabies in dogs had been reported in London and the Home counties and 2982 stray dogs had been seized in London, only 899 of which were claimed. These circumstances seemed to him to clearly point to the necessity for the continuance in force of muzzling regulations, and he regretted therefore that he could not accede to the suggestion of his hon. friend

Prevention of Cruelty to Children.

Mr. M'Cartan asked the Secretary of State for the Home Department whether his attention had been called to the published summary of the annual report of the National Society for the Prevention of Cruelty to Children, wherein it was stated that, on the year's revenue, as compared with expenditure, there was a deficit of £8500; and whether he was aware that a large proportion of the deficit arose through the society bearing the expenses of prosecutions of cases transferred to them by the metropolitan police and county constabulary, which, under ordinary circumstances, would be paid for out of public funds; and, if so, whether he was prepared to take such steps as would relieve the society from such expenses now and in the future.—Sir Matthew White Ridley replied that he saw from the society's report that the ordinary income for the year was less by nearly £6000 than the income of the previous year; but he was informed by the director and the report also showed that the decrease was almost entirely due to the fact that a reserve fund was raised by the society during the year. He was not sure that he understood what was the meaning of the hon. member in the second paragraph of his question, but costs of prosecutions, so far as they were provided for by law, fell upon the same fund whether the prosecutions were instituted by the police or by any other persons. He might add that the society informed him that they did not desire any such relief as that suggested, and that few things had been so valuable to their work as the cordial union which exists throughout the country between them and the police.

Street Accidents.

Questions were addressed to the Home Secretary with regard to the frequency of accidents in the streets arising from the practice of driving covered vans from which the driver is unable to see the traffic on either side of him, and Sir Matthew White Ridley, in reply, said that the number of accidents caused by covered vans was unhappily on the increase. Except, however, in the case of cabs and omnibuses the powers of the police extended only to the manner in which vehicles were driven and not to regulating the position of the driver in the vehicle. Special warnings were issued from time to time and distributed widely, but more than that he was afraid the police could not do.

FRIDAY, JUNE 19TH.

The Case of Surgeon-Captain Fowler.

Sir Walter Foster and Dr. Farquharson at this sitting of the House, and when the House was in Committee of Supply on the Army Estimates, brought forward the case of Surgeon-Captain Fowler, who was gazetted out of the Army because of certain proceedings in the officers' quarters of a militia regiment in training at Sheerness. These two members claimed that Surgeon-Captain Fowler had been unfairly treated by the War Office and that a court-martial should be held upon the proceedings in question.—Mr. Brodrick, Under-Secretary of State for War, resisted the claim, and defended the action of his Department, and nothing came of the matter.

MONDAY, JUNE 22ND.

River Pollution.

Mr. Bartley asked the President of the Local Government Board whether his attention had been drawn to a resolution of the General Purposes Committee of the County Council of Middlesex of the 9th inst., on the subject of the state of the River Brent owing to its pollution by sewage, and what steps were to be taken to remove this danger to the health of the western suburbs of London, especially during this hot weather.—Mr. Chaplin replied that he had received a copy of the resolution. Some time ago he undertook to communicate again with the Thames Conservancy Board and the Middlesex County Council as to preventing the pollution of the Brent, and this he had done. He was informed that in several of the cases of pollution of the river by sewage to which attention was drawn in the report on the subject made last year by one of the inspectors of the Local Government Board, either the pollution had now been

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diverted from the stream or steps had been taken to abate it, while in two instances samples taken periodically since October last had been analysed and were reported to give good effluents He understood that writs had been issued asking for injunctions against two of the district councils referred to in the inspector's report. One of these councils had applied to the Board for sanction to a loan for works of sewage disposal, and he was informed that proposals were to be made to the other by their surveyor as to the execution of some additional works with a view of preventing the pollution.

The Preserved Peas Question.

Mr. George Whiteley asked the President of the Local Government Board whether his attention had been called to a decision given by the Deputy Chairman of the County of London Sessions condemning preserved peas as injurious in the preparation of which sulphate of copper was used; whether he was aware that in France the Government after an exhaustive inquiry permitted the unrestricted sale of such peas as quite harmless, and the same was the case in the United States, Denmark, and other countries; whether, as the Justices of Glasgow and Bristol had held that such peas were harmless, he would consider what steps could be taken to prevent the retail grocer being subjected to such prosecutions; and whether, if satisfied that such peas were harmless, he would issue a recommendation to the local authorities to discontinue such prosecutions?—Mr. Chaplin said that his attention had been drawn to this decision, but he was not in possession of any reports which had been made in France or other countries and which had led to the unrestricted sale of peas coloured with sulphate of copper at the rate of three grains of copper salt to one pound of peas, on the ground that peas thus coloured were quite harmless; nor had he seen the decisions of the justices of Glasgow and Bristol to which his hon. friend referred. Indeed he was not in possession of any evidence which proved that peas coloured as described might be habitually consumed without injury to health, and under these circumstances he was unable to make the recommendation which his hon. friend suggested.

Factory Legislation.

Sir Charles Dilke asked the Secretary of State for the Home Department, with regard to the statement of Her Majesty's Chief Inspector of Factories that the power of the Secretary of State to issue orders applicable to particular classes of work in specified areas where outwork was carried on under insanitary conditions would enable the sweating districts to be dealt with, to what extent steps had been taken to deal with the sweating districts under the provisions of Section 5 of the Factory Act of 1895.—Sir Matthew White Ridley replied that immediately after the Act of last year came into force he made very full inquiries with a view to determining the districts in which the section should be put into operation. The qualifications, however, introduced into the section in the House of Commons were so stringent that he found no case existed in which he had power to make the order. The right hon. gentleman would remember that before such an order could be made it must be proved that the number and distribution of the population, and the conditions under which work was carried on, were such as to involve special risks of injury or dangers to the health, not only of the persons employed, but also of the whole district. He did not know of any case in which those conditions would be complied with except when a district was suffering from, or was threatened with, a special outbreak of infectious disease originating among the sweated workpeople. If that state of things should arise, or if in any other way the conditions which the Act imposed were fulfilled, he should be ready to make the necessary order.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BARBER, P. E., L.R.C.P. Lond., M.R.C.S., has been re-appointed a District Medical Officer, Wortley.

BISSHOPP, FRANCIS R. B. M.A., M.D. Camb., has been appointed Honorary Consulting Physician to the Tonbridge Union and Infirmary.

BLAKISTON, A. A., M.R.C.S., has been re-appointed Medical Officer of Health for the Borough of Glastonbury.

BRADSHAW, W. L., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Third Sanitary District of the Wycombe Union.

BROWN, WILLIAM, F.R.C.S. Edin., has been appointed Honorary Assistant Surgeon to the Cumberland Infirmary, Carlisle.

BURMAN, F. J., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health for the Wath Urban Sanitary District.

BUTTERS, GEO., M.B., C.M. Edin., has been appointed Medical Officer by the Kempston Urban District Council.

CAREY, ARTHUR JAMES, L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer for the No. 4 Sanitary District of the Axbridge Union.

CARGYLL, L. VERNON, F.R.C.S., has been appointed Assistant Surgeon to the Royal Eye Hospital, Southwark.

CHRISTIE, MARGARET M. T., M.B. Lond., has been appointed Assistant Medical Officer for the Workhouse of the Greenwich Union, vice J. H. Griffiths, resigned.

COLLINS, W. J., M.D., F.R.C.S., B.Sc., Cert. Pub. Health, has been appointed Surgeon to the Royal Eye Hospital at Southwark.

COLWELL, J. R., has been appointed Public Analyst by the Clerkenwell Vestry and the St. Giles's District Board of Works.

CROWE, DANIEL, M.B., B.Ch. Dub., has been appointed Medical Officer for the Molvey Sanitary District of the Nuneaton Union.

CUNNINGHAM, A., M.B., C.M. Glasg., has been re-appointed Medical Officer of Health for Oldbury.

DAVIS, HENRY, M.R.C.S. Eng., has been appointed Anæsthetist to the Dental Hospital of London, Leicester-square.

EGLINTON, G. W., L.R.C.P. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health for Street, Somerset.

FAWCETT, WM. H., M.D. Brux., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Wimborne and Cranbourne Union.

FLETCHER, F. J., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer for the Burton Coggles Sanitary District of the Grantham Out-Relief Union.

FRASER, P., M.D. Edin., B.Sc. (Pub. Health), has been appointed Medical Officer of Health for the Menai Bridge Urban Sanitary District, vice H. Rees, resigned.

GILBERT, J. K. MARTYN, B.A., M.B., B.C. Cantab., has been appointed Assistant Resident Medical Officer to Queen Charlotte's Lying-in Hospital.

HARDMAN, F. H., M.B., M.S. Edin., has been appointed Medical Officer of Health for the Kingston Rural Sanitary District, and also Medical Officer for the Teme Rural Sanitary District.

HOSEGOOD, S., M.R.C.S., has been re-appointed Medical Officer of Health for the Swinton and Pendlebury Urban Districts.

MACQUEEN, A., M.D., C.M. Edin., has been appointed Medical Officer of Health for the Drayton Rural Sanitary District.

MURRAY, GEORGE R., M.A., M.D. Camb., M.R.C.P. Lond., has been appointed Physician to the Royal Infirmary, Newcastle-upon-Tyne.

PARKINSON, J. PORTER, M.D., M.R.C.P. Lond., F.R.C.S. Eng., has been appointed Physician to Out-patients at the North-Eastern Hospital for Children, Hackney road.

PEARSON, H. CARDEN, M.B., C.M. Edin., has been appointed Junior House Surgeon to the Borough Hospital, Birkenhead.

PHILLIPS, SIDNEY, M.D. Lond., F.R.C.P., has been appointed Physician to In-patients, St. Mary's Hospital.

PHILIPSON, G. H., M.D. Cantab., F.R.C.P. Lond., has been appointed Consulting Physician to the Royal Infirmary, Newcastle-upon-Tyne.

RICHARDS, H. M., M.D. Lond., B.S., L.R.C.P., M.R.C.S., has been appointed Medical Officer of Health for the Borough of Chesterfield.

ROSCOE, HENRY, L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer for the Crumpsalls Workhouse and the New Bridge-street Workhouse of the Manchester Township.

ROWLANDS, WM. H., M.R.C.S., L.R.C.P., has been appointed Assistant House Surgeon to the General Hospital, Birmingham.

SEYLER, C. A., has been appointed Public Analyst for the County of Pembroke, vice Morgan, deceased.

SNOWDEN, G. H., M.R.C.S., has been re-appointed Medical Officer for Halford Sanitary District of the Shipton Union.

SOPER, R. W., M.R.C.S., has been appointed Medical Officer of Health for Dartmouth Borough and Port.

SPOWART, T., L.R.C.P., L.R.C.S. Edin., D.P.H., has been re-appointed Medical Officer of Health for the Second District of the Wortley Rural Sanitary District.

STURGE, MARY D., has been appointed Anæsthetist to the Birmingham and Midland Hospital for Women.

TATE, WALTER W. H., M.D. Lond., M.R.C.P., has been appointed Assistant Obstetric Physician to St. Thomas's Hospital.

THURSFIELD, W. N., M.D. Edin., M.R.C.S., D.P.H. Camb., has been re-appointed Medical Officer for Ludlow.

WAINMAN, BENJAMIN, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Workhouse of the Hunslet Union.

WIGHTMAN, J. P., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Rawdon Urban Sanitary District, vice C. Dawson, resigned.

WILLIAMS, W. T., M.R.C.S., has been appointed Medical Officer for the Casual Wards and Test House of the Manchester Township.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

CENTRAL LONDON OPHTHALMIC HOSPITAL, 238, Gray's-Inn-road, W.C.—House Surgeon.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY, Chesterfield.—Resident Junior House Surgeon and Dispenser. Salary £50 per annum, with board, apartments, and laundress.

COUNTY BOROUGH OF HUDDERSFIELD.—Medical Officer of Health for the Borough and Urban Sanitary District of Huddersfield. Salary £400 per annum, with actual disbursements. Applications to the Town Clerk, Town Hall, Huddersfield.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians. Also Clinical Assistant in the Out-patient Department, and Clinical Clerk to the In-patient Physicians.

HOXTON HOUSE ASYLUM, London, N.—Clinical Assistant. Board, lodging, and washing provided, and an honorarium at the rate of £40 per annum.

KENSINGTON DISPENSARY.—Resident Medical Officer, unmarried. Salary £125 per annum, with furnished rooms, coals, gas, and attendance. Applications to the Hon. Secretary, 7, Stamford-road, Kensington-square.

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NEWPORT AND MONMOUTHSHIRE HOSPITAL.—House Surgeon. Salary £100 per annum, with board and residence (no stimulants provided). Applications to the Secretary, Newport, Mon.

OWENS COLLEGE, Manchester.—Senior and Junior Demonstrator in Physiology. Stipends £150, rising to £200, and £100, rising to £150 respectively.

SEAMAN'S HOSPITAL SOCIETY (*Dreadnought*).—House Surgeon for Branch Hospital, Royal Victoria and Albert Docks, E. Salary £75 per annum, with board and residence.—Applications to the Secretary, Greenwich, S.E.

SHEFFIELD GENERAL INFIRMARY.—Junior Assistant House Surgeon for three years. Salary £50 per annum, with board, lodging, and washing. Also House Surgeon at a salary of £120; House Physician, salary £80; and Senior Assistant House Surgeon, salary £60 per annum.

ST. MARY'S HOSPITAL, Paddington, W.—Physician in charge of Out-patients for five years.

TAUNTON AND SOMERSET HOSPITAL, Taunton.—House Surgeon for three years. Salary £100 per annum, with board, lodging, and washing in the hospital.

UNIVERSITY OF ABERDEEN.—University Assistant in Physiology. Salary £150, rising by annual increments of £25 to £200. Applications to Professor MacWilliam.

WESTERN GENERAL DISPENSARY, Marylebone-road, London.—House Surgeon, unmarried. Salary £80 a year, with board and residence.

Births, Marriages, and Deaths.

BIRTHS.

BATTLE.—On June 21st, at Mansfield-street, Cavendish-square, W., the wife of W. H. Battle, F.R.C.S., of a daughter.

DIXEY.—On June 20th, at Woodgate, Great Malvern, the wife of Harry E. Dixey, M.D., of a daughter.

MANN.—On June 19th, at Newgate-street, Chester, the wife of Alfred Mann, M.D., of a son.

MCCONNELL.—On June 16th, at Manor House, Ryburgh, Norfolk, the wife of Dr. Henry McConnell, of a daughter.

MONRO.—On May 23rd, at Rhanaghat, Bengal, the wife of Charles G. Monro, M.B., B.C., Rhanaghat Medical Mission, of a daughter.

POWELL.—On June 21st, at Brighton, the wife of Walter Powell, M.R.C.S., L.R.C.P. Lond., of a son.

SANDBERG.—On June 19th, at Liverpool Lodge, Brixton-hill, S.W., the wife of Arthur G. Sandberg, M.D., of a daughter.

STURROCK.—On June 15th, at Arima, Broughty Ferry, the wife of J. F. Sturrock, M.B., of a son.

MARRIAGES.

CROSS—OWTRAM.—On June 18th, at the Parish Church, Beckenham, Geoffrey Cross, M.R.C.S., son of the late James Cross, Esq., of Gringley, Notts, to Mary Constance, second daughter of C. H. Owtram, Esq., of Rylston, Croydon-road, Beckenham.

JONES—ATKINS.—On June 24th, at Christ Church, Banbury, by the Rev. Canon J. Herbert Jones, vicar of St. John's, Waterloo, Liverpool, father of the bridegroom, and the Rev. C. E. Graham Jones, vicar, Clement Royds Jones, M.B., of Calveley, Cheshire, to Ellen, youngest daughter of Edward Atkins, of Banbury.

KIRKPATRICK—KING.—On June 17th, at St. Mary's Church, Old Swinford, Stourbridge, William Kirkpatrick, M.D., eldest son of the Rev. G. Kirkpatrick, of St. Catherine's, Rathfarnham, to Agnes Helen, eldest daughter of Charles King, of Oakleigh, Stourbridge.

MEGGISON—AUSTIN.—On June 16th, at St. John's Church, Lewisham High-road, Thomas Cockburn Meggison, M.D., son of the late John Mill Meggison, of Berwick-on-Tweed, to Mabel, youngest daughter of the late Charles William Austin, of Lee, Kent.

MOLE—CLARKE.—On June 17th, at St. Mark's Church, New Ferry, by the Rev. Herbert E. Willson, Alfred Ernest Mole, M.B. Edin., of Adlington, eldest son of the Rev. R. Hopkins Mole, to Margaret Louisa, only daughter of the late John Clarke, Esq., of Buckley.

MOBERLEY—RYLEY.—On May 14th, at All Saints', Ladysmith, Natal, George Keble Moberly, L.R.C.S., L.R.C.P. Edin., elder son of the late Canon Moberly, of Cintra House, Winchester, to Florence Ryley, second daughter of — Ryle, Esq., M.L.A., of Moortown House, Ladysmith.

PORTER—HONEYMAN.—On June 23rd, at St. George's, Hanover-square, Bruce Porter, Army Medical Staff, son of Captain Porter, late R.A., to Essie, widow of the late J. H. Honeyman, M.D., of Auckland, New Zealand.

SMYTH—TEUSH-HECKER.—On June 16th, at St. James's, Norlands, Surgeon-Captain William Johnson Smyth, M.D., M.S., attached to the Grenadier Guards, to Amy Fanny White, younger daughter of the late H. C. Teush-Hecker, of Misterton, Leicestershire.

DEATHS.

CHOLMELEY.—On June 18th, at Clarendon-road, W., William Cholmeley, M.D., F.R.C.P., aged 73.

GAYLEARD.—On May 28th, at Kingston, Jamaica, Christopher Gayleard, M.R.C.S. Eng., grandson of the late Hon. James Gayleard, aged 59.

QUALTROUGH.—On June 12th, at 2, St. John's-road, Upper Holloway, W. J. Qualtrough, L.R.C.P., L.R.C.S., aged 51 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 25th, 1896.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
June 19	30·21	WNW	66	59	127	77	59	...	Fine
,, 20	30·23	W.	65	58	115	74	56	...	Fine
,, 21	30·17	W.	64	56	122	74	55	...	Cloudy
,, 22	30·19	N.	61	55	120	73	53	...	Fine
,, 23	30·10	W.	65	59	121	77	56	...	Cloudy
,, 24	29·99	S.W.	64	61	116	72	61	0·03	Overcast
,, 25	29·98	N.E.	60	58	99	63	58	0·28	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (29th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.).

TUESDAY (30th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (1st).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY (2nd).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West. London (2 P.M.), Chelsea (2 P.M.), Great Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (3rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.) Gt. Northern Central (2.30 P.M.).

SATURDAY (4th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

WEDNESDAY (1st).—DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND (20, Hanover-square, W.)—4.30 P.M. Council Meeting. 5 P.M. Cases will be shown.

OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shewn by Dr. Remfry and others. Papers:—Dr. F. J. McCann: The Etiology of Gonorrhœa.—Dr. G. F. Blacker and Mr. T. W. P. Lawrence: A Case of True Unilateral Hermaphroditism with Ovotestis occurring in Man, with a Summary and Criticism of the Recorded Cases of True Hermaphroditism.

FRIDAY (3rd).—OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-st., Cavendish-sq., W.).—8.30 P.M. Card Specimen:—Mr. A. Frost: Pulsating Exophthalmos undergoing Spontaneous Cure. Papers:—Dr. C. H. Usher and Dr. G. Dean: Experimental Research on the Course of the Optic Fibres.—Mr. F. R. Cross: Congenital Hydrophthalmos, with microscopic preparations.—Mr. C. D. Marshall: Tension in Cases of Intraocular Tumour. Mr. S. Snell: Note on Electrolysis in Detachment of the Retina. The Annual General Meeting for the Election of Officers, &c., will be held at the close of the ordinary meeting.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (29th).—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Mr. G. C. Wilkin: Aural Polypi.

TUESDAY (30th).—HOME FOR TREATMENT OF WOUNDS AND ULCERS BY OXYGEN (35, St. George's-sq.).—4 to 5.30 P.M. Demonstrations of Treatment, Apparatus, and Cases.

WEDNESDAY (1st).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. J. Taylor.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. McAdam Eccles: The Radical Cure of Hernia.

THURSDAY (2nd).—THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-st., W.C.).—4 P.M. Lecture by Dr. Barlow.

VICTORIA HOSPITAL FOR CHILDREN (Tite-street, S.W.).—4 P.M. Mr. H. Spicer: Some Forms of Keratitis in Children.

HOME FOR TREATMENT OF WOUNDS AND ULCERS BY OXYGEN (35, St. George's sq.).—4 to 5.30 P.M. Demonstrations of Treatment, Apparatus, and Cases.

SATURDAY (4th).—HOME FOR TREATMENT OF WOUNDS AND ULCERS BY OXYGEN (35, St. George's-sq.).—4 to 5.30 P.M. Demonstrations of Treatment, Apparatus, and Cases.

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Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index for the current half-year is given in this week's issue, which completes the first volume of the year 1896. The practice of supplying loose copies of the Index has been discontinued, and it is now placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1896 will be ready shortly. Bound in cloth, gilt lettered, price 18*s*.

Cases for binding the half-year's numbers will also be ready in a few days. Cloth, gilt lettered, price 2*s*.

To be obtained on application to the Manager, accompanied by remittance.

"SAFETY PARAFFIN LAMPS."

MR. R. P. BEATTIE, of 16, Arcadia, Gt. Dover-street, Borough, S.E., sends us a description of a safety lamp of which he is the inventor. Its chief merit is simplicity of construction, while there is little doubt that it would burn ordinary illuminating oil quite safely. It answers to the description of a safe lamp as laid down by THE LANCET Commission. The wick is contained loosely in a wick chamber, except at the bottom where it passes tightly through a plug into the oil reservoir. Thus while the wick absorbs enough oil to feed the flame the wick chamber itself is always empty; leakage, therefore, through the wick tube of oil is prevented. The inventor states that he demonstrates the safety of this burner by throwing a burning lamp into a bed to convince his audience that no disaster can happen, and he adds that "many of the more nervous spectators make for the door and appear relieved when the experiment is over."

A very ingenious invention is the "Equipose Lamp" of Mr. A. H. Thompson, of 18, Garford-street, Poplar, E., which was referred to in our notice of safety lamps in THE LANCET of May 16th. We have since had an opportunity of inspecting the mechanism of this lamp. As its name indicates, the device upon which its safe working depends is a delicate universal joint, by means of which, no matter what position the body of the lamp may take, the reservoir and chimney are always vertical. When the lamp is upset it is immediately extinguished, since the ingress of air is at once stopped. Indeed, when required, the lamp may be conveniently extinguished in this way. It is obvious that this principle can be applied to various grades of lamps. Lamps of this safe construction are particularly well adapted for use in warehouses containing inflammable goods, when, colza oil being used, they give a brilliant light and for this purpose have, further, the advantage of being easily extinguished without unlocking the lantern.

M.D.—The medical man's first duty is undoubtedly towards his patient. As she would be so much better off if she took her parents into her confidence his advice to her to do so would be sound. But the moral point is one for her to decide, while it is his first business to attend to her physical condition.

"DOES ILLNESS HAVE ANY BENEFICIAL EFFECT ON ITS SUBJECT?"

To the Editors of THE LANCET.

SIRS,—I am afraid it is rather late in the day to answer Dr. Harry Campbell's request in THE LANCET of Sept. 28th, 1895. I well remember a case which somewhat applies. During an epidemic of enteric fever a man came to hospital with gonorrhœa; in three or four days he developed enteric fever, the gonorrhœa disappeared, and I well recollect some four weeks later, on the first day of normal temperature, my ward orderly (male nurse) saying, "His gonorrhœa has come back." The statement I was easily able to verify; there was no gonorrhœa during the active process of the enterica. I made an entry in the case book to that effect at the time. I regret that as the case occurred abroad some three years ago I have not access to the record of the case so that I could give accurate dates, &c., but the incident has not faded from my memory. I think such an occurrence is not very uncommon, though at present I can give no others.

I am, Sirs, yours truly,

Sheerness, June 17th, 1895. M. P. HOLT, Surgeon-Captain A.M.S.

M.D. Ed., &c.—Our correspondent had better apply to the School of Languages, 161, Fulham-road. Arabic is not a difficult language to learn to speak fairly fluently; to read or write it is a different thing

C. G. H.—The work done by the unqualified assistant, as described by our correspondent, falls within the proper scope which has been defined by the General Medical Council.

WRIGHT AND WRONG.

The *Jarrow Guardian* of June 19th publishes the following:—

"Mr. and Mrs. Wright and Family wish to thank the large circle of kind friends for their warmest sympathy, and are thankful to say their son George is progressing favourably under the skilful treatment of Dr. J——.

"June 18th, 1896. "9, Park-road, Jarrow."

We omit Dr. J——'s name, and recommend him to insist that the grateful patients shall do so also in their advertisement to their friends.

M.R.C.S.—The objections to such a scheme for payment are innumerable. Has our correspondent any idea of the difficulty the country rector experiences in collecting his tithe?

THE VACCINATION ACTS AND BOARDS OF GUARDIANS.

A CORRESPONDENT calls our attention to an anti-vivisection leaflet which professes to show how the Vaccination Acts may be legally repealed by boards of guardians. Under the heading of "Suggestions" it is stated that it is not obligatory on boards of guardians to prosecute defaulters under the Vaccination Acts, and our correspondent asks for reference to the law on this point. The 27th Clause of 30 and 31 Victoria, Chapter 84 (1867) states positively and clearly that the guardians shall make inquiry, and "if they find the provisions of the Act have been neglected shall cause proceedings to be taken against the persons in default." There is no mistaking this language, but, unfortunately, by the Vaccination Amendment Act 34 and 35 Victoria, Chapter 98, the above Clause (Section 27 of the 1867 Act) is repealed. It is clear, however, that according to the principal Act any parent or person having the custody of a child, &c., who shall neglect "shall *be guilty of an offence* and be liable to be proceeded against summarily, and, upon conviction, to pay a penalty not exceeding 20*s*." We take it, therefore, that any one can prosecute—the guardians may, of course, if they like, and certainly, if any "Registrar" (Clause 31 of the Act of 1867) "shall give information to a Justice of the Peace, the Justice may summon the Parent or Person." It seems a great pity that Section 27 of the 1867 Act should have been repealed, as it has evidently left the matter somewhat in a state of uncertainty.

A. T.—We do not recommend individual practitioners. The matter is one upon which the family medical man is fully competent to advise.

THE WRIGHT DEFENCE FUND.

To the Editors of THE LANCET.

SIRS,—This fund is now closed and the balance (after expenses) has been handed over to Mr. Wright, who is grateful to the subscribers. Will you kindly allow me to add the following to the previous lists:—

	£	*s.*	*d.*
Mr. T. Brayton, Hindley, (additional)	1	1	0
Mr. Bradbury, Wigan ...	1	1	0
Dr. J. Ellis Jones, Chorley	0	10	0
Mr. Hannah, Ashton-in-Makerfield	0	10	6
Dr. Prebble, Blackburn ...	0	5	0
Mr. R. Price, Crewe ...	0	5	0
Previous amount	52	16	6

The Committee desire me to express their thanks to the Editors for their kindness in inserting the appeal in THE LANCET free of cost.

I am, Sirs, yours truly,

Wigan, June 22nd, 1896. WM. BERRY.

Shenly.—A piece of pressed yeast, about one-third of an inch cube, should suffice. By taking a small portion of the washed yeast and adding a drop of diluted tincture of iodine, a blue colour will result if starch is present.

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"A DOCTORLESS HOSPITAL."

THE following very amusing if rather unkind skit on the recent position of affairs at the Liverpool Ladies' Charity and Lying-in Hospital is extracted from the *Liverpool Review* of June 6th. We regret to be unable to find room for a larger quotation, but refer our readers to the original:—

A DOCTORLESS HOSPITAL.

PROSPECTUS.

The List opens to-morrow and will close on the 1st of April next. No promotion money. No underwriting. No humbug. No preference will be shewn except to midvives. Doctors (sixpenny included), rigidly excluded.

A strong feeling having existed from time immemorial among midwives and old women that doctors should be abolished on the ground that those who superintend the arrival of passengers on this planet are quite capable of superintending the exit as well, it is proposed to start a new parent company to acquire and work, free from medical and surgical control, a number of Lying-in Hospitals throughout the country.

* * * * * * *

GENERAL MANAGER: THE MATRON MIDWIFE.
CONSULTING ENGINEER: THE MATRON MIDWIFE.
SECRETARY, PRO TEM.: THE MATRON MIDWIFE.

In order to ensure absolute freedom to the patients and the matron-midwife from the inhumanity of the medical profession, and the continuous annoyance arising from new and improved methods of treatment, the directors and the matron midwife have decided to open a Marine Lying-in or Laying-out Hospital and Sanatorium, on the most insalubrious portion of the Manchester Ship Canal. Any temporary rise in the death-rate will be compensated for by the certain absence of the medical profession.

* * * * * * *

Any qualified man found prowling within five miles of the doctorless hospitals of the company will be arrested and dealt with as the Matron-Midwife Commanding-in-Chief shall direct. Medical students caught poaching in the grounds will be summarily executed on the spot.

Any newsagent, porter, messenger, street arab, or other person found introducing THE LANCET, or any other medical paper, periodical, or book containing up-to-date professional literature, into the company's doctorless hospitals, either on land or water, will be carried before the Matron-Midwife Commanding-in-Chief and incontinently birched or lashed at her discretion.

Any director presuming to differ from the matron-midwife upon any point will be permitted to resign upon getting a written order from the matron-midwife.

* * * * * * * *

Intending patients must give notice at least twelve months in advance to the matron-midwife, of their intention to avail themselves of the place. In order to prevent mistakes in delivery of parcels, husbands are advised to have their wives photographed prior to despatching them to the company's doctorless hospitals, as the hospital will not hold itself responsible for errors in packing and transit.

Patients who have been seen by qualified doctors during the five years immediately preceding admission into the company's doctorless hospitals must sign a renunciation in the presence of the matron-midwife.

Patients who presume to expedite matters with undue precipitancy without consulting the matron-midwife will be expelled.

* * * * * * *

Each matron-midwife appointed by the directors of this company shall assume the courtesy title of doctor, and as many other titles as appeareth good in her sight. Each director may assume the style and title of matron-midwife if so inclined, and strive to live up to it.

* * * * * * *

Dying is strictly prohibited in all the doctorless hospitals of this company, and any patient suspected of a tendency to bring the hospital into disrepute by so mean an act will be summarily ejected.

Although dying on the company's premises is rigorously discountenanced, the directors do not wish to be harsh, and on application to the Matron-Midwife Commanding-in-Chief, printed application for leave to die at home or in the gutter may be obtained by delicate or perverse patients.

It must be understood that the decision of the matron-midwife is final and irrevocable in all things, and that the directors only act as her mouthpiece.

Country Practitioner must consult a solicitor. The answer to his question depends upon the reading of the Medical Act (1886), and as we cannot refer him to any previous decision the matter is one for legal advice.

"THE REMUNERATION OF MEDICAL MEN."

WE have had many letters on this subject, as the outcome of "M.D.'s" communication to us last week, for which we have been unable to find room. One correspondent, who draws a fairly apt parallel between the positions of the medical man and the barrister, has clearly no idea of the pecuniary position of the metropolitan hospitals.

THE HISTORY OF VACCINATION.

To the Editors of THE LANCET.

SIRS,—As the epidemic of small-pox is still raging at Gloucester, evidently from the neglect of vaccination, I venture to add my testimony to the many proofs of prevention, or at least palliation, of this loathsome and fatal disease. To Dr. Jenner we shall always feel a debt of gratitude, not only in this country but all over the world; but the operation was practised long anterior to Jenner's time, for it appears that a Benjamin Jesty of Downshay, as inscribed on his tombstone, was said to have performed the operation in 1774, whereas Jenner's first vaccination experiment was in 1796. It appears also that the county of Dorset lays claim to having originated vaccination, a farmer named Nash having performed the operation on himself with success. But I have every reason to believe that vaccination was practised for a long period anterior to either Jenner's or Nash's time. In the Sanscrit language there is a book written by Hauvantori, which states that the Hindoos at a very remote period practised vaccination, and I have in my possession some interesting and valuable remarks written by Colonel Ellis, which I believe were published in THE LANCET some years ago, respecting a description of vaccination taken from an ancient medical work, which informs us that the "Sakteya Grantham" a work in which very precise rules for vaccination are laid down. Colonel Ellis, who was many years resident in India and was an accomplished Oriental scholar, informs us that Emanuel Timoni and Jacyes Pylanini, two Italian doctors, are said to have introduced the operation from Circassia into Europe in the sixteenth century, and a comparison of their travels and writings with those of the Dhauwantari would tend to show whether either had borrowed from the other, and which of them had first practised this important discovery but none questioned benefit. I do not wish to detract from, or lessen, the reputation of the illustrious Jenner, but simply to show that vaccination was popular from a remote period. I would also mention that in the years 1839–40, when serving on board H.M.S. *Crocodile* engaged in suppressing the slave trade, slavers used to arrive from the coast of Africa to ports in the island of Cuba laden with slaves suffering from small-pox in its most virulent form, many of the dead being thrown overboard to make room for the living sufferers. This was a great loss to slave owners and speculation in slaves, and I was told that a doctor was sent out to vaccinate them previously to embarkation, the consequence being that they arrived free from disease. So this affords a convincing proof of vaccination even from a commercial point of view.

Alas, poor Jenner, his memory deserves a better fate; his statue still remains in a conspicuous part of the nave in the beautiful cathedral of Gloucester, also a painted window given by the local medical practitioners, whilst the city where he originated this beneficent boon o vaccination has found enemies to it. Trusting that when the Royal Commission comes out it will urge on both Houses of Parliament *compulsory* vaccination,

I am, Sirs, yours truly,
HENRY PEACOCK, M.R.C.P.Lond., F.R.C.S.Eng.
Bath, June 19th, 1896. Retired Surgeon R.N.

THE LATE DR. CHARLES RUMNEY ILLINGWORTH.

The following subscriptions have been received in addition to those announced in THE LANCET of June 20th:—

	£	s.	d.		£	s.	d.
Dr. A. Campbell Black, Glasgow	1	1	0	Dr. S. Rutherford Macphail, Derby	1	1	0
Dr. T. Burn-Murdoch, Edinburgh	1	1	0	Dr. A. C. F. Rabagliati, Bradford	1	1	0
Dr. J. Grey Glover	2	2	0	Dr. J. Robinson	1	1	0
Mr. G. Jackson, Plymouth	1	1	0	Dr. Chearnley Smith, Lancaster	1	1	0
Dr. J. W. Johnston, Fording Bridge	1	1	0	Mrs. Wolfe (per Dr. Rabagliati) Bradford	1	1	0
Dr. William Lamb, Notts	2	2	0				

M.R.C.S., &c., has omitted to give his name and address, as also have *M.D. Ed.*, and *F.R.C.S. Ed.*

Z.—The Health Committee of Glasgow will have made arrangements to supply copies.

During the week marked copies of the following newspapers have been received:—*Devon Gazette, Express and Star, Glasgow Herald, Hull Daily Mail, Manchester Evening Mail, Sheffield Telegraph, South Wales Post, East Anglian Daily Times, Pioneer Mail, Bristol Times, Huddersfield Examiner, Liverpool Courier, Times of India, Newcastle Journal, Scotsman, Northern Echo, Oldham Standard, Derbyshire Times, Western Daily Mercury, Indicator, Architect, Leyton Independent, Birmingham Gazette, Midland Evening News, Oswestry Advertiser, Yorkshire Post, Bristol Mercury, Eastern Daily Press, Public Opinion, Grocer, Land Agents' Record, Liverpool Daily Post, Citizen, Builder, Brighton Gazette, Leeds Mercury, Sanitary Record, Family Doctor, Dudley Herald, Walsall Free Press, Sporting Chronicle, Manchester Courier, Bath Argus, Courrier de la Presse, Essex Telegraph, Surrey Mirror, Hertfordshire Mercury, Local Government Chronicle, City Press, Reading Mercury, Weekly Free Press and Aberdeen Herald, Mining Journal, Local Government Journal, Gloucestershire Chronicle, Surrey Advertiser, Guy's Hospital Gazette, Jarrow Guardian, Madras Times, Shrewsbury Chronicle, Newcastle Daily Chronicle, Walsall Advertiser, Montrose, Arbroath and Brechin Advertiser, Brewers' Journal, Brisbane Courier, West Middlesex Herald, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Messrs. Armour and Co., Lond.; Messrs. Arnold and Sons, Lond.; Apollinaris Co., Lond.; Asylum, Lond.

B.—Dr. J. E. Bowes, Stretford; Dr. Bannatyne, Bath; Dr. J. W. Black, Inverness; Mr. A. Butler, Lond.; Mr. L. A. Bidwell, Lond.; Miss Edith P. Bullar, Lond.; Messrs. Burroughs, Wellcome and Co., Lond.; Messrs. Burgoyne, Burbidges and Co., Lond.; Messrs. Belshaw and Co., Lond.; British Institute of Public Health, Lond., Sec. of; Bacteriological Institute, Leicester, Director of.

C.—Dr. W. Carter, Liverpool; Dr C. W. Chapman, Lond.; Mr. C. Campbell, Saddleworth; Mr. W. F. Clay, Edin.; Mr. T. Cooke, Lond.; Messrs. A. H. Cox and Co., Brighton; Messrs. Condy and Mitchell, Lond; Messrs. T. Christy and Co., Lond.; Messrs. A. H. Cox and Co., Brighton; Messrs. Clayton and Son, Upholland; Cambridge Medical Graduates' Club, Lond, Hon. Sec. of.

D.—Dr. J. T. Davison, Buenos Ayres; Dr. Richard Drews, Hamburg; Mr. B. L. Dhingra, Lond.; Mr. L. B. Dhargalker, Bombay; Mr. A. Denman, Beaconsfield; Mr. T. Dixon, Lond.; Messrs. Davy, Yates, and Hicks, Lond.; Dermatological Society of Great Britain, Lond., Hon. Sec. of; D. K., Newcastle-on-Tyne.

E.—Dr. H. B. Esmond, Maine, U.S.A.; Mr. F.W. Eaton, Birmingham; Messrs. Elliott, Son and Boyton, Lond.

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CONTENTS.

THE CAVENDISH LECTURE on the Centenary of the Discovery of Vaccination by Edward Jenner. Delivered before the West London Medico-Chirurgical Society, on June 17th, 1896, by THOMAS BRYANT, M.Ch., F.R.C.S.Eng. & Irel., Consulting Surgeon to Guy's Hospital; Past President of the Royal College of Surgeons of England, &c.—*(With Facsimile of Letter by Dr. Jenner)* 1771

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THE FOUNDERING OF THE *Drummond Castle* 1804

ANNOTATIONS.

The Case of Surgeon-Captain Fowler 1805

The University of London 1805

King's College: Presentation to Professor Curnow, M.D.... 1806

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Technical Education and Health 1809

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"Uneventful Midwifery" 1810

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CHAPTER XXV. *The First Ten Years of* THE LANCET: *a Recapitulation.—A Few Details of Private Life.—The Kindness of Mr. Goodchild.—The Move to Bedford-square.—Wakley resolves to Contest the Borough of Finsbury*..... 1811

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List of Donations to the Fund. *(Continued)* 1813

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The New Infantry Sword Exercise..... 1814

Cholera in Egypt 1814

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The Holiday Season.—*(Continued)* 1815

The Services..... 1818

The Battle of the Clubs.—No. XXXIV. 1825

The Ashanti Expedition.—No. VI.—*(Illustrated)* 1827

Liverpool 1830

Western Counties Notes 1831

Northern Counties Notes 1832

Scotland 1832

Ireland 1833

Paris 1833

Rome 1834

Egypt..... 1835

CORRESPONDENCE.

The Council of the Royal College of Surgeons of England (Mr. James Hardie) 1819

Direct Representation on the General Medical Council (Dr. J. G. Glover, Dr. J. Barr, Dr. F. H. Alderson, Mr. G. Brown, Dr. Colin Campbell)..... 1820

The Royal Medical Benevolent College (Dr. C. Holman)..... 1821

The Cause of Malaria (Dr. Patrick Manson)..... 1821

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MEDICAL NEWS.

Pass-lists of the Royal College of Surgeons of England and Society of Apothecaries of London 1835

Diphtheria in London..... 1837

The Diffusion of Small-pox ... 1837

PARLIAMENTARY INTELLIGENCE.

House of Commons 1837

Appointments..... 1838

Vacancies 1838

Births, Marriages, and Deaths 1839

Medical Diary 1839

Notes, Short Comments, and Answers to Correspondents... 1840

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INDEX.

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PAGE

BAILLIERE, TINDALL, & COX:—
Dowse ..... Neurasthenia 1
Walsham & Hughes .. The Human Foot 1

BALE & SONS:—
Treves ..... Surgical Treatment of Perityphlitis 1
" ..... Peritonitis 1

CASSELL & CO.:—
Treves ..... Intestinal Obstruction 1

CHURCHILL, J. & A.:—
Beale ..... Slight Ailments &c. 1
Bell ..... Sterility 1
Berkart .... Bronchial Asthma 1
Green ..... Manual of Botany 1
Southall's Organic Materia Medica .. 1
Squire ..... Companion to the Brit. Pharmacopœia 1

PENTLAND, Y. J.:—
Crocker .... Diseases of the Skin .. 1
Frost ..... Fundus Oculi 1

RENSHAW:—
Wood ..... Application of Trusses 1

THE LANCET:—
Difficulties under the Infectious Disease (Notification) Act, 1889 1
Terms of Subscription 1
THE LANCET and the Hyderabad Commissions on Chloroform 1

PAGE

BAILLIERE, TINDALL, & COX:—
Allingham .. Colotomy &c. 6
" .. Diseases of the Rectum 6
Browne .... Diphtheria &c. 8
Field ..... Diseases of the Ear 7
Jessett ..... Surgical Diseases &c. .. 8
" ..... Cancer of the Mouth .. 8
" ..... Cancer of the Uterus .. 8
Murrell .... Prevention of Consumption 8

BALE & SONS:—
Barnes ..... On Perinæorrhaphy 6
Moullin .... On the Prostate 6

BURLEIGH:—
Churchill .... Consumption &c. 8

CASSELL & CO.:—
Clinical Manuals:—
Ball ..... Dis. of the Rectum .. 3
Broadbent, sir W. H... The Pulse 3
Bryant ..... Diseases of the Breast 3
Butlin ..... Dis. of the Tongue .. 3
Carter & Frost ..... Ophthalmic Surgery.. 3
Hutchinson.. Syphilis 3
Morris ..... Diseases of the Skin 3
" ..... Dis. of the Kidney .. 3
Owen ..... Diseases of Children 3
Pick ..... Fractures, &c. 3
Robson .... On Gall-stones 3
Savage ..... Insanity 3
Treves ..... Intestinal Obstruction 3
Manuals for Students:—
Bell ..... Comp. Anatomy 3
Bruce ..... Materia Medica, &c... 3
Gould ..... Surgical Diagnosis .. 3
Herman .... First Lines in Midwifery 3
Klein ..... Elements of Histology 3
Luff ..... Manual of Chemistry 3
Pepper ..... Surgical Pathology .. 3
Power ..... Human Physiology .. 3
Ralfe ..... Clinical Chemistry .. 3
Robertson .. Physiological Physics 3
Treves ..... Surgical Anatomy.... 3
" ..... Student's Handbook of Surgical Operations 3

PAGE

CASSELL—(Continued.)
Morris ..... Diseases of the Skin.... 7
" ..... Genito-Urinary Organs 3
Sutton ..... Diseases of the Ovaries 3
System of Surgery 3
Whitelegge.. Hygiene &c. 3
Yeo ..... Food in Health &c. 3
" ..... Medical Treatment 3

CHURCHILL, J. & A.:—
Bigg ..... Spinal Curvature &c. .. 8
" ..... Deformities of the Head and Neck 8
" ..... Manual of Orthopraxy.. 8
Cooper ..... Syphilis 7
Harley ..... Diseases of the Liver .. 4
Snow ..... Cancer &c. 8

CLAY, W. F. (EDIN.):—
Unna ..... Diseases of the Skin .. 7

HEYWOOD:—
Hyde ..... Buxton: its Baths and Climate 4
The Causes and Treatment of Rheumatoid Arthritis 4

KEGAN PAUL & CO.:—
Kraus ..... Gall Stones 6
" ..... Carlsbad 6
Taylor ..... Diseases of the Eye 7

LEWIS:—
Campbell.... Headaches &c. 4
" .... Flushing and Morbid Blushing 4
Crookshank.. Text-book of Bacteriology 5
Martindale & Westcott .. Extra Pharmacopœia .. 6
Moullin .... On the Prostate 6
Ralfe ..... Disease of the Kidneys 6

LONGMANS & CO.:—
Althaus .... On Impotency 8
COOKE'S Tablets of Anatomy 55
Liveing .... Handbook on Diseases of the Skin 4

PAGE

MACMILLAN & CO.:—
A New System of Medicine 8

OLIVER & BOYD (EDIN.):—
Edinburgh Medical Journal 7

PENTLAND, Y. J.:—
Cheyne ..... Treatment of Wounds 7
" ..... Diseases of the Joints.. 7

SEGG & CO.:—
Pedley ..... Dis. of Children's Teeth 7

SIMPKIN, MARSHALL, & CO.:—
Braithwaite's Retrospect 7

SMITH, ELDER, & CO.:—
Hansome.... Treatment of Phthisis.. 8
Weber, H. & F. P. ..... The Spas and Mineral Waters of Europe ....

SPRAGUE & CO.:—
Brust ..... Orthopædic Apparatus Guide 7

STILLWELL & CO. (MELBOURNE):—
Intercolonial Medical Journal of Australasia 8

WHITTAKER & CO.:—
Brodie ..... Dissections Illustrated

WOOD & CO. (NEW YORK):—
Medical Publishers .....

WRIGHT & CO. (BRISTOL):—
Clarkson .... Text-book of Histology

MEDICAL LIBRARIES &c.:—
Rehnke—Stammering 8
Physician, L. O., Strand—Atlas 8

OFFICIAL AND GENERAL ANNOUNCEMENTS.

COVER.

BATHS, HOTELS &c.:—
Pump House, Lake Hotel, and Baths, Llangammarch Wells, Central Wales iii

LIFE AND FIRE ASSURANCES:—
Mutual Life of New York ii

APPOINTMENTS VACANT:—
Asylums, L.O., Strand 62
Central London Ophthalmic Hospital 61
Chesterfield &c. Hos. and Dispensary 61
County Borough of Huddersfield 61
Dundee Royal Infirmary 61
Gore Farm Convalescent Fever Hos. 60
Hospital for Consumption, Brompton 61
Hoxton House Asylum 62
Kensington Dispensary 61
Moore & Co. Houndsditch..... 62
New Fever Hospital, Shooters-hill .. 61
Newport and Monmouthshire Hos. .. 61
Owens College, Manchester 62
Seamen's Hospital Society..... 61
Sheffield General Infirmary 61
Small-pox Hos. Ships, Long Reach .. 61
St. Mary's Hospital, Paddington..... 61
St. Olave's Union 60
Swansea Hospital 61
Taunton and Somerset Hospital..... 61
University of Aberdeen 61
Western General Dispensary 61

ASSISTANCIES, MEDICAL:—
Adams & Parkes, Southampton-street 67
A., L.O., Strand 67
Alpha, L.O., Strand 67
A. P., Greenwich 67
Beta, L.O., Strand 67
Cacum, Piccadilly 67
Celenter, L.O., Strand 67
Dentist, L.O., Strand 68
Dr. K., Newcastle-on-Tyne 67
E. A., Bow 68
Forte L.O., Strand 67
F.R.C.S., L.O., Strand 67
Griffiths, Blaenavon 67
Hewer, L.O., Strand 67
Hospital, L.O., Strand 68
Medicus, Battersea 67
Medicus, Edgware-road 67
Medicus, L.O., Strand 67
M. H. S., Guy's Hospital..... 67
M. P., L.O., Strand.. 67
Norfolk, L.O., Strand 67
Permanency, L.O., Strand 67
Physician, Great Portland-street 67
Rooms, L.O., Strand..... 67
Rus, L.O., Strand 67
Rusticus, L.O., Strand 67
Signum, L.O., Strand 67

ASSISTANCIES—(Continued.)
X., Bunhill-row 67
X. Z., South Hackney 67
Zeta, L.O., Strand 66

ASYLUMS, HOMES, &c.:—
Ashwood House, Kingswinford 58
Farnwood House Hospital..... 67
Buxton House, Earls Soine 57
Capel Lodge, near Folkestone 59
Church Stretton Asylum..... 57
Coppice, The, Nottingham..... 57
Crook, Dr., Margate 56
Dalrymple Home, Rickmansworth .. 58
Dorchester Asylum 60
Dr. H. D., Southwark 60
Exeter Asylum..... 60
Felix L.O., Strand..... 60
Flower House, Catford..... 56
Freeman, Clapham-park..... 56
G., Piccadilly 56
Grove House, Church Stretton 57
Haydock Lodge, Newton-le-Willows.. 58
High Shot House, Twickenham 53
Hitch, Mrs., Hollington 57
Huguenots, The, Wandsworth 56
Inselbad Paderborn 60
Kingswood-park, near Bristol..... 58
Kurhouse &c., Todtmoos 59
Melbourne House, Leicester 56
Moat House, Tamworth 58
M. O. S., Bouverie-street..... 60
Newlands House, Tooting Common .. 57
Northlands, Old Wandsworth 60
Northwoods House, Winterbourne .. 56
Old Park Hall Retreat, Walsall 53
Otto House, West Kensington..... 57
Pendleton, Brighton 60
Principal, Croydon..... 60
Shemeld Hydropathy, Matlock..... 56
Springfield House, Bedford 57
St. Andrew's Hospital, Northampton 57
St. Luke's Hospital, E.C. 57
Stocker, Lancaster-place 56
Tower House, Leicester..... 57
Tower House, Westgate-on-Sea 58
Warneford Asylum, Oxford 57
Westbrooke House, Alton 57
West Malling-place, Kent 58
Women's Temp. Home, Sydenham .. 56
Wonford House, Exeter 56
Wye House, Buxton..... 56
Wyke House, Isleworth 56
Yarrow Home, Broadstairs 58
Youngman, Layer Marney..... 60

BATHS:—
Allen & Son—Portable Turkish Bath 48
Bad Kreuznach 60
Luchon, Pyrénées, France..... 59
Neuenahr 59
Northcote House, Woodhall Spa 60
Pyrmont 60
Woodhall Spa Baths 60

COMPANIONS &c.:—
Gooderham, South Kensington 60

FINANCIAL &c.:—
Birkbeck Bank..... 54
Equitable Reversionary Interest Soc. 54

HOTELS:—
Ilfracombe Hotel 54
Orotava, Teneriffe 54

HOUSE AND ESTATE AGENTS:—
Owner, Parkstone 63
P & G. Geer, Waterloo-road 66
Surfleet, South 65
Willmott, Goldhawk-road 66
CONSULTING-ROOMS:—
Narcotine, L.O., Strand 66

LIFE AND FIRE ASSURANCES:—
Prudential 54
Railway Passengers' Assurance Co. .. 54

MASSAGE:—
Bad Kissingen 60

MEDICAL ACCOUNTANTS &c.:—
Peacock & Hadley 62
Turner..... 65

MEDICAL AGENTS:—
Adams & Parkes 62
Lee & Martin 66
Liverpool Medical Agency..... 65
Manchester Clerical &c. Agency..... 65
Moore 62
Needes, Herbert 65
Needes, J. C. 65
Orridge 62
Peacock & Hadley 62
Scholastic, Clerical & Med. Assoc. .. 64
Turner..... 63
Wilson..... 62

NURSING INSTITUTES:—
Baker-street Assoc. of Trained Nurses 55
Clapham &c. Nursing Institution 54
General Lying-in Hospital, Lambeth 55
General Nursing Institute..... 55
Guy's Hospital Trained Nurses' Inst. 54
Hamilton Association 55
Hooper's Nursing Institute 54
Inge House Nurses' Co-operation 55
Leeds Trained Nurses' Institute 54
London Nurses' Association..... 55
Male and Female Benefit Association 55
Male Nurses' Co-operation 55
Middlesex Hos. Trained Nurses' Inst. 55
North London Nursing Institute 56
Nurses' Co-operation, Portland-place 56
Queen Charlotte's Lying-in Hospital 55

NURSING INST.—(Continued.)
St. John's House..... 56
Wilson's Nursing Institute 55

OFFICIAL NOTICES:—
Royal College of Physicians of London 53
Royal Westminster Ophthalmic Hos. 53
St. John Ambulance Association 53
St. John's Hospital for Skin Diseases 53
Surgical Aid Society 53
University of Cambridge 53
West-end Pathological Laboratory .. 53

PARTNERSHIPS & PRACTICES:—
A. B., Tooting 66
A. K., Shoreditch 66
Calomel, L.O., Strand 66
Delta, L.O., Strand..... 66
G. T. C., L.O., Strand 66
Howitt, L.O., Strand..... 66
J. B., L.O., Strand 64
Korne, Johannesburg 66
Lancs, L.O., Strand 66
Lanfear & Co., Cannon-street 66
L. P., L.O., Strand 66
Medicus, Lasbroke-grove 66
M. J., L.O., Strand 66
M., L.O., Strand 66
M. M. C., Notting-hill 66
Nemo, L.O., Strand 66
Omega, L.O., Strand..... 66
Rural, L.O., Strand 66
Serlo, L.O., Strand 66
Surgeon, L.O., Strand 66
Theta, L.O., Strand 63
Veteran, L.O., Strand 66

RAILWAY & STEAMSHIP CO.'S:—
Fortnightly Cruises—Midnight Sun . 54
G.E.R. Co.—Cheapest Continental Holiday 54
New Zealand Shipping Company 54
Orient Co.'s Pleasure Cruises 54
P. & O. Steamship Company..... 54
Royal Mail Steam Packet Company .. 54
Shaw, Savill, & Albion Co., Limited .. 54

SCHOOLS, PREPARATORY, &c.:—
Cooke's School of Anatomy 53
Pelican House College..... 53
Robertson, Eastbourne 53
Scholastic, Clerical, and Med. Assoc... 55

TUTORS AND LECTURERS:—
Boultbee 53
Class Rooms 53
Fellowships 55
Kerin & Lynam 53
Masoa 54
Reeve 53
Trasma 54
Van Praagh 53
Weymouth..... 53

(For Index to Trade and Miscellaneous Advertisements see page 4.)

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INDEX—(CONTINUED).

TRADE AND MISCELLANEOUS ADVERTISEMENTS.

COVER.

PAGE

CHEMISTS AND DRUGGISTS:—
Müller's Cod-Liver Oil ... ii
Squire & Son—
Chemical Food ... iv
Syrup of Senna ... iv
Confectio Belæ Recentis ... iv
Kasak Elixir ... iv
Liquor Morphiæ Bimeconatis ... iv
Lehlia ... iv

FOODS:—
Aylesbury Dairy Company—
Humanised Milk ... ii

STATIONERY &c.:—
Ceres Letter Files ... 1

BICYCLES AND TRICYCLES:—
Medico-Clerical Cycle Agency—
M.D. Cycles ... 10
National Typewriter Exchange Co.—
Cycles ... 10

BOTTLE MERCHANTS:—
Isaacs ... 47
Islington Glass Bottle Company ... 47
Kilner Brothers ... 47

CARRIAGES, HORSES, &c.:—
Aldridge's Horse Repository ... 11
Cortland Wagon Co.—
Henrietta Gig ... 11
Eastgate—Triano Single Brougham ... 11
Maythorn & Son—
Ripon Buggy ... 11
Offord & Sons—
Light Single Broughams ... 11
Pneumatic Tyre Co., Limited—
Dunlop Tyres ... 11

CHEMISTS AND DRUGGISTS:—
Allen & Hanburys—
Byno-Hypophosphites ... 38
Angier Chemical Co.—
Petroleum Emulsion ... 34
Antikamnia ... 17
Armour & Co.—
Peptonising Tablets ... 39
Benger & Co.—
Liquor Pancreaticus ... 30
Liquor Pepticus ... 30
Bullock & Co.—
Pepsina Porci ... 40
Acid Glycerine of Pepsine ... 40
Burroughs, Wellcome & Co.—
Lanoline ... 29
Toilet Lanoline ... 29
Lanoline Toilet Soap ... 29
Tabloids of Animal Remedies ... 35
Tabloids of Animal Substances ... 35
Saccharin Tabloids ... 35
Emol-Keigel ... 35
Comar & Son—Nourry Iodinated Wine 12
Dieterich—
Liq. Ferro Manganese Saccharate 15
Liq. Ferro Manganese Peptonate 15
Domeier & Co.—Ferratus ... 41
Duncan, Flockhart, & Co.—
Chloroform ... 21
Gelatine Capsules ... 21
Blaud's Pill Capsules ... 21
Duncan's Syrup of the Hypophosphites ... 21
Elberfeld Farbenfabriken Co—
Trional ... 41
Lycetol ... 41
Somatose ... 41
Sulfonal Bayer ... 41
Piperazine Bayer ... 41
Phenacetine Bayer ... 41
Salophen ... 41
Electric Ozone Syndicate, Ltd.—
Ozone Apparatus ... 15

PAGE

CHEMISTS—(Continued.)
English Diastatic Malt Extract Co.—
Edme Malt Extract ... 42
Fanyau & Co.—Zematone ... 41
Gale & Co.—
Linctus Tussi ... 40
Linctus Tussi c. Morphina ... 40
Linctus Tussi sine Opio ... 40
Elixir Boracis Co. ... 40
Linimentum Album ... 40
Ung. Cuticularis ... 40
Emulsions of Cod Liver Oil ... 40
Emulsions of Petroleum ... 40
Greeff & Co.—
Anti-Venomous Serum ... 41
Anti-Diphtheritic Serum ... 41
Vaccine Jenner ... 41
Anti-Streptococcic Serum ... 41
Grillon's Tamar Indien ... 40
Hewlett & Co.'s Mist. Pepsinæ Co. ... 41
Ichthyol Co.—Ichthyol ... 24
Josean—Quina-Laroche ... 42
Kreochyle Co.—Barff Boro-Glyceride 40
Lunguli Co.—Lunguli ... 45
Maltine Manufacturing Co.—
Maltine ... 31
Newbery & Sons—
Ingluvin ... 38
Peptenzyme Co.—Peptenzyme ... 13
Price's Glycerine ... 43
Rio Chemical Co.—
Celerina ... 18
Robbins & Co.—Methylene, &c ... 44
Salamon & Co.—Purest Chloroform ... 44
Slinger & Son—
Nutrient Suppositories ... 43
Turner & Co.—Erythrol Tetra Nitrate 44
Wand's Pearl-coated Pills ... 44
Wilcox & Co.—
Cigares de Joy ... 43
Crystallized Digitaline ... 43
Desiccated Extract of Malt ... 43

FILTERS:—
Defries & Sons—
Pasteur Germ Filter ... 20

FOODS:—
Allen & Hanburys—
First Food for Infants ... 27
Second Food for Infants ... 27
Malted Food, for Infants and Invalids ... 27
Armour & Co.—
Vigoral ... 39
Nutrient Wine of Beef Peptone ... 39
Benger & Co.—
Peptonised Beef Jelly ... 30
Peptonised Chicken Jelly ... 30
Blatchley's Diabetic Preparations ... 42
Bonthron & Co.—Gluten Bread, &c. ... 44
Bovril (Limited)—
Bovril ... 32
Invalid Bovril ... 32
Cadbury's Cocoa ... 36
Callard & Co.—Diabetic Foods ... 47
Cleave & Son—
Devonshire Cream Confections ... 44
Evans, Lescher, & Webb—
Savar's Coca Wine ... 28
Fitton & Sons—
Hovis Bread and Biscuits ... 36
Fry's Pure Concentrated Cocoa ... 47
Liebig Company's Peptone of Beef ... 13
Liquor Carnis Co.—
Malto Carnus ... 37
Mave's Food for Infants &c. ... 45
Nestlé's Milk ... 37
Nutrosa Limited—Nutrosa Food ... 47
Savory & Moore—
Peptonised Milk ... 25
Peptonised Cocoa and Milk ... 25
Van Abbott & Sons—
Foods for Diabetes and Obesity ... 42
Vi-Cocoa Co.—Vi-Cocoa ... 42
Wilcox & Co.—Vin Mariani ... 43

FURNITURE &c.:—
Carter, J.—Invalid Furniture ... 18

PAGE

HOSIERS:—
Robinson & Cleaver—
Irish Damask Table and House Linen ... 48
Irish Cambric Pocket Handkerchiefs ... 48
Collars, Cuffs, and Shirts ... 43

MED. AND SURG. APPLIANCES:—
Bailey & Son—
Patent Abdominal Belts ... 18
Holdfast Enema ... 18
British American Ball Nozzle Co.—
Ball Nozzle Syringe ... 50
Bronsdon & Scales—Medical Bag ... 9
Denton—New Clinical Thermometer ... 8
Maywood—
Trusses ... 10
Elastic Stockings ... 10
Hooper & Co.—
Elastic Water or Air Beds and Cushions ... 34
Elastic Inflating Bed Pan ... 34
Elastic Inflating Bed Slipper ... 34
Sanitary Bed Pan ... 34
Spiral Elastic Bandages ... 34
Huxley—
Abdominal Belts ... 49
Lithanode Electric Storage Co.—
Lithanode Medical Batteries ... 50
Maw, Son, & Thompson—
Aseptic Catheters ... 48
Millikin & Lawley—Osteology &c. ... 51
Milne—Ligatures ... 49
Pocock—Tubular Water Bed ... 50
Pope & Plante—
Elastic Stockings ... 9
Abdominal Supporting Belts ... 9
Robinson & Sons—Gamgee Tissue ... 47
Wood—Med. and Surgical Appliances 9

MINERAL WATERS:—
Apollinaris Company—
Apenta ... 36
Blake & Co.—Lithia Water, &c. ... 42
C.A.M.W.A.L. Waters ... 45
Davis—Natural Mineral Waters ... 44
" Pure Aërated Waters ... 44
Franz Josef Aperient Water ... 47
Gallais—Vals ... 45
Hogg & Son—Aërated Lime Water ... 47
Hunyadi Janos ... 18
Ingram & Royle, Ltd.—
Vichy ... 14
Johannis ... 45
Riddle & Co.—
Stower's Lime Juice Cordial ... 46
Rosbach Springs, Limited—Rosbach 14
Ross—Aërated Table Waters ... 47
Source du Pavillon ... 46

OPTICIANS:—
Curry & Paxton—Glasses ... 50

PEPSIN MANUFACTURERS:—
Armour & Co—
Lactated Pepsin ... 39

PHOTOGRAPHY:—
Watson & Sons—
Röntgen X Rays ... 10
Apparatus ... 10

PRINTERS AND ENGRAVERS:—
Cooke & Co.—Brass Name Plates ... 9
Quileton—
Heraldry &c ... 9
Brass Door Plates ... 9

SANITARY APPLIANCES &c.:—
Aymard's Patent Steriliser Co.—
Milk Steriliser ... 49
British Electrozone Corporation, Ltd.—
Electrozone and Meditrina ... 20
Condy's Fluid ... 9
Defries & Sons—
Equifex Disinfection Appliances 20
Steam Stoves ... 20
Sprayers ... 20

PAGE

SAN. APPLIANCES—(Continued.)
Joyes' Sanitary Compounds Co—
Medicinal Preparations ... 33
Kühn—Chinosol ... 22
" Fluid ... 22
Lever Brothers, Limited—
Lifebuoy Soap ... 19
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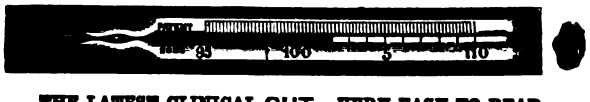

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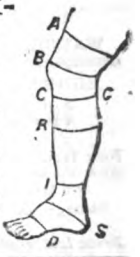

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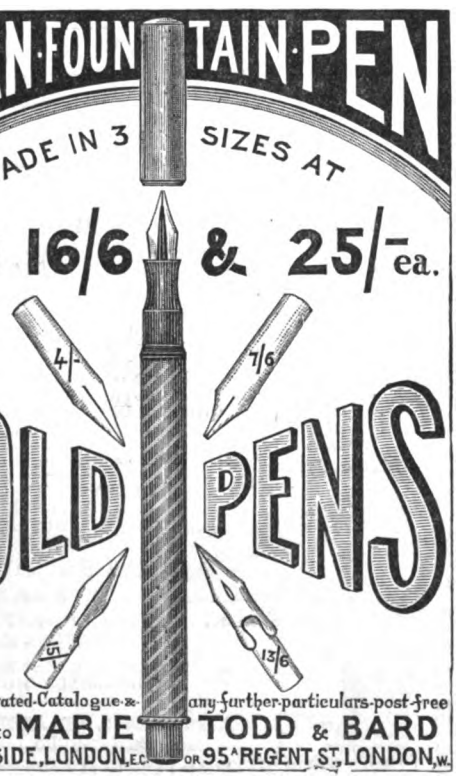

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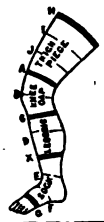

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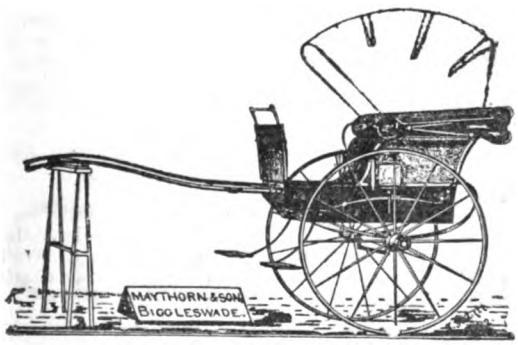

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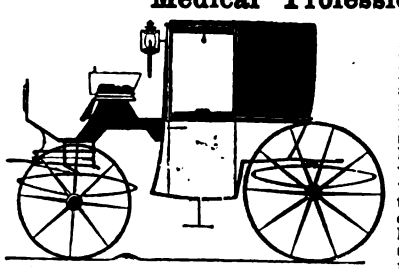

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THE LANCET of January 6th, 1894, publishes a full analysis of the Wine, and after explaining the difficulty of extracting all the Iodine, THE LANCET analysis proved that the Wine contains no free Iodine, and yielded **2·5 gr. of Iodine per 1000 c.c.** "In view of these results, we regard this wine as an introduction of distinct importance in therapeutics, since it appears to place the use and administration of a valuable medicament on a more satisfactory basis than heretofore. Iodine has been sparingly employed hitherto on account of its irritant and other disagreeable properties. The above preparation, therefore, which contains **no free Iodine,** but which yields it in full quantity on the slightest provocation, is calculated to lead to more extended application. It certainly deserves trial." And

The MEDICAL TIMES AND HOSPITAL GAZETTE of April 28th, 1894, states that "It therefore contains a **large proportion of Iodine** in a **very palatable** and easily assimilated condition, and seems to be an excellent form of administration when that drug is indicated."

The BRITISH MEDICAL JOURNAL of January 12th, 1895, describes the Gibert Dispensary for Children at Havre, and says:—"Scrofulous, tuberculous, and syphilitic patients are abundant here, as in other poor districts. More than 3000 new patients have to be treated in the course of the year, and the constitutional treatment carried out has resulted in much experience of the action of many drugs. Thus Dr. Gibert, after a long period of administering Iodine, found **no form agreeable to children**, and suggested to Mr. Nourry, a chemist of great reputation in Havre, the advisability of preparing Iodine with Malaga Wine, which is agreeable to children. Iodine is therefore administered in this pleasant and effective form, and **the children willingly come to get it.**"

The MEDICAL PRESS AND CIRCULAR of March 27th, 1895 says:—"M. Nourry hit upon the happy expedient of combining Iodine with Tanin in Malaga Wine, the result being a **complete disguising of its objectionable taste,** rendering it more palatable to both children and invalids generally; and we consider, after trials extending over several months that its value in this connexion is not so well known to the Profession in this country as its merits deserve."

CLINICAL SKETCHES of January, 1896, adds to a previous notice published June, 1895:—"We think that this Wine is an excellent method of giving Iodine in a pleasant form, and a medicine which is pleasant is generally more beneficial than one which is nasty. The metallic taste of Iodine is not only liable to create revulsion but is very apt to interfere with the digestion of the patients, sometimes doing a great deal of harm in this way. In Iodinated Wine, the taste is not only agreeable, but the influence of the Iodine is satisfactory. We have used it in **rheumatoid arthritis** with marked benefit, and we would urge an extended trial of this remedy **in all cases where Iodine is indicated.**

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PROF. HUGO ENGEL, A.M., M.D., *Fellow of the American Academy of Medicine, points out one or two important facts in regard to ANTIKAMNIA. He says:—*

"Antikamnia possesses no merit as a preventive of pain; its action is *nil* until the pain begins.

"Antikamnia, when given in five-grain doses every ten minutes until grs. xxx. have been taken, produces no effect whatever in a *healthy* person. As my investigation concerned its action under pathological conditions, I did not inquire further into the question how much more than thirty grains might be administered to a healthy person without any deleterious effect.

"The action of Antikamnia as an analgesic begins the moment an individual is attacked by pain; and here a great number of observations has established with me the following rule for its administration to adults:—

"As early as possible after the pain has developed—if possible, immediately after—Antikamnia grs. v. are taken; from three to four minutes later, if the first dose has no, or but little, effect, the same dose is repeated; and again three or four minutes later, provided again the effect is *nil* or not sufficient, this dose is administered the third time. Then I let the patient wait ten minutes; if by the end of that time the pain be greatly ameliorated but a trace of it still present, a fourth dose of gr. v. then (i.e., ten minutes after the third) given will generally stop the pain completely."

Prof. Engel's observations have been confirmed and reinforced in England by Mr. ACHESON WILKIN, L.R.C.P. & S., &c., and Mr. R. J. BLACKHAM, L.R.C.P. & S. &c. *See* MEDICAL REPRINTS, *Jan., 1896.*

EDINBURGH MEDICAL JOURNAL says:

"This is one of the many Coal-Tar products which have lately been introduced into medicine. . . . In doses of three to ten grains it appears to act as a speedy and effective antipyretic and analgesic.

The American antipyretic, anodyne, and analgesic, is a combination of Coal-Tar derivatives of the series CnH2n-6, into which the amines have entered, forming the various amido-compounds.

It has, in contradistinction to other coal-tar products, a stimulating action on the nerve centres and the vital functions, especially the cardiac system.

It occurs in microcrystalline powder, and is perfectly white in colour; of a slight pungently bitter taste and alkaline reaction. It is moderately soluble in water, more freely with glycerine sparingly added, and freely soluble in brandy, whisky, or wines, according to their alcoholic percentage. In liquid prescriptions, however, simple elixirs offer the best vehicles.

ANTIKAMNIA should not be dispensed, however, in any vehicle of acid reaction. It can be readily given in tablets, as well as in powder (dry on the tongue) followed by a swallow of water or wine.

DOSE for Adults—5 to 15 grains; for Children in proportion. As a pain reliever in Neuralgia, Rheumatism, &c., ANTIKAMNIA acts with safety, certainty, and celerity.

PRICE OF ANTIKAMNIA TO THE MEDICAL PROFESSION.—In three-grain or five-grain Tablets, or in Powder, 3s. 9d. per ounce. One-ounce packages only. Price to the public (on prescription only), 4s. 6d. per ounce.

SAMPLES gratis and post free to any Medical Man to whom (by accident) we have omitted to send one. British Depot: JOHN M. RICHARDS, 46, Holborn Viaduct, London, E.C.

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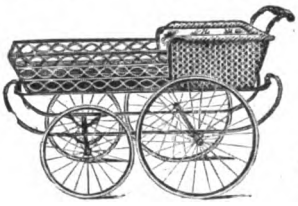

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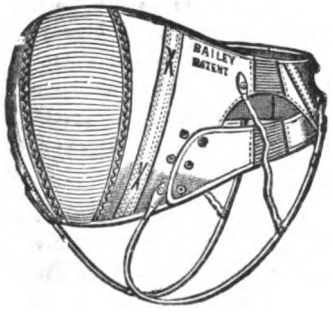

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Eminent Medical Men,

Officers of Health, and Trained Nurses, recommend Lifebuoy Soap for use during Epidemics. Read what Dr. Karl Enoch, Chemisch Hygienisches Institut, Hamburg, says in his report of Experiments made with Lifebuoy Soap:—

"The examination of the sample of LIFEBUOY ROYAL DISINFECTANT "SOAP furnished to me by the Hamburg Agents of Messrs. Lever Brothers, "Limited, of Port Sunlight, England, gives the following results as to its "action as a disinfectant.

"Solutions of one, two, and five per cent. of LIFEBUOY ROYAL DISIN-"FECTANT SOAP in water were made. These solutions were brought to bear "on a variety of clean cultivated germs or microbes (*Bacillus*), in each case a "certain exact time being allowed for the operation; and thus the capacity of "this soap for destroying the various live and growing germs was proved. To "carry out this the following species of germs or microbes, amongst others, "were used:—

"1. Typhoid Microbe. 2. Cholera Microbe, taken from Hamburg water. "3. Diphtheria Microbe. 4. Carbuncle or Boil Microbe.

The results were as follows:—

"1. The obstinate Typhoid Microbes, with the five per cent. solution, were dead "within two hours.

"The operation of this soap on the Cholera Microbes was very remarkable, and "showed this soap to be in the highest degree a disinfectant. These were taken "from Hamburg water, and showed a result as follows:—

"With the two per cent. mixture, Cholera Microbes were dead within fifteen "minutes.

"With the five per cent. same were dead within five minutes.

"3. The Diphtheria Microbes were killed after two hours, with the five per "cent. solution.

"4. The five per cent. solution was tried on fresh Carbuncle germs, and the "result showed that the Microbe life was entirely extinct after four hours."

GUARANTEED PERFECTLY PURE, and FREE FROM ANY INJURIOUS CHEMICALS.

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THE BEST DEODORANTS AND GERMICIDES.
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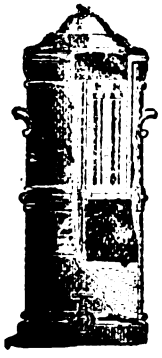

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STEAM STOVES.—The only stoves complying with the Recommendations of the International Sanitary Congress (Budapesth, 1894). Only Medal, Sanitary Institute Congress, Liverpool, 1893; Only Highest Award wherever exhibited.

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CHLOROFORM.

Chloroform (DUNCAN'S S.G. 1490) Non-decomposable.

This contains about 1 per cent. Absolute Alcohol, but in other respects is identical with our ordinary make (S.G. 1497). While this minute proportion of Alcohol in no way affects anæsthetic power, it renders the Chloroform **PRACTICALLY NON-DECOMPOSABLE.**

GELATINE CAPSULES, 1000 Varieties.

CASCARA CAPSULES. EASTON SYRUP CAPSULES.
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BLAUD PILL CAPSULES.

GUARANTEED STRENGTH.

At the request of medical men and others we have analysed a number of **BLAUD PILL CAPSULES** similar in size and colour to those of our own make. These capsules were stated to be each equal to three Blaud Pills, but our analyses showed that in no instance were they equal to more than 1½ Blaud Pills. This is neither fair to the medical man nor to his patient.

WE GUARANTEE OUR ONE, TWO, AND THREE PILL CAPSULES TO BE EQUAL RESPECTIVELY IN FERROUS CARBONATE TO ONE, TWO, AND THREE FRESHLY-PREPARED BLAUD PILLS. THEY HAVE ALSO THIS DISTINCT ADVANTAGE OVER PILLS, THAT THEY NEITHER OXIDISE NOR HARDEN.

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The above may be ordered through any Wholesale or Retail Druggist. The Capsules and Syrup are sold and dispensed by

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Prepared under the direction of the Staff of the

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FOR USE IN THAT INSTITUTION.

	Price per Tablet.	s.	d.
Superfatted ICHTHYOL SOAP (containing 5 per cent. Ichth. Ammon.)		1	0
Superfatted BENZOIN SOAP (5 per cent. Tinct. Benz.)		0	8
Superfatted ICHTHYOL & TAR SOAP (5 per cent. Ichth. Ammon. and 2½ per cent. Ol. Cadini.)		1	0
HYGIENIC SOAP		0	8
Superfatted ICHTHYOL and PERUVIAN BALSAM SOAP (3 per cent. Ichth. Amm., 2 per cent. Bals. Peru, with Sapo moll. P.B.)		1	0
Superfatted CAMPHOR, SULPHUR, & PERUVIAN BALSAM SOAP (5 per cent. Camph., 5 per cent. Sulph. Precip., 3 per cent. Bals. Peru.)		1	0
Superfatted SALICYLIC SULPHUR SOAP (3 per cent. Salicylic Acid and 10 per cent. Sulph. precip.)		0	8

Messrs. Yardley & Co. assure the Medical Profession of the purity of the base of these soaps and of their careful manipulation.

With a knowledge of these facts, it is to be hoped that there will be no further necessity for obtaining supplies from the Continent.

TO BE HAD OF ALL CHEMISTS, OR OF THE MANUFACTURERS,

YARDLEY & CO., LIMITED,

RIDGEMOUNT STREET, LONDON, W.C.

An absolutely non-poisonous, non-corrosive, and most powerful

ANTISEPTIC, DEODORIZER, & DISINFECTANT,

(CHEM. FORMULA $C_6H_9.N.KSO_4$),

Possessing a germicidal action forty times stronger than Carbolic Acid and ten times stronger than Corrosive Sublimate.

CHINOSOL is, moreover, readily soluble in any proportion of cold water; the solutions do not coagulate albumen, and are therefore enabled to penetrate the tissues to an extent that no albumen-coagulating antiseptic can possibly do. As a deodorizer **CHINOSOL** is very efficient, possessing itself a characteristic, agreeable, and slightly aromatic odour. A further and most valuable feature of **CHINOSOL** is its **extreme portability.**

ONE OUNCE of CHINOSOL dissolved in 10 gallons of cold water provides a most efficient Deodorizer.
ONE OUNCE of CHINOSOL ,, 30 ,, ,, ,, a powerful Disinfectant.
ONE OUNCE of CHINOSOL ,, 60 ,, ,, ,, an efficient general Disinfectant.

GUY'S HOSPITAL GAZETTE, 9th May, 1896:—"The report which we have of its use at Guy's, where it has been used to a limited extent, is decidedly in its favour, and bears out what has already been stated as to its superiority over other antiseptics."

The JOURNAL OF STATE MEDICINE, May, 1896:—"Chinosol, from the experiments we have made, appears to be a most valuable disinfectant. Experiments on recent broth-cultures of *Staphylococcus Pyogenes Aureus* showed that a solution of 1:25,000 *was fatal in ten minutes.* These results should cause this substance to prove of *great value in antiseptic surgery.*"

CHINOSOL FLUID is **indispensable** in all cases where a prompt and effective germicide and deodoriser is required; it can be employed in the Sick Room as a spray, or for washing floors and walls of Hospitals, Public Institutions, Schools, Barracks, Ships' Decks, &c. Chinosol Fluid does not contain soapy or resinous matter, it consequently does not leave a slippery surface.

Literature, Bacteriological Report, and Samples of CHINOSOL in various forms sent free to the Medical Profession.

Chinosol is sold by all Wholesale and Retail Chemists, or where not obtainable, please apply direct to

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MEDICINAL PREPARATIONS.

NAME.	PROPERTIES.	DOSE.
ANTINOSINE	Iodoform substitute, being the sodium salt of Nosophen, a blue powder soluble in water.	As gargle and for irrigation in 0·1 to 0·25 per cent. solution, or undiluted in powder form like iodoform.
CARNIFERRINE	Iron salt of phospho-carnic acid, containing 30 per cent. iron in an active and easily assimilable form.	8 grains daily for adults, 3 to 5 grains for children, as a powder or in tablets or pills.
CREOLIN	A refined preparation of JEYES' FLUID for medicinal purposes, forming an emulsion with water, used as a powerful non-irritating antiseptic.	In ½ to 2 per cent. solution.
EUDOXINE	A reddish-brown tasteless powder, insoluble in water, combining the properties of Nosophen and Bismuth. Used as an internal antiseptic.	5 to 8 grains thrice daily; children ¾ to 3 grains thrice daily according to age; infants ⅛th to ¾ grains thrice daily. Best given in powder or pills.
JEYES' FLUID	A coal-tar disinfectant of uniform, constant, and active composition, used as a general disinfectant.	In 2 to 5 per cent. solutions, and in soaps, disinfectant powders, &c.
JEYES' SOLUBLE FLUID	A refined preparation of JEYES' FLUID, forming a clear solution with water; for sterilisation of surgical instruments and as a general antiseptic.	For sterilisation purposes, in 2 to 3 per cent. solution; for irrigations, in ½ to 1 per cent. solution.
LYSIDINE	A colourless liquid and uric acid solvent in gouty disorders.	30 to 150 minims in a pint of aërated water, given daily.
MIGRAININE	A powder easily soluble in water, combining the action of antipyrine and caffeine. Used in neuralgia, migraine, and sick headaches.	16½ grains, best given in water and taken on an empty stomach, after which two hours' rest should be enjoyed. A second dose should only be given in exceptional cases, and not before the lapse of two hours after taking the first dose.
NOSOPHEN	Tetra-iodo-phenolphtalein, a greenish-yellow powder, insoluble in water, tasteless, and odourless, containing 61·7 per cent. iodine. A powerful substitute for iodoform, free from poisonous and irritant properties.	Used undiluted, and also diluted in the form of powder, ointments, paste, gauze, &c. Internally in doses of 5 to 8 grains.
SYMPHOROL N	The sodium, lithium, and strontium salts of caffeine-sulphonic acid. A white powder soluble in water, used as a powerful diuretic.	15 grains four times a day, given in water.
" L		
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JEYES' SANITARY COMPOUNDS CO., Ltd.,
64, CANNON STREET, LONDON E.C.

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Angier's Petroleum Emulsion.

WITH HYPOPHOSPHITES LIME AND SODA

IN

WASTING DISEASES OF CHILDREN.

ANGIER'S PETROLEUM EMULSION is peculiarly suited to the treatment of Children suffering from diseases of malnutrition and wasting and bowel disorders.

It is almost tasteless and children take it readily either alone or in milk or water, with which it mixes perfectly. It can be administered in the hottest weather without fear of disturbing digestion; while its antiseptic action in the intestines, together with its peculiar soothing effect, makes it of special value in the many forms of intestinal disorders so prevalent with children during the hot summer months.

In 6 & 12 ounce bottles; of any Chemist. Free Sample on application.

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ICHTHYOL.

MANUFACTURED BY

THE ICHTHYOL COMPANY, CORDES, HERMANNI & CO., HAMBURG.

ICHTHYOL is employed with advantage in—

Diseases of Women.	Diseases of the Throat. Influenza.
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Deranged Conditions of the Digestive and Circulatory Organs.	Inflammatory and Rheumatic Affections of all Kinds.

ICHTHYOL—*Its extensive employment is indicated by the Reducing, Sedative, and Antiparasitic properties revealed by experimental and clinical observations, as well as by its Stimulating and Regulating effects upon the system.*

ICHTHYOL *is warmly recommended by Medical Men, both connected with Hospitals and in Private Practice, and is in regular use in University and Public Hospitals.*

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(PATENT CONCENTRATED).

The remarkable value of Peptonized (*predigested*) Milk has now been completely established. Without calling for any digestive effort, it can, in the absence of all other food, supply the system for an indefinite period with the nutriment which it requires. The great drawback to the more extended use of Peptonized Milk has been the trouble, care, and even skill required to be daily expended to prepare a fairly palatable and uniformly peptonized product. These disadvantages are entirely obviated by the use of this Concentrated Preparation, as by mere dilution with water a **deliciously-sweetened Peptonized Milk, of uniform composition, can be instantly prepared by the most inexperienced person.**

In Tins, 2s. 6d.; in Half-Tins (Samples), 1s. 6d.

PEPTONIZED COCOA AND MILK

(PATENT CONCENTRATED).

In this preparation the Cocoa as well as the Milk is peptonized and rendered soluble, and **is therefore more readily assimilable than any other preparation of Cocoa extant,** and can be digested by even the most confirmed dyspeptic. Besides its **extreme digestibility,** its perfect palatableness renders it a **most delicious** as well as wholesome **beverage,** which can be taken alike by the invalid and by those who, although otherwise healthy and robust, frequently experience a difficulty in digesting any form of Cocoa. For **general convenience in use** it is unrivalled, as no addition of milk or sugar is needed, but only mixture with hot water.

Tins, 2s. 6d., to make fifteen breakfast cups of Cocoa, or ten or more breakfast cups of rich Chocolate. Also in Half-Tins (Samples), 1s. 6d. each.

N.B.—The milk used in these preparations is secured from farms under our control, and where the sanitary arrangements have been made perfect, and, in addition to this, sterilisation after the most approved modern methods is provided for, thus ensuring complete immunity from communication of the infectious diseases which are unhappily so often spread by means of milk.

OPINIONS OF THE MEDICAL PRESS.

THE LANCET, June 15th, 1889:—

"Peptonized Milk (Patent Concentrated) is an excellent article. In consistence it is like a thick cream, agreeable in flavour, and yet so well peptonized that it gives no coagulation with dilute hydrochloric acid, even after heating. It will be of great value. The Peptonized Cocoa and Milk (Patent Concentrated) is clearly founded on the above. In appearance it resembles chocolate cream, and it is delicate in flavour, and yet peptonized. It is almost needless to say of Messrs. Savory & Moore's novelties that they are well prepared."

The PRACTITIONER, July, 1889:—

"We have carefully examined and tested Savory & Moore's Peptonized Cocoa and Milk and Peptonized Milk, and have used them ourselves and for patients of fastidious appetite. We find them well peptonized, capable of keeping even when the tins are opened for a considerable time, and very palatable. The Cocoa and Milk forms a thin and inviting beverage of a pleasant nutty flavour, and is retained well even in cases of chronic neurotic vomiting. The Peptonized Milk mixes well with tea or coffee, and improves the taste of both. These properties render Messrs. Savory & Moore's latest preparations a valuable addition to the sick-room dietary, and we can recommend them to the profession."

The MEDICAL PRESS AND CIRCULAR, Sept. 4th, 1889:—

"The Peptonized Cocoa and Milk and Peptonized Milk introduced to our notice by Messrs. Savory & Moore, like everything emanating from their laboratory, are most carefully prepared and of the highest quality. There is, moreover, a delicacy in flavour and aroma with the Peptonized Cocoa which shows at once that the products of selected growths only obtain a place here. It is, therefore, one we can unhesitatingly recommend."

N.B.—THESE PREPARATIONS KEEP WELL AFTER THE TINS ARE OPENED.

SAVORY & MOORE,

Chemists to the Queen, H.R.H. the Prince of Wales, H.H. the Khedive of Egypt, &c.,

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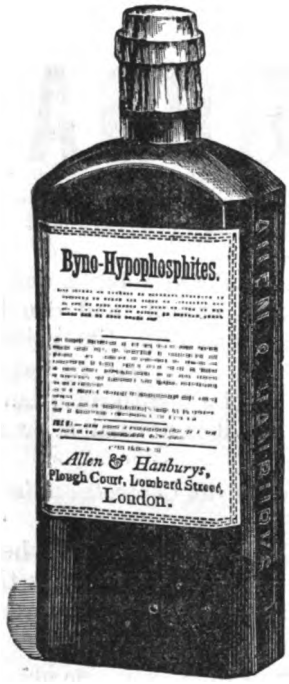
☞ "One of the most popular Tonics of the day."—*The British Medical Journal.*

Byno-Hypophosphites.

A great advance on the ordinary (Sugar) Syrups of the Hypophosphites.



Composition.

The **Vehicle** is **Bynin,** our Liquid Extract of Malt, so prepared that the entire activity of the digestive diastatic ferment is preserved.

The **active ingredients** consist of a **neutral** solution of the **Hypophosphites of Iron, Manganese, Calcium and Potassium,** together with the **Alkaloids of Nux Vomica** and **Cinchona.**

These latter are present in the form in which they occur in the natural state, combined with vegetable acids. Unlike many galenical preparations, however, the quantity of each alkaloid present is a fixed one—that of Strychnine being $\frac{1}{20}$ grain to each ounce of the mixture.

Therapeutic Advantages of Byno-Hypophosphites are briefly:

(a) The employment of sugar, usual in most preparations of Hypophosphites, is avoided, and a potent cause of dyspepsia eliminated by the substitution of **Malt Extract.** This is capable of digesting and aiding the digestion of a considerable amount of starchy food.

(b) The Alkaloids of **Nux Vomica,** especially Strychnine, are perhaps the most valuable gastric tonic in common use, while those of Cinchona possess properties essential in the treatment of functional nervous disorders and febrile conditions. Given in combination with their natural acids, experience has long shown that they are not only more easily tolerated, but more readily assimilated.

(c) The presence especially of Iron and Calcium in this preparation indicates its value as a direct hæmopoietic agent.

The **Hypophosphites,** taken as a group, are invaluable restoratives in cases of brain fatigue and nervous exhaustion. It is a matter of clinical observation that **Phosphorous,** essential in the production of the lecithin compounds of the nervous system, is **far more readily assimilated** in the form of **Hypophosphites** than as Phosphates, Phosphoric Acid, or even free Phosphorus.

In Phthisis, Hypophosphites are indicated for the following reasons:—
"They increase appetite and digestion, promote the formation of the blood, lessen cough and expectoration; they "appear to be more useful in the earlier stages of the disease, and are said to be more successful with young than "with old people. They are recommended in nervous and general debility, teething, spermatorrhœa, chlorosis, "and anæmia."—(RINGER.)

BYNO-HYPOPHOSPHITES is a clear amber coloured liquid of a slightly bitter but agreeable taste. It unites readily with water, and may be administered with safety to children.

DOSE.—For YOUNG CHILDREN, a tea-spoonful twice a day. For ADULTS, a table-spoonful three times a day. If given before meals it promotes appetite. If given after meals it accelerates digestion according to the physiological principles indicated above.

REPORTS FROM MEDICAL JOURNALS:—

The Lancet writes:—
"This is an excellent preparation, in which are ingeniously combined the hypophosphites of iron, lime, potash and manganese with the alkaloids of cinchona and nux vomica in combination with the well known active Malt essence—Bynin. We have proved its efficacy as regards digestive powers, while the tonic salts already indicated and the alkaloids of nux vomica were readily detected."

Medical Magazine writes:
"A distinct pharmacological success."

The Hospital Gazette writes:
"The value of such a preparation must be obvious."

The Chemist and Druggist writes:
"May be said to fill a blank in the well-occupied field devoted to hypophosphite remedies."

The British Medical Journal writes:
"One of the most popular tonics of the day."

Byno-Hypophosphites is put up in capsuled bottles at 2/6 and 4/6, and sold by Chemists everywhere. Price to the Medical Profession, 24/- and 41/- per dozen. SAMPLES SUPPLIED ON REQUEST.

Allen & Hanburys Ltd. Plough Court, Lombard Street, London.

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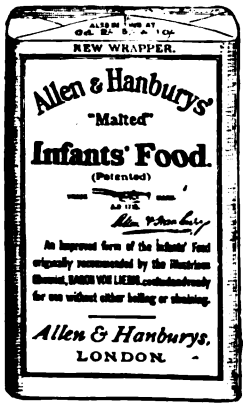

Allen & Hanburys'

"Malted" (or No. 3) Food

FOR

Infants and Invalids.

THIS preparation is a perfectly assimilable farinaceous food. It is prepared on Baron von Liebig's principle of malting, but by greatly improved methods. It differs from other forms of Malted Food in that the malt is present in a soluble, concentrated, and most active form, rendering this Food not only most nutritious but self-digesting.

The basis of the Food is fine wheaten flour, rich in nitrogen, with this advantage, that a large proportion, but not all, of the starch is converted by the action of Malt Extract. The proportions are so arranged that the infant economy does not sink into an atonic condition, by having no work to do, as in the case of so many wholly digested foods, while care is taken that the child is not given too much starch to assimilate.

The Food is rich in soluble phosphates and albumenoids, constituents especially adapted for the formation of firm muscle and solid bone, and, with the addition of the proper proportion of milk and water, or milk only, it forms a perfect diet for young children.

ALLEN & HANBURYS have more recently introduced a "**First**" and "**Second**" **Food for Infants,** which differ in character from the "MALTED" (No. 3) FOOD, in that they are Milk Foods, and do not contain starch. These Foods are so arranged that, if the child be fed by hand from its birth, a series of foods is obtainable which is scientifically adapted to its progressive alimentary requirements.

The "**First Food**" (**No. 1**) is a correct substitute for mother's milk, and should be given for the first three months. It is prepared in the form of a dry powder, and is made from cow's milk, from which the excess of casein is removed, and the deficiency in fat, soluble albumen, and milk-sugar corrected.

The "**Second Food**" (**No. 2**) is the same as No. 1, but with the addition of Maltose, soluble Phosphates, and Albumenoids. There is no unconverted starch present. This should be given for the next three months, until the use of

The "**Malted Food**" (**No. 3**) may be naturally and advantageously commenced.

The experience of many years during which this preparation has been in use all over the world demonstrates how accurately chemico-physiological principles can be brought to bear in formulating a proper dietary.

The following quotation from the *British Medical Journal* will illustrate the practical value of this accurately-adjusted food :—

> "We have taken some trouble to have this Food carefully tested by skilled persons. The result of Dr. W——'s trials was decidedly satisfactory. Delicate children have, in many instances, improved under its use; infants who have thriven under its use fell off when it was discontinued, and it was generally liked by the children to whom it was given. In the same way, Dr. D—— was able to report very favourably of its influence upon the health, nutrition, and digestion of the children to whom it was administered in his hospital practice. In two large *crèches* the Food has been found very successful; in more than one instance the children who had been subject to sickness being freed from it by the use of Messrs. ALLEN & HANBURYS' Food."

The Lancet writes :—

> "An improved form of LIEBIG's well-known Food. It is excellent in quality and flavour."

Samples free to medical men on application.

First Food and Second Food in tins at 1/6 and 3/- Malted Food in tins at 1/-, 2/-, 5/-, & 10/- each.

Allen & Hanburys Ltd., Plough Court, Lombard Street, London.

Laboratories and Warehouse: BETHNAL GREEN, LONDON, E.

West End House: VERE STREET, CAVENDISH SQUARE, W. *Surgical Instruments:* 48, WIGMORE STREET, LONDON, W.
Cod-liver Oil Factories: LONGVA AND KJERSTAD, NORWAY. *Australian Agency:* 484, COLLINS STREET, MELBOURNE.

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THE ABOVE 2/6
SAVARS' COCA WINE
SAVARS'
COCA WINE
TRADE
MARK
DOMINE DIRIGE GRESSUS MEOS
PALMAM QUI MERUIT FERAT
The Erythroxilon coca—a shrub of South America—has been long celebrated for its strengthening powers and its property of temporarily replacing food by arresting decay in the human tissues; its leaves have been always thus used by the Indians.
Each small bottle contains the active principles of about 1000 leaves, one ¼ oz. therefore equals 25 leaves; the alcoholic and aqueous portions of this wine holding in solution the several active principles of the Coca
A dessert-spoonful in half a wine glass of water or wine before meals; after several days this may be doubled
Supplied by all Chemists and Patent Medicine dealers, and wholesale for exportation at
60, BARTHOLOMEW CLOSE, LONDON
56, Hanover Street, LIVERPOOL
PRICE 4s.

SAVAR'S
COCA WINE

The restorative and tonic properties of Coca are well exhibited in Wine, but most Coca Wines are weak in Cocaine.

SAVAR'S COCA WINE, manufactured in our own laboratories, is standardised to contain half grain Pure Cocaine per fluid ounce, and being of this strength it is classed as a true medicated wine.

It can be prescribed as SAVAR'S COCA WINE, or VIN. COCAE SAVARS; it can be obtained from

Mr. WM. MARTINDALE,
10, New Cavendish Street, W.,
Or from any Chemist of repute.

N.B.—A 4/6 bottle contains ten fluid ounces; in 2 drachm doses, this would last a patient about a fortnight; a 7/- bottle contains 20 ounces.

Evans, Lescher & Webb,
60, Bartholomew Close, London.
Paris and Sydney Agencies.

Evans, Sons & Co.,
56, Hanover Street, Liverpool.

Evans and Sons, Ltd.,
Montreal.

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"Lanoline" TRADE MARK.

Preparations.

"Lanoline" (*Liebreich*).

A preparation of the purified cholesterin fat of lamb's wool. Does not decompose or become rancid, and therefore never irritates the skin. It is the natural fat of the skin, and is therefore instantly absorbed by it. Supplied at 2s. 8d. per lb.

Toilet "Lanoline"

Is similar to the natural fat of the human skin and therefore forms an effective soothing and protective application for roughness, redness, chaps, abrasions, cuts, burns, eruptions and all forms of sensitive skin. Supplied to the medical profession in collapsable tubes at 5d. and 9d. each.

"Lanoline" Toilet Soap

Is super-fatted with "Lanoline," and therefore not only cleanses, but also nourishes, imparts suppleness, and protects the most sensitive skin. Perfectly suited for infants. Supplied to the medical profession at 5d. and 9d. per tablet.

Burroughs Wellcome & Co., Snow Hill Buildings, LONDON.

Australian Address:—456, Collins Street West, MELBOURNE. *Cable and Telegraphic Address:—"BURCOME, LONDON."*

29

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AWARDS.

GOLD MEDAL, International Health Exhibition, London, 1884.
FIRST ORDER OF MERIT AND MEDAL (Highest Award), Adelaide, 1887.
HIGHEST AWARD, Medical and Sanitary Exhibition, London, 1882.
FIRST ORDER OF MERIT AND MEDAL, Melbourne, 1888.

Liquor Pancreaticus (Benger).

For the preparation of peptonised or partially digested milk and other articles of food.

Simple directions for use enclosed. In 4 oz., 8 oz., and 16 oz. Bottles.

The *British Medical Journal* of April 1st, 1882, in an article on Benger's Preparations, says:—"Time and use have justified the claims put forward for these preparations."

The *London Medical Record* of March 15th, 1882, says:—"These are undoubtedly a great advance on any previous attempt in this direction. . . . The introduction of these preparations is a distinct advance in therapeutics."

The *Medical Times and Gazette* of September 8th, 1883, says:—"Benger's Preparations have deservedly a very high reputation, and are all largely used."

Liquor Pepticus (Benger).

An exceedingly active fluid pepsine, without disagreeable taste.

DOSE.—One or two teaspoonfuls with meals. In 4 oz., 8 oz., and 16 oz. Bottles.

Benger's Peptonised Beef Jelly.

A delicious quick restorative for Invalids and the Aged. In patent glass jars, no metallic contamination possible. Retail, 2s. each.

The Lancet says:—"It is a most valuable form of concentrated food."

The *London Medical Record* says:—"Invaluable for old people; also in convalescence from acute diseases."

A Physician writes:—"I feel I cannot express my gratitude to you sufficiently, as your Beef Jelly is the only thing my niece can retain, and it has certainly kept her alive for the last week."

Benger's Peptonised Chicken Jelly.

In similar glass jars. Retail, 2s. each.

The Lancet says:—"Mr. Benger's Preparations are now so well known that all we need say of the sample before us is—that it is excellent. It has a delicate chicken flavour."

The *Medical Press* says:—"Few modern improvements in pharmacy have done so much as Benger's Preparations to assist the physician in the treatment of the sick."

Benger's Preparations may be obtained through all Retail and Wholesale Houses and Shippers, or of the Manufacturers—

F. B. BENGER & CO., LTD., Otter Works, Manchester.

TELEGRAPHIC ADDRESS—"Benger's, Manchester."

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Maltine

A NUTRITIVE FOOD & AN UNEQUALLED STARCH-DIGESTANT.

"MALTINE" offers important advantages to those desirous of utilising the valuable properties of Malt in various lines of treatment. It is rightly characterised as—

I.—AN IMPORTANT NUTRIENT.

Because it has been found to contain the principles required to sustain strength and repair waste. Thus "Maltine" is—

(*a*) A food rich in carbohydrates—dextrine and maltose. These carbohydrates are the most assimilable of their class, and constitute, probably, a form of nourishment that is more easily digested than any other. "Maltine" is, then, a fat-making, force-giving food that is practically pre-digested.

(*b*) "Maltine" also contains a good proportion of the albuminoids and phosphates of the grains. Dr. MILNER FOTHERGILL specially valued this characteristic of "Maltine," pointing out that it was virtually the only means at our disposal for utilising vegetable albumen in a digestible or uncoagulated condition. Both the albuminoids and phosphates, derived from the grain by the process of malting, are in the most assimilable condition, and it is held that these natural phosphates are far more effective in the treatment of deficient bone-formation, than the salts in inorganic combinations.

Briefly, then, "Maltine" is a most easily digested Food, rich in the principles that make fat and build up flesh and bone.

II.—A VALUABLE DIGESTIVE AGENT.

(*a*) Because of its exceptional richness in **Diastase.** This delicate hydrolytic ferment is very susceptible to change and impairment, and only long experience and careful study will make it possible to obtain the fullest amount in the extract. The same process that has ensured the richness of "Maltine" in flesh-forming material is adapted to the preservation of diastase, and "Maltine" contains this useful ferment in unexampled proportions. By its action, "Maltine" has a pronounced effect on all farinaceous food, rapidly converting the starch into maltose and dextrine, and thus, when through debility, the system is unable of itself to properly perform this function, the use of "Maltine" will effect the digestion of food, and both directly and indirectly nourish the system.

(*b*) "Maltine" is not only of service in indigestion by reason of its action on the ingesta; it acts, further, as a digestive stimulant. Dextrin possesses undoubtedly the property of a gastric stimulant, causing an increased secretion of the gastric glands; and "Maltine," by virtue of its dextrin, stimulates and gives tone to these functions.

Among the other features which have won such general appreciation for "Maltine" may be mentioned its **CONVENIENT SEMI-LIQUID CONSISTENCE,** so much preferred by patients to the thick, viscid extracts; its **BRIGHT, CLEAR COLOUR and AGREEABLE FLAVOUR.**

The uses of "Maltine" are so well known that we need scarcely recapitulate them. Whenever it is desired to administer easily digested food containing the essential principles of nutrition, combat waste, improve the appetite, and counteract digestive weakness, "Maltine" is used with the happiest results. Its usefulness in Infant Feeding deserves, perhaps, more attention. By its action on cow's milk, the hard curd is broken up and rendered more easily digestible. Mixed up with warm milk, with or without a little cereal food, it constitutes a most successful aliment for infants.

"'Maltine' contains from three to five times as much diastase as any other extract of malt in the market."—Prof. ATTFIELD.

"Clinical experience enables us to recommend it as a nutritive and digestive agent, in virtue of its albuminoid contents and its richness in phosphates and diastase."—BRITISH MEDICAL JOURNAL.

SAMPLES FREE TO MEDICAL MEN.

In ordering, please specify "MALTINE CO."

THE MALTINE MANUFACTURING COMPANY, Limited,

24 and 25, HART STREET, BLOOMSBURY, LONDON, W.C.

* * c c 31

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BOVRIL

IS THE VITAL PRINCIPLE OF PRIME OX BEEF.
FROM CATTLE REARED IN AUSTRALIA AND SOUTH AMERICA.

ANIMAL FOOD offers a means of strength and stimulus not furnished by any other aliment, and the perfect assimilation of nutritious food is an essential condition of perfect health, but the high-pressure life of the present age demands an effective stimulative nourishment, taking little time to prepare or consume, yet not detrimental to the digestive organs, hence the introduction of Meat Extracts, Meat Essences, &c.

But BARON LIEBIG, the great German chemist, discovered and publicly declared on Nov. 11th, 1865, the unsuitableness of these preparations as resuscitating agents or as food in any direct sense. As he truly says :—

> "WERE IT POSSIBLE TO FURNISH THE MARKET AT A REASONABLE PRICE WITH A PREPARATION OF MEAT COMBINING IN ITSELF THE ALBUMINOUS, TOGETHER WITH THE EXTRACTIVE PRINCIPLES, SUCH A PREPARATION WOULD HAVE TO BE PREFERRED TO THE EXTRACTUM CARNIS, FOR IT WOULD CONTAIN *all* THE NUTRITIVE CONSTITUENTS OF MEAT." AGAIN—"I HAVE BEFORE STATED THAT IN PREPARING THE EXTRACT OF MEAT THE ALBUMINOUS PRINCIPLES REMAIN IN THE RESIDUE; THEY ARE LOST TO NUTRITION, AND THIS IS CERTAINLY A GREAT DISADVANTAGE."

The Albumen and Fibrine are the only nourishing portions of the Beef, and they are not present in Meat Extracts, &c., which, therefore, are only stimulants and no more nourish the system than the poker feeds the fire.

Bovril supplies the nourishment so conspicuously absent in these preparations, and this is secured by the introduction of albumen and fibrine (or rather the entire lean of beef) desiccated at a low temperature by special process, and subsequently pulverised to a minute degree of subdivision. By this means the entire nourishment of animal food is adapted to the feeblest and most sensitive system, and perfect assimilation is secured with the least possible expenditure of vital energy.

INVALID BOVRIL

Is specially prepared for use in the sick-room, and is put up in porcelain jars, obtainable from chemists and druggists only.

It contains the entire nutritive and stimulative constituents of Prime Ox Beef, and differs from ordinary Bovril in being more concentrated and quite devoid of seasoning, solving the great difficulty which all medical men recognise of furnishing substantial nourishment to the system through a debilitated stomach, nature being so effectively assisted that perfect digestion and assimilation is certain.

Strength to sustain the patient through the crisis of the illness, and strength to carry the invalid to a speedy convalescence and recovery is all important, and Bovril (which is not merely an Extract of Meat but Meat ITSELF) furnishes the system with renewed strength and increased vitality, being relished and retained when ordinary foods are rejected.

BOVRIL, LTD., FOOD SPECIALISTS, LONDON.

DIRECTORS: The Right Hon. LORD PLAYFAIR, G.C.B., LL.D., and others.

BRANCHES AT—*Birmingham, Manchester, Liverpool, Newcastle, Hull, Leeds, Edinburgh, Glasgow, Dublin, and Brussels.*
AGENCIES AT—*Sheffield, Northampton, Derby, New York, Paris, Christiania, Karlsruhe, Stockholm, Lausanne, Rotterdam, Madrid, Seville, Sydney, Athens, Melbourne, Adelaide, Brisbane, Albany, Perth (W.A.), Christchurch (N.Z.), Port Elizabeth, Shanghai, Bombay, Singapore, Calcutta, Valparaiso, &c.*

32

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Some Important Products of Modern Pharmacy.

"TABLOIDS" OF ANIMAL REMEDIES.

DURING the present century no more important investigations have been undertaken than those which have established the therapeutic value of various animal substances in the treatment of more or less obscure diseases. Although the definite scientific side of the question still requires laborious research, many important results have already been obtained, and there is little doubt that when investigation has emerged from its at present embryonic stage, there will be opened up for this class of remedy a much wider field of usefulness than is dreamt of by those who are not cognisant of the immense strides that the movement is even now making. One of the most important facts yet established by laboratory trial and clinical test is the unreliability of liquid and solid extracts of the various animal organs now in use. Not only are these preparations liable to decompose shortly after they are made, but, owing to the fact that our knowledge of the ultimate chemistry of these organs is very limited, there has not yet been discovered a solvent or mixture of solvents which will effectually separate all the active principles. To ensure the presence of the *whole* of the substance and *all* the active principles of an animal organ it is necessary to exhibit it in the reliable, scientific, and accurately-dosed form of "tabloids." These are prepared from healthy organs, carefully selected and examined by a medical expert, and afterwards minced, dessicated, and compressed. As they are prepared in large batches a uniform percentage of active principles is secured throughout the whole. Modern medical literature is full of reports showing how active and reliable "tabloids" have proved in the hands of eminent clinicians.

In alphabetical order we subjoin a list of some of the animal substances we are now compressing into the scientific, reliable, convenient, and accurately-dosed form of "tabloids."

LIST OF "TABLOIDS" OF ANIMAL SUBSTANCES.

Bone Medulla (Red) "Tabloids," gr. 1½	Bottles of 100	2/-	each.
Cerebrinin "Tabloids," gr. 5 ...	,, ,,	1/6	,,
Didymin "Tabloids," gr. 5 ...	,, ,,	1/6	,,
Fallopian Tube "Tabloids," gr. 5	,, ,,	3/-	,,
Kidney Substance "Tabloids," gr. 5	,, ,,	2/-	,,
Liver Substance "Tabloids," gr. 5	,, ,,	2/-	,,
Lymphatic Gland (Cervical) "Tabloids," gr. 2½ ...		4/-	,,
Red Marrow "Tabloids," gr. 1½		2/-	,,
Ovarian Tissue "Tabloids," gr. 5		5/-	,,
Pancreas Substance "Tabloids," gr. 5		2/-	,,
Pineal Gland "Tabloids," gr. 1		20/-	,,
Pituitary Gland "Tabloids," gr. 2...		4/-	,,
Residuum Rubrum "Tabloids," gr. 5		1/-	,,
Salivary Gland "Tabloids," gr. 5		4/-	,,
Spinal Medulla "Tabloids," gr. 2½		2/-	,,
Spleen Substance "Tabloids," gr. 5		2/-	,,
Suprarenal Gland "Tabloids," gr. 5		4/6	,,
Thymus Gland "Tabloids," gr. 5		2/-	,,
Thyroid Gland "Tabloids," gr. 1½		-/10	,,
Thyroid Gland "Tabloids," gr. 5		2/-	,,
Uterine Wall Substance "Tabloids," gr. 5 ...		2/-	,,

SACCHARIN "TABLOIDS."

The absolute harmlessness of saccharin has been conclusively proved by numerous and thorough scientific experiments and researches, and experience has corroborated the results arrived at. It has been shown that saccharin produces no injurious effects whatever upon the body; that it is discharged, unchanged and in its entirety, through the urine and fæces, and that it is absolutely inoperative as a retarding agent on bodily functions. When, therefore, sugar is prohibited as an article of food or as a condiment, saccharin satisfies the palate of the patient without aggravating the existing malady; on the contrary, its antiseptic influence may be for good.

The Editors of THE LANCET, replying to a correspondent in the issue of Jan. 18th, 1896, and referring to the researches of Dr. T. Stevenson and Dr. L. C. Wooldridge, make the following important statements with regard to the use of Saccharin:—

"(1) Saccharin is quite innocuous when taken in quantities largely exceeding what would be taken in any ordinary dietary.

"(2) Saccharin does not interfere with or impede the digestive processes when taken in any practicable quantity.

"(3) Our personal experience is that Saccharin may be taken for an extended period without interfering with the digestive and other bodily functions. Hence there is no reason to think that its continued use is in any way harmful."

Soluble Saccharin Powder is supplied to the Medical Profession in ¼-oz. and 1-oz. bottles with scoop, at 1/2 and 3/10 per bottle. Saccharin 'Tabloids,' containing ½ grain in each, are supplied in bottles of 100 and 200 at -/7 and 1/1 each.

"EMOL-KELEET."

Week by week we are receiving reports from the medical and nursing press and from practising physicians and surgeons regarding the value of "Emol-Keleet" in the treatment of a great variety of skin diseases, and for ordinary dusting purposes in the nursery and sick-room. As a nursery dusting powder, and for application before and after the appearance of bed-sores it is invaluable. For chafing and undue perspiration, and in the treatment of eczema, infantile eczema, intractable urticaria, and nearly every inflammatory or weeping skin disease, it is now largely prescribed.

We quote the following from a recent letter of a distinguished practitioner regarding a case of acute eczema:—"The eruption, though scattered over various parts of the body was most violent about the perineum, between the nates and the region of the pubes. There was the usual weeping discharge, especially in the last-named regions. The constitutional effect was very marked and the nervous symptoms were intense, so much so that the patient almost contemplated bodily destruction." After trying the usual standard remedies without effect, "Emol-Keleet" was applied. The result was excellent. "The intense itching abated, his life became bearable, his spirits rose, and he was able to take suitable nourishment. After a few slight relapses the patient rapidly regained his usual health."

Price to the medical profession at 9d. per tin.

BURROUGHS, WELLCOME & Co.

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HOOPER'S ELASTIC WATER OR AIR BEDS AND CUSHIONS.

To be used on any ordinary Bedstead or Couch.

For Paralysis, Fevers, Consumption, Rheumatic Affections.

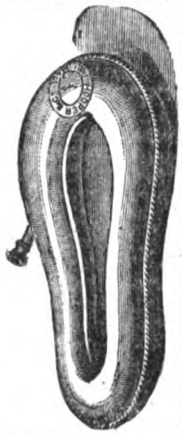
For Sale or on Hire.

For Bedsores, Spinal Affections, and all Bedridden Patients.

HIGHEST AWARD AT THE INTERNATIONAL MEDICAL AND SANITARY EXHIBITION, 1881.

☞ Messrs. Hooper & Compy. beg to invite the attention of the Profession to their system of hiring their Water Beds otherwise than in contagious or infectious diseases, and feel assured that where outlay is a consideration the Profession will appreciate and avail themselves of this hiring system.

ELASTIC INFLATING BED PAN.



ELASTIC INFLATING BED SLIPPER.

SANITARY BED PAN.

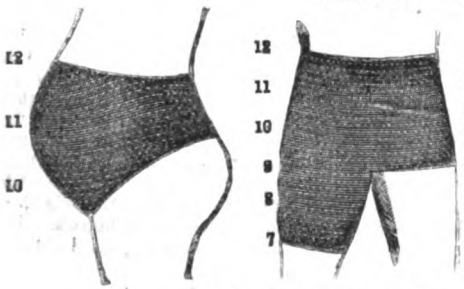
IN WHITE PORCELAIN OR GUTTA PERCHA.

Fitted with lid and stopper to prevent effluvia when removed from the Patient.

The Elastic Bed Slipper and Bed Pan, from their softness and elasticity, are peculiarly adapted to Ladies after confinement, and to Invalids who, from emaciation or other causes, cannot bear the hardness of ordinary utensils.

HOOPER'S SPIRAL ELASTIC BANDAGES.

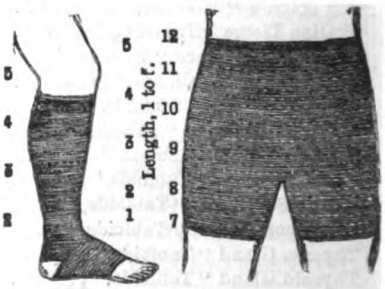
POROUS—ALLOWING FREE VENTILATION.



The measure should be taken next the skin, as follows:—

1, Round thickest part of instep.
2, Round ankle-bone.
3, Round small of leg.
4, Round thickest part of calf.
5, Round leg, just below knee.
6, Round knee-cap.
7, Round leg, just above knee.
8, Round middle of thigh.
9, Round top of thigh.
10, Round body at hips.
11, Round body at umbilicus.
12, Round waist.

The Length should also be given.



Experienced Male always in attendance for fitting Trusses, Belts, and Stockings.

SOLE PROPRIETORS AND MANUFACTURERS,

HOOPER & COMPY., 7, Pall Mall East, & 55, Grosvenor St., LONDON.

ORDERS BY POST OR TELEGRAM EXECUTED IMMEDIATELY.

SPECIAL DISCOUNT FOR POOR-LAW GUARDIANS.

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SAMPLES FREE ON APPLICATION.

HYGIENIC WOOD WOOL TOWELETTES.

Put up in the following sizes:—

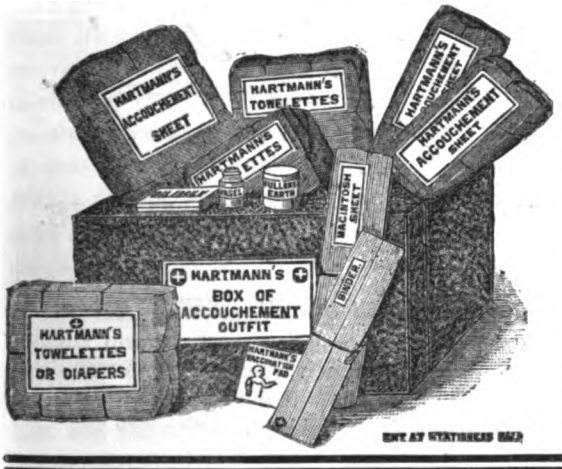
In YELLOW paper, 2/- per doz. size (special make for use after accouchement).
In GOLD paper, 2/- per doz. size.
In BLUE paper, 1/4 per doz. size (new make).
In WHITE paper, 1/- per doz. size.

} Superior to any other make.

FOR HOME USE, DELICATE HEALTH, FOR LADIES' TRAVELLING AND ACCOUCHEMENT THEY ARE INVALUABL AND INDISPENSABLE. THEY ARE SOFT, LIGHT, ANTISEPTIC, AND ARE SUPPLIED AT THE ACTUAL COST OF WASHING. AFTER USE THEY ARE SIMPLY BURNT.

Sample Packets of 1 dozen at 2s., 1s. 4d., and 1s. post free, or 12 Packets at 12s. 6d., 12s. 6d., and 9s. 6d.

Carriage Paid to the Medical Profession only.



HARTMANN'S

COMPLETE

GUINEA OUTFIT FOR ACCOUCHEMENT.

It contains all the necessary Hartmann's Absorbent Wood Wool Sheets, Sanitary Wood Wool Towelettes, Binders, Safety Pins, Carbolised Vaseline, Thread, Pads, Fuller's Earth, Oiled Silk, Mackintosh Sheeting, &c.

It affords great cleanliness and comfort to the patient, and diminishes the risk of puerperal fever.

Too much attention cannot be given in selecting the best articles for use during confinement; and in the interest of their patients we ask physicians to recommend Hartmann's Complete Guinea Accouchement Outfit.

A Smaller Outfit is also put up, price 10/6.

REDUCED PRICES to DOCTORS & NURSES.

The above Boxes will be sent to any Medical Man or Nurse on receipt of 19/- or 9/6.

HARTMANN'S

2d. each. WOOD WOOL 2d. each.

VACCINATION PAD.

Highly recommended by the Public Vaccinators.

Antiseptic and absorbent, soft and not liable to hurt the arm like shields.

It protects the arm from external violence.

It absorbs all discharges.

Most important of all, it reduces the risk of septic absorption and blood-poisoning.

It cannot be used a second time, like ordinary "shields," which it is too often the dangerous practice to use again and again.

Lastly, and not its least advantage, is its extreme cheapness.

Packed in boxes of 1 dozen, at 2/- post free to any Medical Man or Nurse.

Special Quotations to Public Vaccinators for quantity.

HARTMANN'S

SANITARY WOOD WOOL

SHEETS.

For Accouchement, Bedsores, Operations, &c.

PERFECTLY ANTISEPTIC, CLEAN, and COMFORTABLE.

The most comfortable Appliance for Accouchement ever made

"Risk of Puerperal Fever diminished."

A Great Boon for Patient, Nurse, and Physician in attendance.

Used in the Principal Lying-in Hospitals of London, Manchester, Edinburgh, Glasgow, &c.

These Sheets are made of Hartmann's Patent Wood Wool Wadding, the most absorbent substance ever known. They are most comfortable and healthy, are perfectly antiseptic, have not the disagreeable smell so common to indiarubber sheets, and are much cheaper. In Accouchement a large sheet is laid under the patient, it absorbs the discharge completely, and is SIMPLY BURNT after use. No soiled clothes; risk of puerperal fever greatly lessened; and perfect comfort and cleanliness.

Price of the Three Sizes - - 1/-, 1/6, and 2/6.

Sizes: 24 by 18 in., 26 by 20 in., 32 by 32 in.

The SANITARY WOOD WOOL COMPANY, Limited,

26, Thavies Inn, Holborn Circus, London, E.C. *Telegraphic Address*—"LIGATURE, LONDON."

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"APENTA"

A NATURAL HUNGARIAN APERIENT WATER.

Bottled at the **UJ HUNYADI** Springs, Buda Pest, Hungary.

Under the absolute control of the Royal Hungarian Chemical Institute (Ministry of Agriculture), Buda Pest.

"This water is richer in mineral salts than all Continental bitter waters, and its efficacy is so great that even the smallest dose secures the best results."

John. Mobray

Sworn Chemist in Buda Pest.

APPROVED BY THE ACADÉMIE DE MÉDECINE, PARIS.

"THE LANCET" says:—

"A much-esteemed purgative water."—"Its composition is constant. The practitioner is thus enabled to prescribe definite quantities for definite results."—"A Natural Water."

"THE MEDICAL PRESS AND CIRCULAR" says:—

"Belongs to that large class of aperient waters which come from the neighbourhood of Buda Pest, commonly known under the generic name of Hunyadi."—"Contains a large amount of lithia. Specially marked out for the treatment of gouty patients."

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"One of the most valuable of aperient waters."—"Agreeable to take."—"Very efficient."—Reliable in its therapeutic effects."

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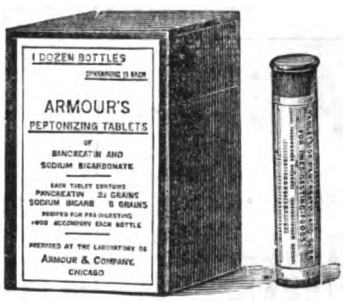

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"..... on inspection the leaf proved to be a choice variety of Dubec and according to microscopic examination is identical with that present in the cigarettes. The cigarettes yield a smoke possessing the well-known aroma peculiar to the Dubec leaf; but while it is particularly fragrant it is somewhat powerful also. The normal mineral constituent of genuine tobacco—namely, Nitrate of Potassium—was extracted from the leaf in good quantity."—THE LANCET, Jan. 13th, 1894.
"..... It was therefore a fine, well-preserved and highly aromatic specimen of pure manufactured tobacco, and specially adapted for cigarettes "London, Nov. 23rd, 1893.
"(Signed) GEO. BROWNEN, F.C.S."

BEST HAVANA CIGARS AT IMPORT PRICES.
The greatest connoisseurs, the keenest buyers, and best judges of value now purchase their cigars at
BENSON'S, 61, St. Paul's Churchyard.
Good Foreign Cigars, 12s., 16s., 20s., 22s., 100. Samples five for 1s. (14 stamps). Cigars to suit most delicate palates.

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DIABETES,
SEND FOR
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LIST OF
GLUTEN BREAD
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See PAVY on Diabetes, p. 245, THE LANCET, June 9th, 1877, Report, and recommended by all leading authorities on the subject.
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Sir Chas. A. Cameron M.D.

Neave's Food

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FOR INFANTS CHILDREN INVALIDS & THE AGED

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PRÉCIEUSE Liver, Calculi, Gravel, Gout. Complaints of the Kidneys.

Saint-Jean Impératrice Disorders of the stomach. The best *natural* table waters ever known.

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SAINT-RAPHAEL

Tonic, Strengthening, digestive wine. Ordered for weak and fatigued stomachs, in chlorosis, anæmia and to convalescent people. Unrivalled adjuvant in consumption. *Excellent flavour.*

Beware of worthless imitations. See that you get on each bottle the Trade Mark here opposite and the Warranty Stamp of the Manufacturers Union.

S^t RAPHAEL WINE COMPANY, VALENCE (Drôme, FRANCE)
H. GALLAIS, 90, Piccadilly, W. LONDON

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CHEMISTS' ASSOCIATION FOR MINERAL AND ARTIFICIAL TABLE WATERS LIMITED.

PURITY.
QUALITY.
CHEAPNESS.
CONVENIENCE.
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The Medical Profession are requested to specify "**C.A.M.W.A.L.**" **WATERS.** By so doing they directly benefit both Chemists and their Patients. Every label distinctly states the quantity of active ingredient in each half-pint of the waters. Hundreds of leading Medical Men have sent written testimony in favour of C.A.M.W.A.L. Waters.

Samples Free to the Profession, and lists of nearest Agents on receipt of post-card to the Secretary, 45, GIFFORD STREET, LONDON, N.

C.A.M.W.A.L. supplies Chemists and Hospitals only; over 3000 Chemists have joined hands in this business, and this number is steadily increasing.

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Supplied under Royal Warrant to Her Majesty the QUEEN and to H.R.H. the PRINCE of WALES.

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THE KING OF NATURAL TABLE WATERS.

CHARGED ENTIRELY WITH ITS OWN NATURAL GAS.

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LONDON ... Bott. 5/-, ½ Bott. 4/6, ¼ Bott. 3/6. | COUNTRY ... Bott. 6/6, ½ Bott. 5/-, ¼ Bott. 3/9.

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Be Careful to specify:

SOURCE DU **PAVILLON**

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Samples free to Members of the Medical Profession on application to INGRAM & ROYLE, Ltd., 52, Farringdon-st., London, E.C.

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SOUND & BRIGHT. SOUND & NUTRITIOUS.

The Half-Guinea ALE — IN CASKS AND BOTTLES — S.N. STOUT

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Are especially adapted for Medicinal and Family purposes

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48/- PER DOZEN, CARRIAGE PAID.

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TONIC WINE.

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A wine-glassful of **BYRRH** before meals promotes the appetite, and at any time will be found a most invigorating and strength-giving Wine.

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In Imperial Pints and Half-Pints. Corked or Screw-stoppered.

Sold by Retailers of Beer in Bottle.

All the above Beers are Brewed by WHITBREAD & CO., Limited, and Bottled by them at their Stores:—

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NO MUSTY FLAVOUR.

As supplied to Her Majesty and both Houses of Parliament, the Orient Line, P. & O. Line, Pacific Steamship Co., &c., &c.

ABSOLUTELY PURE AND NON-ALCOHOLIC.

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Purchasers should ask specially for FRY'S PURE CONCENTRATED COCOA *to distinguish it from other varieties manufactured by the Firm.*

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ARE SUPPLIED TO GUY'S, THE LONDON, ST. BARTHOLOMEW'S, AND OTHER Leading Hospitals.

Please write for Catalogue and Samples—

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Special Biscuit Bakers by Royal Warrant to Her Majesty,
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Recommended to the kindly notice of the Medical Profession. The

FRANZ JOSEF APERIENT WATER.

Known for over 20 years. Sold everywhere. Head Office, Budapest.

AËRATED LIME-WATER.

An efficacious Remedy for Nausea and Sickness. Mixed with milk, it forms a valuable Beverage for Ladies nursing or Delicate Children.

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NUTROA FOOD

12% DIGESTIBLE FAT!!
STARCH FREE
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THE NEW SHAPE, with Rounded Edges or the Ordinary Kind.
3 and 4 oz., plain or graduated ..... 7s. 6d. per gross.
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WHITE MOULDED PHIALS, Plain or Teaspoons.
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Best Quality.

BLUE POISON BOTTLES, all sizes.

PLEASE NOTE.—The Green Glass can be had, washed and papered, 6d. per gross extra. (*Strongly recommended.*)

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Or the ordinary kind, plain or graduated.

3 & 4	ounce	7s. 6d. per gross.
6 & 8	„	8s. 6d. „
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Oval, octagon, or direct square shape the same price.

WHITE MOULDED PHIALS — BEST QUALITY.

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1	„	3s. 6d. „
1½	„	4s. 3d. „
2	„	5s. 0d. „

Plain or Graduated to Teaspoons.

CRYSTAL BLUE TINTED BOTTLES—SPLENDID QUALITY.

3 & 4	ounce	8s. 0d. per gross.
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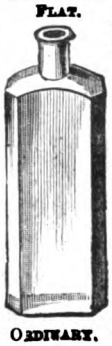

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REDUCED PRICES.

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3 oz.	4 oz.	6 oz.	8 oz.
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½ oz.	1 oz.	1½ oz.	2 oz.
3/-	3/3	3/10	4/6 per gross

FREE ON RAILS IN LONDON.

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Fish Napkins, 2/11 per doz.; Dinner Napkins, 5/6; Table Cloths, 2-yds. square, 2/11; 2½ by 3-yds., 5/11 each; Kitchen Table Cloths, -/11½ each; Strong Huckaback Towels, 4/6 per doz.; Frilled Linen Pillow Cases, 1/4½ each.

IRISH CAMBRIC POCKET HANDKERCHIEFS.

Children's Bordered, per doz.			1/6
Ladies'	"	"	2/3
Gents'	"	"	2/6
Ladies' Hemstitched, per doz.			2/9
Gents'	"	"	3/11

COLLARS, CUFFS, & SHIRTS.

Ladies' 3-fold Collars from 3/6 per doz.; Gents' 4-fold, 4/11 per doz.; Cuffs for Ladies or Gentlemen from 5/11 per dozen; MATCHLESS SHIRTS, best quality Long Cloth, with 4-fold Linen Fronts and Cuffs, 35/6 the half-dozen (to measure 2/- extra).

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In plated metal case containing:

Symes' Abscess and Tenotomy Knife, Finger Knife and Scalpel, Double Bistoury, all in metal handles, Scissors with take-apart blades, Spring Forceps, Bow-dressing Forceps with take-apart blades, Aluminium Caustic Case, Probes, Spatula, Drainage Tube Introducer, Ear Scoop, Needles, Silk, &c.

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INSTRUMENT MAKERS TO THE ARMY, NAVY, AND INDIAN GOVERNMENT, &c.

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ASEPTIC CATHETERS,

FIRST QUALITY, SILK WEBS, WOVEN EYES, & SOLID ENDS,

WITH INNER SURFACE SMOOTH AND HIGHLY POLISHED.

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Per Dozen—à Boule, 38/-; à Coudée, 39/-; Bi-Coudée, 40/-; Conical, 38/-; Cylindrical, 36/-.

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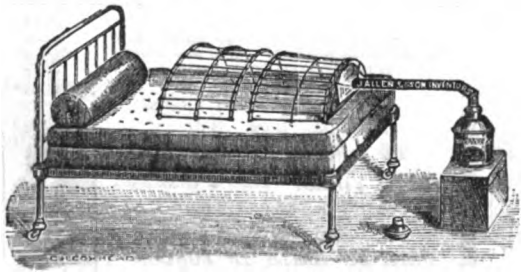

For Rheumatism, Gout, Eczema, Lumbago, Sciatica, and Skin, Liver, and Kidney Affections.

THE LANCET says: "This instrument is very complete. Every precaution has been taken to make an accident impossible. It is portable, it is cheap, and it acts promptly," &c.

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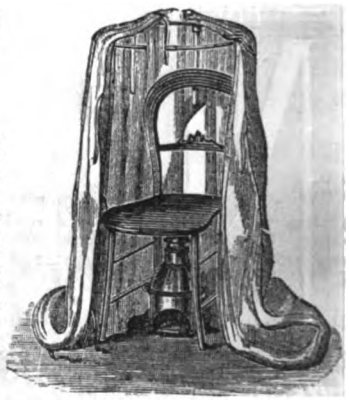

Apparatus complete in wood box, with pair of wicker frames and foot-plate, £2 5s. The two Apparatus combined in one, for Chair and Bed, £3 10s.

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Apparatus for use under chair, with best Cloak, Tinned Iron Supports, in Box complete, 30s.

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VERY SIMPLE. VERY CHEAP. VERY EFFECTIVE. REQUIRES NO WATCHING. IS READY IN A FEW MINUTES.

THE LANCET, May 23rd, 1896, says:—"This apparatus enables milk to be very quickly sterilised for the use of an infant in small quantities as required; and there is, of course, no separation of the cream, so that the result is better than when a number of small bottles of milk are treated at one time, according to the usual practice, for when these bottles become cold the cream rises and sticks around the narrow necks. An important advantage of sterilisation is that it prevents any risk from the pathogenic organisms so frequently conveyed by milk, such as those of tubercle, scarlet fever, and enteric fever."

The HOSPITAL says:—"Milk can thus be sterilised without that prolonged heating which is largely the cause of the peculiar taste of boiled milk, and also without the cream separating. ..... Is found in practice to be a very great benefit."

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Size.	Price.	Size.	Price.
½ Pint, suitable for one or two infants	£0 3 6	1 Gallon, best quality, for small schools	£1 7 6
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A specially made Thermometer if required, price 3/-. This Sterilizer is highly approved by all the leading Physicians, who are unanimous in their opinion that it is better for general use to dispense with a Thermometer and substitute a time allowance. These Sterilizers can be obtained from the following well-known Surgical Instrument Makers: Messrs. ARNOLD & SON, 31, West Smithfield, London; DOWN BROS., St. Thomas's-street, Borough, London, S.E.; FANNIN & CO., 41, Grafton-st., Dublin; WEISS & SON, 287, Oxford-st., London, and 42, King-st., Manchester.

Wholesale: AYMARD'S PATENT STERILIZER CO., **19a, COLEMAN STREET, LONDON, E.C.**

THE

THRESH "CURRENT STEAM" DISINFECTOR

Is adapted for HOSPITALS, WORKHOUSES, PUBLIC SCHOOLS, &c. Made in several sizes, with one or two doors. Portable Machines for Rural Districts. ***Prices 60 to 140 Guineas.***

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Manufacturers—

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THE "LATEST" IN LIGATURES.

(PROTECTED BY ROYAL LETTERS PATENT.)

CATGUT, SULPHO-CHROMIC CUT, SILKWORM CUT, HORSEHAIR, & TWISTED SILK.

These Ligatures are 12 inches long, and supplied in 6-inch Tubes, having a metal screw-cap. Each Tube contains 100 threads on a patent frame.

SPECIAL POINTS.

1. **There is absolutely no waste.**
2. **Each thread comes out in a straight length, and there is no corkscrew curl as from a reel.**
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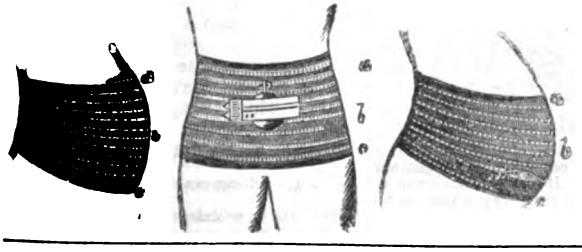

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MEASUREMENT REQUIRED.—Circumference at *a*, *b*, and *c*, depth from *a* to *c*, stating sex and any other particulars that can be given.

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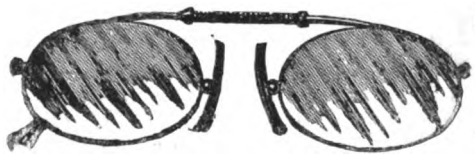

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OPHTHALMIC OPTICIANS,

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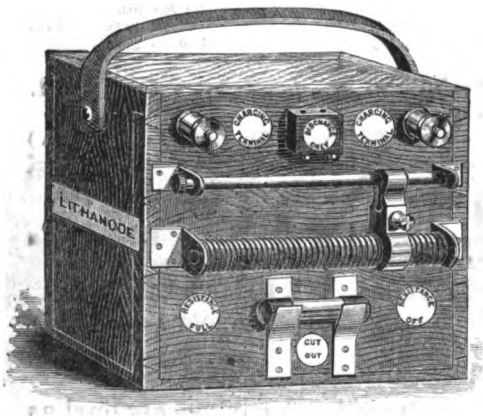
Inventors and Patentees of the only Pince-nez suitable for astigmatism. CURRY & PAXTON are the only Opticians who devote themselves ENTIRELY to the Medical Profession.



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THE MOST SUCCESSFUL BATTERY FOR USE WITH "X-RAY" APPARATUS.

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Consists of a series of separate and distinct cylinders, any diameter and suitable length, made of Waterproof material either for Water or Air, fitting into a case which keeps them side by side, but slightly apart.

1. In cost it is less expensive.
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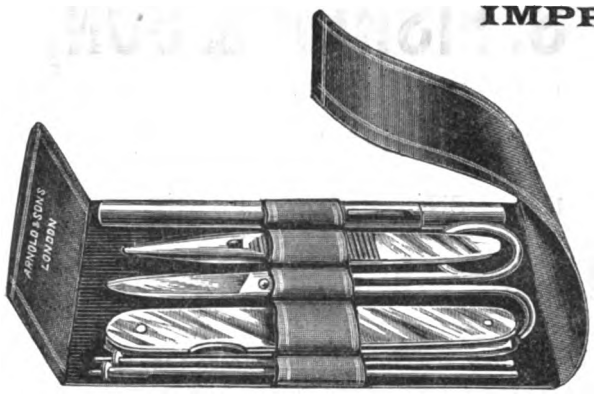

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10, THAYER STREET, MANCHESTER SQUARE, LONDON, W.

Superior Trained MALE NURSES for Medical, Surgical, Mental, Dipsomania, Fever, and Travelling Cases supplied at a moment's notice, Day or Night. All Nurses supplied by this Association are TOTAL ABSTAINERS. SKILLED MASSEURS supplied. *The only Temperance* Association of Male Nurses in the Kingdom. Terms: 1 guinea and a half or 2 guineas and upwards per week. Nurses to receive their own fees. F. ROUSE, Secretary. *Telegraphic Address:* "*Assuaged, London.*"

TRAINED MALE NURSES.

THE HAMILTON ASSOCIATION,

57, PARK STREET, GROSVENOR SQUARE, LONDON, W.

TELEGRAPHIC ADDRESS: "ALUMNUS, LONDON." [UNDER DISTINGUISHED MEDICAL PATRONAGE.

Supply HOSPITAL-TRAINED MALE NURSES for Medical, Surgical, Mental, and Dipsomania Cases (in Town or Country), at the shortest notice, day or night. Terms from Two to FOUR GUINEAS a week. Certificated Masseurs sent out by the hour or week. Travelling Attendants for Invalids.

MALE AND FEMALE NURSES'

MUTUAL BENEFIT ASSOCIATION, 69, Wigmore Street,

CAVENDISH SQUARE, W. Telegraphic Address: "**DESIDERATUM, LONDON.**"

HOSPITAL-TRAINED NURSES, Male and Female, for all cases. Nature of case and sex should be stated and any particulars which will assist the "Lady Superintendent" in selecting the most suitable Nurse. Also, Massage. Owing to frequent applications for "Female Nurses" the Committee have decided to add them to their Staff.—Apply to the Lady Superintendent.

THE BAKER STREET ASSOCIATION OF TRAINED NURSES,

15, BAKER STREET, W.

ON THE CO-OPERATION SYSTEM.

Experienced Nurses can be obtained for Medical, Surgical, Monthly, Mental, and Fever Cases at the shortest notice. There is a Home in connexion, where patients can be received for treatment. [*Telegrams*: "WOMANLY, LONDON."

Mr. D. E. WILSON'S

NURSING INSTITUTION,

96, 97, 98a, WIMPOLE STREET,

Cavendish Square, London, W.,

For Supplying the Medical Profession and the Public with

HOSPITAL TRAINED NURSES

For Medical, Surgical, Monthly, Mental, Dipsomania, Fever, &c.

The nature of the case and sex should be described personally, or by letter or telegram, to Mr. WILSON, or to the Lady Superintendent.

FEMALE and MALE NURSES especially trained for Mental, Nervous, and Dipsomania Cases. Also,

TRAINED MALE ATTENDANTS

For Medical, Surgical, Mental, Dipsomania, Fever Cases, &c.

Established 1867, since which Eighty-six Thousand Families have been provided with Nurses.

GENERAL NURSING INSTITUTE.

5, Mandeville Place, Manchester Square, W.

ESTABLISHED 1862 at Henrietta-street, Covent-garden.

Thoroughly experienced Hospital-trained NURSES supplied at a moment's notice, being resident in the Home.

Also, specially-trained NURSES for Mental and Nerve Cases.

Terms fixed and moderate. Particulars forwarded.

Apply to the SUPERINTENDENT.

Telegrams: "Nutrix, London." Telephone No. 7055.

INGS HOUSE NURSES' COÖPERATION,

Chief Office, 81. New Bond Street, W.,

Supplies thoroughly trained Nurses for all cases, day or night.

Applications for Nurses and terms of the Home for Paying Patients to be made to the Lady Supt., above address.

Telegrams—"OVERNIGHT, LONDON." Telephone 35,109.

THE LONDON ASSOCIATION OF NURSES.

CHIEF OFFICE—123, NEW BOND STREET, W.
(Between Brook-street and Grosvenor-street.)

BRANCH OFFICE—86, KENNINGTON PARK ROAD, S.E.

Superior Hospital-trained Nurses for Medical, Surgical, Mental, Monthly, Fever, and all Infectious Cases; also, Male Nurses and Medical Rubbers can be obtained immediately on application to the Superintendent. Great care is taken in the selection of Monthly Nurses, who reside in a separate home and never come in contact with those who attend infectious cases.

There are Homes in connexion with the Association, where Invalids can be received under the care of their own physicians or surgeons. Each patient is provided with a separate room and a trained Nurse

M. FIRTH, Superintendent.

Telegraphic Address: "FIRTH'S ASSOCIATION, LONDON."

General Lying-in Hospital, York-road, Lambeth.

—Respectable WET NURSES and Certificated MONTHLY NURSES, also Certificated MIDWIVES, supplied on application. Female Pupils are trained in Midwifery and Monthly Nursing.—Address, A. Atkinson, Matron.

Queen Charlotte's Lying-in Hospital and MIDWIFERY TRAINING SCHOOL, Marylebone, N.W.

—MEDICAL PUPILS admitted to the Practice of this Hospital. Unusual opportunities are afforded of seeing obstetrical complications and operative midwifery, upwards of three-fourths of the total admissions being primiparous cases.

CERTIFICATES AWARDED as required by the various Examining Bodies.

PUPILS RECEIVED and SPECIALLY TRAINED for MIDWIVES and MONTHLY NURSES. On completion of the period of Training, each pupil, on being found competent, is awarded a Certificate of efficiency.

For rules, fees, &c., apply ARTHUR WATTS, Secretary.

The Middlesex Hospital Trained NURSES' INSTITUTE.

—Thoroughly experienced NURSES can be immediately obtained for Medical and Surgical Cases from the Sister in Charge, 17, Cleveland-street, W. Telegraphic address: "Skilful, London."

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MISS HOOPER'S
NURSES' INSTITUTION,
9, UPPER BAKER STREET, N.W.

For supplying Resident
Hospital-trained NURSES on the shortest notice, day or night.
Telegrams:—"HELPFULNESS, LONDON."
Telephone 7253.

NURSES' COÖPERATION,
8, NEW CAVENDISH STREET, PORTLAND PLACE, W.
Founded 1891. Incorporated 1894.
Established to secure to Nurses the full remuneration for their work.

FULLY TRAINED HOSPITAL
Medical, Surgical, Mental, Maternity, Fever, Children's } NURSES

Supplied any time, day or night. Telegraphic address: "Aprons, London." K. PHILIPPA HICKS, Lady Superintendent.

St. John's House.—Trained and Experienced, Medical, Surgical, Monthly NURSES and MASSEUSES can be obtained by application, personally or by letter, to the Sisters Superior, 8, Norfolk-street, Strand. Telegraphic address, "Private Nurses, London."

North London Nursing Institute & Home for Paying Patients.
UNDER NOBLE AND DISTINGUISHED PATRONAGE.

MASSAGE and ELECTRICITY.
NURSES and MASSEUSES sent to all parts.

LADY SUPT.: 6 and 8, ALEXANDRA ROAD, FINSBURY PARK.
Branch Home: HOLLYWOOD, BRENTWOOD.
Telegraphic Addresses: "*Masseuses, London,*" "*Masseuses, Brentwood.*"

WYKE HOUSE,
ISLEWORTH, MIDDLESEX.
A Private Asylum for Ladies and Gentlemen mentally afflicted. Voluntary Boarders are received. The grounds are very extensive and various amusements are provided. For terms apply to
F. MURCHISON, M.A., M.B., Resident Proprietor.

THE MOAT HOUSE,
TAMWORTH, STAFFORDSHIRE.
A HOME for NERVOUS and MENTAL CASES. Stations, L. & N West. and Mid. Railways.
The House stands in grounds of ten acres (within 5 minutes' drive of either station), and is devoted to the care and treatment of a few Ladies suffering from Nervous and Mental Disorders, who enjoy the comforts, privacy, and occupations of home life. Voluntary patients are received without certificates.
Medical Attendants—J. HOLMES JOY, M.A., M.D., and C. N. THOMAS, M.B. Camb. For terms, &c., apply to the Resident Proprietor, W. HOLLINS, M.A. Camb., J.P.

NORTHWOODS HOUSE,
Winterbourne, near Bristol.
PRIVATE ASYLUM for Ladies and Gentlemen, situated in a large Park in a healthy picturesque locality easily accessible by rail via Bristol, Patchway, or Yate Stations.
Voluntary Boarders can now be received. For further information, see "Medical Directory," page 1937; and for terms, &c., apply to Dr. HAGER, Resident Physician.

TREATMENT OF INEBRIETY.
HIGH SHOT HOUSE,
ST. MARGARETS, TWICKENHAM.
For Gentlemen under the Acts and Privately.

For terms, &c., apply to
F. H. BROMHEAD, M.B. Camb., M.R.C.S. Eng., &c.
Resident Medical Superintendent.

The Women's Temperance Home at Sydenham receives a limited number of LADIES desirous of overcoming habits of Intemperance. Terms moderate, varying according to requirements.—For particulars, apply The Matron, The Tor, Silverdale, Sydenham.

Resident Patients.—A List of Medical Men in all parts willing to receive into their houses Resident Patients, together with a full description of the accommodation offered, terms, &c., can be had without charge from Mr. G. B. Stocker, 8, Lancaster-place, Strand, W.C.

Resident Patients.—Margate.—M.D. Lond., F.R.C.S. Eng. (married), residing in a commodious house facing the sea, in best position, has accommodation for one or two of the above. Drainage guaranteed perfect. Terms moderate, according to requirements.—Address, Dr. Crook, Dalby-square, Margate.

WONFORD HOUSE.
HOSPITAL FOR THE INSANE, near EXETER.
A REGISTERED HOSPITAL FOR THE UPPER AND MIDDLE CLASSES.
This Institution is situated in a beautiful and healthy locality, within a short distance of the City of Exeter.
There is comfortable accommodation at moderate rates, both in the Hospital itself and at Plantation House, Dawlish, a seaside residence on the South Devon Coast, affording more privacy, with the benefits of sea air and a mild and salubrious climate.
Private Rooms and Special Attendants provided, if required.
Voluntary Patients or Boarders also received without certificates.
For terms &c. apply to
P. MAURY DRAS, M.B., M.S. Lond.,
Resident Medical Superintendent.

TREATMENT OF INEBRIETY.
DALRYMPLE HOME,
RICKMANSWORTH, HERTS.
For Gentlemen under the Act and privately. Terms—2 to 5 guineas.
Apply to the Medical Superintendent.

INEBRIETY.
OLD PARK HALL RETREAT, near WALSALL.
FOR GENTLEMEN ONLY.
DAISY BANK RETREAT, near WALSALL.
FOR LADIES ONLY.
Patients taken in both Homes privately or under the Acts
Apply The Secretary, OLD PARK HALL.
Telegrams: "RETREAT, WALSALL."

HYDROPATHY.
SMEDLEY'S—MATLOCK.
Railway Station—MATLOCK BRIDGE.
Telegraph Office—MATLOCK BANK.
W. C. SHARPE, M.B.,
and a House Physician.
TURKISH, RUSSIAN, and other BATHS. WEIR-MITCHELL METHOD and ELECTRIC TREATMENT.

FLOWER HOUSE,
CATFORD, S.E.
A Sanatorium of the highest class for the Treatment and Care of Gentlemen of Unsound Mind.
N.B.—Under the New Act voluntary boarders can be received on their own personal application.
Apply to Dr. MERCIER, Resident Medical Superintendent.

THE HUGUENOTS,
EAST HILL, WANDSWORTH. ESTABLISHED 1874.
A Home for Ladies suffering from mental and nervous diseases. Boarders not under certificates also received for care and treatment. A Mental Specialist visits. The house has large grounds and is healthily situated near several commons.
Resident Licensee, Mrs. Leech.

Confirmed Invalids.—Private Home, where only three or four are received. Every care, combined with home comforts. Good nursing if necessary. Cheerful outlook; large garden. Good medical and other references. House strictly private. No plate.—For particulars apply, Miss Freeman, Darroch Lawn, Atkins-road, Clapham-park, S.W.

Married Lady (Trained Nurse), with excellent medical references, would receive, and give special care to, NERVE CASES (Male or Female). Quiet bracing situation in a retired and hilly part of Bucks. Terms according to requirements.—Apply, G., 16, Air-street, Piccadilly, W.

Wye House Asylum, Buxton, Derbyshire, for the middle and upper classes of BOTH SEXES, is beautifully situated in the healthy and bracing climate of the Derbyshire hills, and is directly accessible by the Midland and the London and North-Western Railways.—For terms and other particulars, address the Resident Physician and Proprietor, Dr. F. K. DICKSON.

INEBRIETY.
MELBOURNE HOUSE, LEICESTER.
PRIVATE HOME FOR LADIES.
Medical Attendant: CHAS. J. BOND, F.R.C.S.Eng., L.R.C.P.Lond.
Principal: H. M. RILEY, Assoc. Soc. Study of Inebriety.
Thirty Years' Experience. Excellent Medical References.
For terms and particulars apply Miss RILEY, or PRINCIPAL.

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Barnwood House Hospital for

MENTAL DISEASES, Barnwood, near Gloucester. Exclusively for Private Patients of the Upper and Middle Classes. This Institution is devoted to the Care and Treatment of persons of both sexes at moderate rates of payment. The terms vary according to the requirements of the patients, who can have private rooms and special attendants, or be accommodated in Detached Villas and in the Branch Convalescent Establishment on the hills. Under special circumstances the rates of payment may be greatly reduced by the Committee.—For further information apply to J. G. Soutar, M.B., the Med. Supt.

St. Luke's Hospital, London, E.C.

Established 1751.

This Hospital was established for the Treatment of Mental Diseases of the Upper-middle and Middle Classes, for whom there is no statutory relief. Preference is given to acute cases, and these are admitted either gratuitously or on payment of a weekly sum varying from 14s. to 30s., according to the circumstances of each; and chronic cases can only be admitted at the higher rates. Patients are eligible for admission from any part of the United Kingdom.

Forms of application may be had from, and inquiries addressed to, the Secretary, at the Hospital.

PERCY DE BATHE, M.A., Secretary.

Warneford Asylum, Oxford.—This

Asylum, for the care and treatment of the Insane of both sexes of the Middle and Upper Classes, is pleasantly situated on Headlington-hill, near Oxford, and has been recently enlarged. The grounds are extensive, and cricket, tennis, billiards, dances, and other amusements are amply provided. There are now vacancies for patients at moderate charges. Voluntary patients can also be received.—For particulars apply to the Medical Superintendent, Dr. BYWATER WARD.

SPRINGFIELD HOUSE PRIVATE ASYLUM, BEDFORD.

For forms of admission, address, DAVID BOWER, M.D., as above.

(Dr. B. attends at 5, Duchess-street, Portland-place, W., on Tuesdays, from 3 to 4.)

Terms 2½ guineas per week.

There is a Vacancy for One LADY. Vacancies for Gentlemen will be announced when they arise.

INTEMPERANCE.

Buxton House, Earl's Colne, Essex.—

PRIVATE HOME for SIX LADIES. Nineteen years' experience. Very satisfactory results. Excellent Medical references. Inspection by applicants welcomed. Terms from 2 to 3½ guineas weekly. Medical Attendant, J. TAYLOR, Esq., M.R.C.S. Lond., L.S.A. Address, Mrs. or Miss PUDNEY.

THE COPPICE, NOTTINGHAM.

HOSPITAL FOR MENTAL DISEASES.

President: The Right Hon. the Earl MANVERS.

This Institution is for the reception of a limited number of Private Patients of Both Sexes, of the Upper and Middle Classes only, at moderate rates of payment. It is pleasantly situated on an eminence a short distance from Nottingham, and commands an extensive view of the surrounding country; and from its singularly healthy position affords every facility for the relief and cure of those mentally afflicted.

Particulars as to terms, &c., may be obtained from Dr. TATE, the Medical Superintendent.

Private Home for the Treatment of

INSANE LADIES,
ASHBROOK HALL, HOLLINGTON,

within half an hour's walk of St. Leonards-on-Sea, conducted by the Widow of the late Samuel Hitch, M.D., formerly of Sandywell-park, near Cheltenham, for many years Physician to the General Lunatic Asylum for the County of Gloucester.

Station: Warrior-square, St. Leonards. Telegraph Office: Hollington.

For particulars and terms apply to
Mrs. LETITIA A. HITCH or Miss ADAMS, Co-Licensee.

Church Stretton Asylum, Stretton

House, Church Stretton, Salop. Established 1853. (For Gentlemen only.) 600 ft. above sea level. Bracing air, farm, extensive grounds, and every facility for occupation and amusement; 4½ hours from London. Terms moderate. Suites of rooms for first-class cases.

Superintendent, CAMPBELL HYSLOP; Medical Superintendent, Dr. HORATIO BARNETT, B.A., M.B. Cantab., M.R.C.S., &c.

(See Medical Directory for further information.)

Grove House, All Stretton, Church

STRETTON, SHROPSHIRE.

A PRIVATE HOME for the Care and Treatment of a limited number of Ladies mentally afflicted. Climate healthy and bracing.

Apply to Mrs. McLintock (widow of the late Dr. McLintock), the Resident Proprietress, or to the Medical Superintendent.

Mrs. McLintock has also in her private grounds a pretty detached Villa Residence, containing every modern convenience and comfort, where she is prepared to receive a Lady suffering from nervous affections, either with or without certificates, who will be attended by the Medical Consultant of the Grove House.

NEWLANDS HOUSE,

TOOTING BEC ROAD, TOOTING COMMON, S.W.

A HOME FOR THE TREATMENT OF GENTLEMEN OF UNSOUND MIND.

This Institution removed from Blacklands House, Chelsea, is licensed for the care and treatment of Gentlemen of Unsound Mind. Voluntary Boarders can also be received. It is fitted with every appliance for the treatment of the insane, acute and chronic.—Apply to

E. T. HALL, Esq., M.R.C.S., Resident Medical Superintendent, or to
A. H. SUTHERLAND, Esq. (Licensed Proprietor),
2a, Marloes-road, Kensington, W.

OTTO HOUSE,

NORTH END ROAD, WEST KENSINGTON, W.

A HOME FOR THE TREATMENT OF LADIES OF UNSOUND MIND.

This House, standing in its own grounds of several acres and lately enlarged, is licensed for the care and treatment of Ladies of Unsound Mind, acute and chronic. Voluntary Boarders can also be received.—Apply to

Mrs. CHAPMAN (Resident Lady Superintendent), or to
A. H. SUTHERLAND, Esq. (Licensed Proprietor),
2a, Marloes-road, Kensington, W.

WESTBROOKE HOUSE.

This old-established Private Asylum for Ladies and Gentlemen suffering from mental affections. Voluntary boarders and friends can be accommodated. Very healthily situated in lovely grounds. Tennis, carriage, horse exercise, &c. Private rooms and special attendants if desired.—For further particulars address The Medical Superintendent,

WESTBROOKE HOUSE, ALTON, HANTS.

INEBRIETY, THE MORPHIA HABIT, AND THE ABUSE OF DRUGS.

A PRIVATE HOME, ESTABLISHED 1864,

for the Treatment and Cure of Ladies of the Upper and Higher Middle Classes suffering from the above. Highly successful results. Consulting Physician: Sir BENJAMIN WARD RICHARDSON, M.D., F.R.C.P. Medical Attendant: Dr. J. St. T. CLARKE, Leicester.—For terms, &c., apply, Mrs. THEOBALD, Tower House, Leicester.

Telegraphic Address: "Theobald, Leicester."

St. Andrew's Hospital for Mental

DISEASES,
NORTHAMPTON.

FOR THE UPPER AND MIDDLE CLASSES ONLY.

President—The Right Honble. the EARL SPENCER, K.G.
Chairman of the Committee of Management—The Most Honble. the Marquis of NORTHAMPTON, K.G.

The Institution is pleasantly situated in a healthy locality, one mile from the London and North-Western or Midland lines, and one and a half hour only from London.

It is surrounded by more than 100 acres of pleasure grounds.

Great care is exercised in the classification of the Patients according to their habits and different degrees of mental aberration, so that those who are quiet or convalescent may not associate with those whose minds are more affected.

Ample means of occupation and amusement are provided, including Cricket, Croquet, Lawn Tennis, and Archery. There are also Billiard Rooms, and a large Recreation Hall and Theatre.

The terms vary from 25s. to £4 4s. week, according to the requirements of the case.

Patients paying higher rates can have Special Attendants, Horses, and Carriages; and Private Rooms in the hospital; or in detached villas in the grounds of the hospital; or at Moulton Park, a branch establishment, two miles from the hospital.

There is also a Seaside House, to which Patients may be sent.

For further information apply to the Medical Superintendent.

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TREATMENT OF INEBRIETY.

KINGSWOOD PARK, near BRISTOL.

"LICENSED UNDER THE INEBRIATES ACTS."

R. WILLIAM BRIMACOMBE, L.R.C.P.Lond., M.R.C.S., Medical Superintendent.

A Retreat for the treatment of Gentlemen suffering from Alcoholism and the abuse of drugs, either under the Acts or privately. The house is situated nearly 400 ft. above sea-level, between Clifton and Bath.

For particulars apply to T. WALTER BRIMACOMBE (Licensee).

WEST MALLING PLACE, KENT, for MENTAL DISORDERS.

An easy distance from LONDON, between SEVENOAKS and MAIDSTONE. A commodious country residence, beautifully situated in a retired position, on its own ample grounds, in one of the healthiest localities in England. It is old-established, reconstructed. Most modern nursing and other requirements; HOME-LIKE. Resident Physician formerly Physician-Superintendent Crichton Royal and Metropolitan Institutions. London address, 64, Welbeck-street, Cavendish-square, W. (Wednesday mornings). Voluntary Boarders received. Telegraphic address: "Physician, West Malling."

Private Asylum.—Ashwood House, Kingswinford, Staffordshire.—

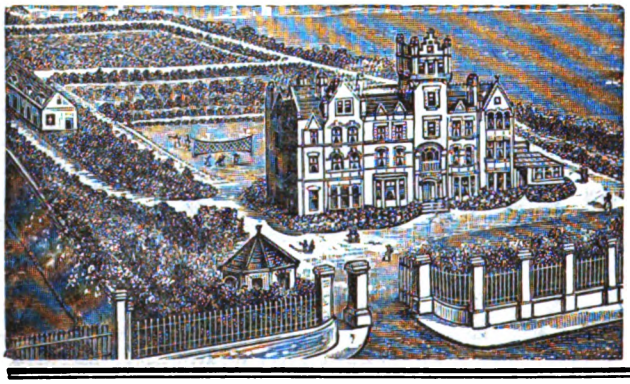
For the Reception and Medical Treatment of a limited number of Ladies and Gentlemen nervously or mentally afflicted. The house stands in picturesque grounds of 40 acres in extent; the soil, sand and gravel; climate genial; the locality notoriously healthy. The patients associate with the family, congenial occupation is encouraged, and every possible freedom allowed consistent with safety. Carriage exercise, billiard table, tennis lawns, and a variety of amusements provided. Boarders received without certificates. Friends of patients, if desirous, may reside in the house *pro tem.*—Proprietors, Drs. PEACOCK and PIETERSEN; late Bodington and Peacock, co-Licensees.

HAYDOCK LODGE, NEWTON-LE-WILLOWS, LANCASHIRE,

Is charmingly situated in a healthy and retired neighbourhood, midway between Liverpool and Manchester, about two miles from Newton-le-Willows Station on the London and North-Western Railway. It is a comfortably furnished country mansion, especially adapted for the care and treatment of persons of unsound mind. Besides the use of the general sitting-rooms, &c., patients of both sexes can have private apartments and special attendants at moderate rates of payment. *Information as to terms, &c., may be obtained on application to the Resident Medical Superintendent*—CHARLES T. STREET, L.R.C.P.Lond., M.R.C.S.Eng., who attends at 49b, Rodney-street, Liverpool, every Thursday, from 2 to 4.

Telegrams: Street, Ashton-in-Makerfield. Telephone (National) No. 3, Ashton-in-Makerfield.

Visiting Physician: ALEXANDER DAVIDSON, M.D., F.R.C.P., Physician to the Liverpool Royal Infirmary.



INEBRIETY.

TOWER HOUSE RETREAT & SANATORIUM (Ld.), Westgate-on-Sea, Kent.

Principal and Licensee—ALFRED F. STREET, M.A., M.D., B.C.Cantab.

Licensed under the Inebriates' Acts, 1879-88. The only establishment in the United Kingdom specially erected for the reception and treatment of Ladies and Gentlemen desirous of overcoming habits of Intemperance or of the abuse of Narcotic Drugs.

The house stands in its own grounds of nearly three acres, and is replete with every convenience, containing a large Billiard-room, spacious Drawing-rooms, Smoking-rooms, Bath-rooms, &c.

Patients can be received under the Act or privately.

For prospectus, forms (when required) for signature under the Act, and further particulars, address, Principal, Tower House Westgate-on-Sea.

THE YARROW HOME FOR CONVALESCENT CHILDREN, BROADSTAIRS.

This Home is now open and provision made for 50 Boys and 50 Girls.

It is not intended for the very poor, for whom charitable agencies already exist, but for the children of parents who from reduced circumstances or other causes are not able to give, entirely at their own cost, the advantages of a change of air at the Sea-side to their Convalescent children.

Boys between the ages of 4 and 14, and Girls, 4 and 16 years are admitted, irrespective of nationality and creed, provided their home training has been such as to make them fit companions for other respectable and well-mannered children.

A charge of 5/- per week is made for each child.

This Home is open throughout the year, and under the management of a highly experienced Matron. Medical Officer and Certificated Nurses form a part of the Staff.

Particulars and forms of Application may be obtained on application to the Secretary,

Mr. T. F. MYERS, at the London Office 73, Queen Victoria Street, E.C.

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INTEMPERANCE.

CAPEL LODGE, NEAR FOLKESTONE.

Licensed under the Inebriates Acts, 1879-1888.

Resident Proprietor and Licensee—E. NORTON, M.D., L.R.C.P., M.R.C.S.

This RETREAT is devoted to the care and cure of a limited number of Gentlemen only. Patients received privately or under the Acts. The house is situated on the high cliffs between Folkestone and Dover, and overlooks the sea; the invigorating air being most beneficial. Large private grounds of seven acres. Billiard Room, Library, Home Dairy, &c.

For prospectus apply, Dr. NORTON, Capel Lodge, near Folkestone.

WOODHALL SPA BATHS.

BROMO-IODINE SPRINGS.

IN UTERINE AND SKIN DISEASES, GOUT, RHEUMATISM, &c.

The BATHS comprise MINERAL, VAPOUR and PINE BATHS, DOUCHES and ROOMS for INHALATION.

For particulars apply to Mr. C. J. WILLIAMS, Medical Superintendent, Brookside, or the Manager, WOODHALL SPA, LINCOLN.

The VICTORIA HOTEL, situated within the grounds and NEAR to the BATHS, is replete with every comfort and is THE ONLY HOUSE IN WOODHALL where BATHS of the BROMO-IODINE WATER can be obtained. Golf, tennis, &c.

Apply, Manager, VICTORIA HOTEL, WOODHALL SPA, LINCOLN.

TODTMOOS.

Near St. Blasien, Southern Black Forest, 850 mtr. above the level of the Sea.

MOUNTAIN AIR, FOREST, and CLIMATIC HEALTH RESORT.

Kurhouse and Pension Adler.

Most beautiful Health Resort, situate in the midst of grandiose Forests. Railway Station, Wehr, through the highly romantic Wehra Ravine.

The only Alkaline Thermal Spring of Germany.

40° C.; CONTAINS ARSENIC AND LITHIUM.

NEUENAHR.

Bathing and Drinking Treatment, Inhalations, Massage, forwarding of the Thermal Water.

Very efficacious in Catarrh of the Larynx (Influenza and its consequences), Catarrh of the Stomach, Intestines and Bladder; in Gall-stones, Diseases of the Kidneys and Liver, Diabetes, Gout, Rheumatism, and diseases of Females. Mild expectorant and strengthener of the organism.

PAMPHLETS WITH EVERY INFORMATION SUPPLIED BY THE MANAGEMENT.

Route: COLOGNE—BONN—REMAGEN, or COBLENZ—REMAGEN—NEUENAHR.

PYRÉNÉES' LUCHON. FRANCE.

BEAUTIFUL SITUATION—CENTRE OF EXCURSIONS.

SULPHUROUS MINERAL WATERS (48 SPRINGS).

SKIN DISEASES; MUCOUS AFFECTIONS: ANGINA, LARYNGITIS, &c.; ANÆMIA, LYMPHATICS.

INHALING HALLS FOR THE TREATMENT OF RESPIRATORY AFFECTIONS.

Hot Baths open the whole year. Season from June 1st to October 1st.

CASINO, THEATRE, CONCERTS, LAWN-TENNIS, CROQUET, PIGEON SHOOTING.

FIFTEEN HOURS FROM PARIS BY ORLEANS RAILWAY.

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PYRMONT.

Season, from the beginning of May till Oct. 10th.
Annual number of visitors, 13,000 to 14,000.

There is a Station on the Hanover-Altenburg Railway and express communication with Berlin, Hildesheim, Cologne, and Paris.

Pyrmont is the oldest Health Resort in Germany. The Chalybeate Springs and Iron Mud Baths are celebrated and efficacious, while the Water, containing Sodium Salts, is of great use, both Externally and Internally. The Chalybeate Baths, Brine Baths, and Mud Baths are all fitted with the most recent improvements. The air is invigorating, and the magnificently Wooded Environs supply every opportunity and inducement for Healthful Exercise.

The treatment at Pyrmont is of well-established benefit in cases of Tedious Convalescence, in Impoverished Conditions of the Blood, in Nervous Debility, in many Special Diseases of Females, Scrofula, Rickets, Rheumatism, Gout, Chronic Heart Disease, Catarrh of the Stomach and Bowels, Kidney and Bladder Troubles, &c.

Cheerful and agreeable neighbourhood, pressure water-supply, irreproachable drinking water, very extensive park with natural avenues of great age, lawn tennis ground, electric lighting, mountain railway to the adjacent upland forest, charming restaurant on the mountain, church, theatre, ball-room, racecourse, shooting and fishing free to visitors. Every information supplied by the Board of Management (Fürstliche Brunnen-Direction).

BAD KISSENGEN.

Our Institute for Massage, Medical, Gymnastic, and Orthopædic Treatment (under medical supervision) at HOTEL VICTORIA, Bad Kissengen, Bavaria, is open from May 1st to Sept. 30th.

Address, GRAMCKO & SOHN, Proprietors and Directors of the Massage Medical-Gymnastic Institute (Zanders-Swedish System) in Hamburg.

BAD KREUZNACH.

Iodine-Bromide-Lithia Saline Springs, free from gyps, for inward and outward use (Kreuznach's mother lye). Newly erected Steam, Hot-Air Bath and Inhalations Room.

INSELBAD PADERBORN.

Unique establishment for the treatment of Asthma* and connected complaints, also for Nose and Throat Ailments. Prospectus free.
Specialist, Dr. Brügelmann, Director.

* See Brügelmann's "Ueber Asthma," &c., 3rd Ed., published by J. F. Bergmann, Wiesbaden, 1895.

"Northlands," 10 and 12, North-street, Old Wandsworth, Surrey.—HOME for Ladies suffering from Hysteria, Intemperance, Epilepsy, Paralysis, Nervousness, Weak Intellect, &c. Careful supervision. Established twenty-five years. Large garden, situation cheerful and healthy, near several parks and commons; five miles from London on L.S.W.R. Medical references. Terms from £50 a year.—Mrs. Rutlev.

Board and Residence offered in a Medical Man's house five miles west of London, with large secluded flower and fruit gardens (no children or other inmate received), to an Invalid Lady or otherwise. Every care and attention given, combined with home comforts. Highest references to friends of former patients. Terms moderate and inclusive.—Address, Dr. H. D., care of Daly, Yates, and Hicks, 64, Park-street, Southwark, S.E.

DORCHESTER ASYLUM.

PRIVATE PATIENTS.

The New and Special Departments are now ready, containing large Dining- and Drawing-rooms of Fireproof Construction and lighted by Electricity. Situation elevated and healthy, with extensive recreation gardens. Charge from £1 1s. per week.

Address: HERRISON, DORCHESTER. About three-and-a-half hours from London. Full particulars on application to Dr. MacDonald.

IODINE BATHS AT NORTHCOTE HOUSE, WOODHALL SPA, near LINCOLN.

TREATMENT of GOUT, RHEUMATISM, TUMOURS, and HEART DISHASE by BROMO-IODINE BATHS, ELECTROLYSIS, and CALISTHENICS.

Mr. R. CUFFE, M.R.C.S. Eng.
For seventeen years Medical Superintendent at the Spa.

Exeter Asylum.—Private Patients are admitted into this Asylum at a uniform rate of 25s. a week. This sum includes everything except clothing. For further information printed forms of certificates, &c., apply, R. L. Rutherford, M.D., Medical Superintendent.

"The wards are in excellent order, bright and cheerful, and those occupied by the patients of the private class should attract many whose means are limited from all parts of England."—Extract from the Forty-eighth Report of the Commissioners in Lunacy.

60

Brighton.—Those requiring Medical and Nursing care, change after illness, Medical Man, wife trained nurse, both with many years' experience, receive the above into their comfortable Home. Medical electrical baths, massage, trained nurses. House two minutes from sea, pier, and lawns, overlooking ornamental grounds; cheerful rooms. Terms from £2 2s. Vacancy for permanent case.—Dr. Pendleton, Stillwood Lodge, Brighton.

Home for Backward and Feeble-minded Children. Tuition combined with home comforts. Large secluded grounds.
Principal, Woodside Court, Croydon.

A Medical Man, married, without family, residing in a large comfortable house in a seaport town on South Coast, has a vacancy for a RESIDENT PATIENT (lady or gentleman). Private sitting-room if required. Climate specially suited to patients with weak chests. Terms according to requirements. Good references.—Address, Felix, THE LANCET Office, 423, Strand, W.C.

A Gentleman suffering from the abuse of Drugs, Alcoholism, or a Slight Mental Case, can be received, with or without attendant, in large Country House on the Great Eastern main line, within forty-five miles of London. Medical attendant J. H. Salter, Esq., M.R.C.S.—Terms and particulars apply A. B. Youngman, Layer Marney, Kelvedon, Essex.

Literary.—An Editor, married, a member of an important publishing firm, has a vacancy for a resident or non-resident PUPIL for a term of one, two, or three years, a young gentleman or lady. Thorough training in Journalism, &c. Partnership might be arranged for afterwards. Comfortable home in flat. Tennis, cycling, &c.—Address, Pupil, Scrivens' Advertising Offices, 66, Ludgate-hill, E.C.

ACCOUCHEMENT.

Ladies received in the houses of a Medical Man—one house in London, the other in a quiet country village, within one hour of Town—whose wife is a skilled and practised Obstetrician.—For terms, &c., address M. O. S., care of Messrs. Gale & Co., 15, Bouverie-street, London, E.C.

NURSE GOODERHAM,

MONTHLY NURSE

(*City of London Hospital Certificate*),

Address—20, THURLOE PLACE, SOUTH KENSINGTON, S.W.

St. Olave's Union.—Matron of the INFIRMARY.—The Guardians of the Poor of the St. Olave's Union are desirous of receiving applications for the appointment of MATRON of their Infirmary, Lower-road, Rotherhithe, S.E. The salary is £100 per annum, together with rations, furnished apartments, washing, and attendance.

The Infirmary contains 640 beds. An Assistant to the Matron is provided. Candidates must be single or widows, without children dependent upon them, not less than thirty nor more than forty-five years of age, have had training in a General Hospital or a recognised training school for Nurses, and acquired practical experience in the management of large institutions for the sick.

Candidates must submit unquestionable credentials of their ability and experience to undertake the supervision of the Nursing and the training of Probationers and Nurses in accordance with the Nursing scheme in force at the Infirmary, and carry out the orders of the Guardians and the Medical Officer in connexion therewith.

The officer appointed will be required to keep all the books and accounts and perform all the duties prescribed by the orders of the Local Government Board and the Guardians; to obey all lawful orders of the Guardians and the medical officer, and to aid the medical officer and steward in enforcing the due observance of all regulations for the government of the Infirmary by the inmates, officers, and servants.

The appointment will be made subject to the rules, regulations, orders, and approval of the Local Government Board.

Personally canvassing the Guardians is prohibited, and will be deemed a disqualification.

Applications, with copies of not more than five testimonials, to be made upon forms to be obtained on written application to me, inclosing a stamped and addressed envelope of foolscap size. The applications for the appointment must be received not later than Monday, the 6th July, 1896.

Selected candidates will have notice of the day and hour they will be required to attend a meeting of the Guardians.

By order,
E. PITTS FENTON, Clerk to the Guardians.

Clerk's Offices, 30, Tanner-street, Bermondsey, S.E.,
18th June, 1896.

To Nurses and Assistant Nurses—Wanted, at the GORE FARM CONVALESCENT FEVER HOSPITAL, Darenth, near Dartford, Kent (under the Metropolitan Asylums Board), CHARGE NURSES, who must be at least twenty-five years of age, and possess a certificate of three years' training. Salary £36, rising to £40; board, lodging, washing, and uniform.

FIRST ASSISTANT NURSES, who must be at least twenty-three years of age, and possess a certificate of one year's training. Salary £24, rising to £28, board, lodging, washing, and uniform.

Apply to the Matron at the Hospital by letter, with copies of testimonials.

June 22nd, 1896.

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To Charge Nurses.—Wanted, at

the SMALL-POX HOSPITAL SHIPS, Long Reach, near Dartford, Kent (under the Metropolitan Asylums Board), CHARGE NURSES, who must be at least twenty-five years of age and possess a certificate of three years' training. Salary £38, rising to £42, board, lodging, washing, and uniform.—Apply to the Medical Superintendent at the Hospital Ships by letter, with copies of testimonials.

June 23rd, 1896.

Charge Nurses. — Wanted, at the

NEW FEVER HOSPITAL, Shooter's-hill, S.E. (Brook Hospital), under the Metropolitan Asylums Board, CHARGE NURSES, who must be at least twenty-five years of age and possess a certificate of three years' training. Salary £36, rising to £40, board, lodging, washing, and uniform.

Application forms may be obtained at the chief offices, Norfolk House, Norfolk-street, W.C., where they are to be returned.

The services of the Nurses selected will be required about the second week in July.

June 23rd, 1896.

Swansea Hospital.—Wanted imme-

diately, a NIGHT SUPERINTENDENT. She must be a fully trained Nurse, and will be expected to take the Matron's place whenever she may be absent from the Hospital. Salary £35, with board, lodging, and laundress.—Application, with testimonials, to be sent to the undersigned on or before Tuesday, July 7th.

Offices: 9, Castle-street, Swansea. JNO. W. MORRIS, Secretary.

Dundee Royal Infirmary. — The

Directors invite applications for the post of MATRON to this Hospital.

Salary £100 per annum, with board, lodging, and washing.

The applicant must be a fully trained and certificated Nurse, and must have also a practical knowledge of private nursing and experience in Housekeeping.

Copies of duties and rules may be obtained from the Secretary on application.

Applications, with testimonials, must be received by the Secretary on or before the 1st July, 1896.

10, Meadowside, Dundee. D. GORDON STEWART, Secretary.

Newport and Monmouthshire Hos-

PITAL.—Wanted, Aug. 26th, 1896, a HOUSE SURGEON, registered Medical and Surgical qualifications. Fifty beds. Mixed accident cases admitted. The hospital has an out-patient department attached, and a home-visiting district.

Salary £100 per annum, with board and residence (no stimulants provided).

Candidates must make applications in writing, stating age and qualifications, accompanied by copies of recent testimonials, and send same under cover to the Secretary not later than July 11th, 1896.

The appointment will be made on July 21st, 1896. Any candidate canvassing will be disqualified.

J. K. STONE, Secretary, Newport, Mon.

County Borough of Huddersfield.—

APPOINTMENT OF MEDICAL OFFICER OF HEALTH.—The Council of the County Borough of Huddersfield are prepared to receive applications for the post of Medical Officer of Health for the Borough and Urban Sanitary District of Huddersfield.

The population of the County Borough is estimated to exceed 100,000, and the area is 12,088 acres.

The gentleman appointed will be required to devote the whole of his time to the duties of the office. Salary £400 per annum, with actual disbursements.

In addition to the ordinary qualifications in Medical Surgery and Midwifery, applicants for the office must be either registered as the holder of a Diploma in Sanitary Science, Public Health, or State Medicine under Section 21 of the Medical Act, 1886, or have been during three consecutive years preceding the year 1892 a Medical Officer of a district or combination of districts with a population according to the last published census of not less than 20,000, or have been before 13th August, 1888, for not less than three years a Medical Officer or Inspector of the Local Government Board.

The duties of the office comprise (*a*) the duties of a Medical Officer of Health as defined by the Public Health Act, 1875, the Orders of the Local Government Board, and the Huddersfield Local Acts; and (*b*) the superintendence of the Infectious Diseases Hospitals of the Borough, including the Sanatorium now in course of construction.

The appointment will be made subject to the approval of the Local Government Board, and in accordance with the Orders of the said Board, and all applications will be considered subject thereto.

Applications, in writing, stating the age of the applicants, endorsed "Medical Officer of Health," with copies of not more than three recent testimonials (which will not be returned), to be sent in to the undersigned not later than the 7th July, 1896, on which day the Council will proceed to appoint such Medical Officer.

By order.

F. C. LLOYD, Town Clerk.

Town Hall, Huddersfield, 12th June, 1896.

Resident Junior House Surgeon.—

Wanted, for the CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY, Chesterfield, a gentleman to fill the office of Junior House Surgeon and Dispenser. He must be fully qualified. Salary £50 per annum, with board, apartments, and laundress.

He must enter into the usual bond not to practise in the district.

Surgical cases only are treated in the hospital.

Applications, stating age and experience, with recent testimonials, must be addressed to the Secretary at the Hospital, Chesterfield, and be delivered there not later than noon on Thursday, 2nd July next.

June 18th, 1896.

St. Mary's Hospital, Paddington, W.

A vacancy having occurred in the office of PHYSICIAN in charge of out-patients, gentlemen desiring to become candidates for the appointment are requested to forward their applications, with copies of testimonials, not exceeding six in number, addressed to the Secretary, at the Hospital, on or before 4th July.

Candidates must be Fellows or Members of one of the Colleges of Physicians of the United Kingdom.

The appointment is for five years, at the expiration of which term the holder will be eligible for re-election.

By order.

20th June, 1896. THOMAS RYAN, Secretary.

Resident House Physicians. —

Vacancies having occurred in the HOSPITAL for CONSUMPTION and DISEASES of the CHEST, those Gentlemen desirous of becoming Candidates for the vacant offices are requested to send in their applications, with testimonials, on or before Wednesday, July 1st, and to attend the Medical Committee on the following Monday at four o'clock. Testimonials as to moral character, as well as to medical qualifications, are required. Further particulars may be obtained at the Hospital.

WILLIAM H. THEOBALD, Secretary.

Brompton, June 16th, 1896.

Central London Ophthalmic Hos-

PITAL, 238, Gray's-inn-road, W.C.—There is a vacancy for HOUSE SURGEON. Applications, with testimonials, from duly qualified candidates must be sent to the Secretary before Tuesday, July 7th. Candidates must attend at the Hospital on Tuesday, July 7th, at 4 P.M. Rooms, coals, and lights. WILLIAM ABRAMS, Secretary.

Western General Dispensary, Mary-

lebone-road.—Wanted, a second HOUSE SURGEON. He must be unmarried, fully qualified to practise, and registered. Salary £60 a year, with board and residence. Applications, stating age and past experience, with copies of testimonials, to be sent to the Hon. Sec. at the Institution not later than Monday, the 29th inst. Selected candidates will be summoned to attend the Board.

Seamen's Hospital Society ("Dread-

NOUGHT").—Wanted, HOUSE SURGEON for Branch Hospital, Royal Victoria and Albert Docks, E. Salary £75 per annum, with board and residence. Candidates must be doubly qualified and registered. Applications and copies of not more than three testimonials to be sent in on or before June 30th to the undersigned, from whom further particulars can be obtained.

By order,

Greenwich, S.E., June 9th, 1896. P. MICHELLI, Secretary.

Kensington Dispensary.—Resident

MEDICAL OFFICER.—This post being about to become vacant, Registered Medical Practitioners, unmarried, under thirty-five years of age, and qualified to practise in Medicine and Surgery are invited to send testimonials of qualification and character to the Honorary Secretary, F. Leach, Esq., 7, Stanford-road, Kensington-square, by the 4th July, from whom further particulars may be obtained by written application.

The gentleman appointed must devote his whole time to the duties of the office. Salary £125 per annum, with furnished rooms, coals, gas, and attendance.

University of Aberdeen.—University

ASSISTANT in PHYSIOLOGY to be appointed in July. Salary £150, rising by annual increments of £25 to £200.—Applications, with testimonials, to Professor MAC WILLIAM by July 13th.

Taunton and Somerset Hospital.—

HOUSE SURGEON.—The office of House Surgeon at this institution will shortly become vacant. 100 beds. Nursing institute attached. Salary £100 per annum, with board, lodging, and washing in the hospital.

Candidates must be duly registered as possessing both a Medical and surgical qualification.

The candidate elected will be required to enter into an engagement for not less than three years, in case the Governors shall so long require his services, and to commence his duties on July 30th next.

Applications, stating age, certificates of registration, and copies of testimonials, to be sent on or before July 13th to the undersigned.

The election will take place on July 23rd next.

Candidates will not be expected to attend unless they receive notice from the committee.

J. H. BIDDULPH PINCHARD, Secretary.

Dated, 13, Hammet-street, Taunton, 15th June, 1896.

Sheffield General Infirmary.—

Wanted, a JUNIOR ASSISTANT HOUSE SURGEON, who must possess a legal Medical and Surgical qualification from some University, College, or licensing body in the United Kingdom.

Salary £50 per annum, with board, lodging, and washing. Such appointment to continue for three years only, but subject to a three months' notice on either side at any period; nevertheless, such Junior Assistant House Surgeon shall be eligible for re-election.

The offices of HOUSE SURGEON at a salary of £120, HOUSE PHYSICIAN at £80, and SENIOR ASSISTANT HOUSE SURGEON at £60 per annum are also vacant, and the present resident officers will be candidates for these appointments.

Applications and testimonials to be addressed to the "Medical Staff of the Sheffield General Infirmary," to the care of the Secretary, on or before Thursday, July 16th, and a special meeting of the Weekly Board, with whom the election of the before-named medical officers rest, will be held at the Sheffield General Infirmary on Friday, July 31st, at 12 o'clock at noon, when the election will take place.

GEORGE HENRY DAY, Secretary.

Board-room, June 22nd, 1896.

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Hospital for Consumption and

DISEASES OF THE CHEST, Brompton, S.W.—Several Vacancies for the posts of CLINICAL ASSISTANT in the Out-patient Department and CLINICAL CLERK to the In-patient Physicians.

Applications to be sent to the Secretary of the Hospital on or before July 7th.

Hoxton House Asylum, London, N.

A CLINICAL ASSISTANT is required. Candidates must be qualified.

Board, lodging, and washing is provided, and an honorarium at the rate of £40 per annum.

Owens College, Manchester.—The

Senate are prepared to appoint a SENIOR and a JUNIOR DEMONSTRATOR in PHYSIOLOGY.

The stipends will be £150 rising to £200, and £100 rising to £150 respectively.

Applications should be made, on or before July 13th, to the Registrar, from whom further particulars may be obtained.

S. CRAFFERS, Registrar.

Resident Medical Man, with some

experience in Lunacy, wanted in a small Private Asylum in the Country. Must be single, and over forty-five. Duties nominal. Stipend £50 per annum; comfortable home.—Address, stating age, qualifications, experience, &c., Asylum, THE LANCET Office, 423, Strand, W.C.

Sea Voyage. — A Medical Man

desirous of taking a Sea Voyage (South) for either health or pleasure can hear of a favourable opportunity by making personal application to Moore & Co., 125, Houndsditch, E.C.

MEDICAL TRANSFER AGENCY AND ACCOUNTANCY OFFICES. (Established 1868.)

19, CRAVEN-STREET, STRAND, W.C.

Messrs. Peacock & Hadley under-

take the **SALE** and **TRANSFER** of **PRACTICES** and **PARTNERSHIPS**, also **ARBITRATIONS. INVESTIGATIONS** and **VALUATION** of Practices and all other business connected with **MEDICAL AGENCY** and **ACCOUNTANCY.**

LOCUM TENENS and **ASSISTANTS** with satisfactory testimonials can be engaged at very short notice.

BOOKS kept, **ACCOUNTS** made out, and **DEBTS** promptly collected in Town and Country.

No charge made to Purchasers or for enquiries.

Telegraphic address: "Herbaria, London."

Messrs. H. Wilson and Son,

26, CHARLES STREET, ST. JAMES'S SQUARE, S.W.

Established over fifty years.

MEDICAL REFEREES, VALUERS, and ARBITRATORS.

QUALIFIED ASSISTANTS and LOCUM TENENS PROVIDED.

1. WESTERN DISTRICT.—A well-established PRACTICE producing over £600 per annum, inclusive of Appointments. The present Incumbent is relinquishing in consequence of ill-health. A convenient corner house. A capital opening for any young and active Practitioner.
2. YORKSHIRE.—A General PRACTICE, £700 to £800 a year, including Appointments. Working expenses very light, no horse or Assistant being required. Rent and taxes £40 per annum.
3. READY-MONEY CASH PRACTICE established many years. Returns £15 per week, including retail. A convenient house held on lease in a leading thoroughfare east of the Bank. Premium £500.
4. LONDON.—PARTNERSHIP.—A Practitioner who has conducted a private practice in one of the northern districts for over twenty-five years is seeking the assistance of a Gentleman about thirty years of age. Present income between £1400 and £1500 per annum. A Third- or Half-share is for disposal, with Succession in two years.
5. A VERY OLD-ESTABLISHED PRACTICE, E. DISTRICT, has been conducted in the same locality nearly a century. Private connexion. Cash receipts, including appointments, about £800 per annum. Visiting fees 2s. 6d. to 5s. Midwifery 21s. to 42s; about forty cases a year. No horse required. Duties light. Rent £42; held on lease. Premium £700. Will bear every investigation. Held by Vendor ten years. Most satisfactory reasons for relinquishing.
6. WEST END.—Ready-money fee PRACTICE in a good position doing about £200 a year.
7. PARTNERSHIP INTRODUCTION.—A very old-established PRACTICE in a populous district within ten miles. Cash receipts last year over £1000, including about £600 per annum from appointments, one or two years' introduction given. The present practitioner has held it over twenty years and is retiring from the profession. An energetic practitioner could increase the income. Messrs. Wilson have known the practice nearly fifty years.

*** Several other PRACTICES, &c., for Disposal at once.

PRACTICES REQUIRED.

1. WANTED IN A COUNTRY DISTRICT, from £800 to £1200 a year. Been in General Practice. Has means at command. An immediate arrangement.—Apply, A.
2. PRACTICE REQUIRED by Gentleman who has held a Practice in a large town, and wishes to purchase one in a fair-class residential district or town. £700 to £1000. Enter on duties directly. Apply, F. M.

MEDICAL VACANCIES.

QUALIFIED NON-RESIDENT.—Essex; salary £130, with rooms and percentage on Midwifery. Notts: £150, with house; be able to ride.

QUALIFIED RESIDENT.—Essex: £80 to £90. Notts: £80.

Personal application only.

62

ADAMS & PARKES, (B.A. Cantab.),

UNIVERSITIES AND GENERAL MEDICAL AGENCY,

(Late 14, SOUTHAMPTON STREET, STRAND.)

Owing to the GREAT EXPANSION of BUSINESS, and the consequent necessity for LARGER OFFICES,

Messrs. ADAMS & PARKES have Removed to 8, JOHN STREET, ADELPHI, STRAND, W.C.

This Agency is conducted by CAMBRIDGE GRADUATES. Highest references and testimonials. PARTNERSHIPS and Transfer of PRACTICES speedily arranged. LOCUM TENENS or ASSISTANTS; a large number of reliable, well-qualified men always available.

Open to all Medical Men. No CHARGE to PURCHASERS or for ENQUIRIES.

Every application receives the immediate personal attention of the principals.

All communications treated as confidential.

List of terms (which are moderate) and references (gratis) on application

Telegraphic Address, "Interjoin, London."

SELECTED FROM OUR REGISTER.

No.	Locality.	Class.	Income.	Premium.
1.	YORKS. ...	TOWN	£750 ...	£1200
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3.	LONDON, W.	DENTAL (PARTNER)... ...	2200 ...	1500
4.	DEVON ...	GOOD-CLASS (PARTNER) ...	600 ...	600
5.	LONDON, S.E.	... ...	500 ...	350
6	GLO'STERSH.	COUNTRY	900 ...	900
7.	KENT	TOWN	400 ...	250
8.	LONDON, E....	MIXED	450 ...	350
9.	NORFOLK ...	COUNTRY	300 ...	200
10.	ESSEX... ...	COUNTRY	350 ...	500
11.	SHEFFIELD	MIXED-CLASS	500 ...	350
12.	DURHAM ...	SEASIDE	350 ...	150

No. 376, Sold.

A large number of Nuclei.

Several good ASSISTANTSHIPS (in-door and out) ranging from £80 to £200 per annum.

More than 900 would-be purchasers with capital up to £6000.

Full particulars on application.

Surgeons. — Sea. — Abroad. —

Surgeons with families or friends going abroad will find an immense saving by obtaining their passages through MOORE & CO. All passages booked free of charge. Surgeons as medical officers to ships or for the outward voyage only to the Colonies are all obtained through MOORE & CO., the recognised agents to all shipping firms.

LOCUM TENENS and ASSISTANTS provided to practitioners requiring substitutes. Thoroughly reliable men, personally known to Mr. Moore.

Stamped envelope to MOORE & CO., Medical Agents, Wholesale Druggists, 125, Houndsditch, E.C.

MEDICAL TRANSFER AND PARTNERSHIP

32, Ludgate-hill.

Messrs. Orridge & Co., Medical

Transfer Agents, Referees, and Valuers, in offering their services to the Profession, have pleasure in referring to the fact that for ABOUT HALF A CENTURY the name of Mr. ORRIDGE has been known in the advertising columns of the leading medical journals, and that a very large proportion of the Medical Men throughout the kingdom have confided their interests in the adjustment of PARTNERSHIPS and TRANSFERS to their care.

Purchasers who will communicate (confidentially) the NATURE and EXTENT of their wishes regarding investment can be apprised of appropriate opportunities as they occur.

On occasions where ADVICE is required in forming a correct conclusion as to the worth or eligibility of a Practice, Messrs. ORRIDGE & Co. trust that their familiarity with the various contingencies that govern value will be found of considerable service to those by whom they are employed. N.B.—No charge is made to purchasers.

First-class County Practice, situate

within 100 miles of London. Has been held by vendor nearly twenty years. Receipts average £1500 yearly, including appointments. Very superior house, with garden and tennis lawn. Kitchen, and fruit garden, stabling, &c. Good hunting, &c., in the locality. Introduction about six months. Full particulars on application. About £2500 required.

Apply at Messrs. ORRIDGE & Co.'s Offices, 32, Ludgate-hill.

Lancashire.—Small General Prac-

TICE, situate in close proximity to a large manufacturing town. Present receipts at the rate of £300 yearly, including one or two Club appointments, forming the nucleus of extensive practice. The Practice is worked without horse and well within easy distance. Short introduction only required. Premium £150.

Apply at Messrs. ORRIDGE & Co.'s Offices, 32, Ludgate-hill.

London, near.—Middle-class Prac-

TICE capable of considerable expansion. Present receipts about £340 per annum. Clubs and other appointments have been declined. Premium £450, including the beneficial lease; but if the Practice is taken with a short tenure of the house vendor will accept £300 for the Practice.

Apply at Messrs. ORRIDGE & Co.'s Offices, 32, Ludgate-hill.

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(Son of a well-known Practitioner),

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HOURS FOR CONSULTATION, 10 TO 5. SATURDAYS, 10 TO 1.

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Practitioners seeking Partners or Successors can be immediately introduced to suitable candidates by Mr. Turner, he having always very many more purchasers than vendors on his books, thereby enabling him to carry out the arrangements, if desired, without the delay and publicity of advertising.

PURCHASERS supplied with details of Practices for Disposal free of charge on application.

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Death Vacancy. — Easy terms. Average receipts £568. Main road S.E. London. Appointments over £200. Locum in charge. Good house. No horse required. Fees from 2s. 6d.; Midwifery, 21s. Any gentleman with £100 can negotiate.—Apply immediately.

Seaside Town.—North of England.— An increasing PRACTICE returning about £800 a year in a seaside resort is for disposal for £600. Clubs £80. Partnership introduction.

Partnership.—£2000.—Junior Partner wanted in a good increasing Practice in a residential country district near London. Income £1500 to £2000 a year. Ample scope. Every investigation. Must be well qualified and have means. Usual premium.—Apply to Mr. Percival Turner.

£800 a year.—On the Thames.— PARTNER wanted with view to Succession in a few years in a good old-established Practice in a first-class riverside Suburb. Half-share for disposal at two and a half years' purchase. Every investigation.

£2000 a year.—Partnership introduction of twelve months or longer can be given to a first-class PRACTICE in a favourite residential suburb. Price about one and a half year's purchase. Apply personally if possible.

Eastern Suburb.—A good increasing General PRACTICE in a thickly populated district offering scope for enormous increase, and specially suited to a gentleman commencing Practice. Present returns nearly £300. Expenses small. Good house and garden.—Apply to Mr. Percival Turner.

£850.—Practice with retail, old-established, all ready money. No fees under 1s. Good position, main road. Price only £550, including stock, fixtures, &c.

Northern Suburb.—For Disposal, in a largely populated suburb, an increasing PRACTICE of £500 a year. Good house and garden. Expenses nominal. Every investigation. Premium only £350.

To Physicians, &c.—The Lease of a first class HOUSE in best position in West-end can shortly be acquired.

Assistantship, with Partnership in six months, is open to an active Gentleman not afraid of work in a mixed mining and colliery district in Yorkshire.

Resident Patients and opening for Practice. A very favourable opportunity offers to secure a good house and grounds near London, with a connexion that last year brought in over £1000 (£400 net profit). A premium of 1000 guineas will secure goodwill, furniture, and everything. Photos and full details can be had at Mr. Turner's Offices.

£500.—Northern Town.—Increasing middle-class PRACTICE. Large manufacturing town. Good house. No horse required. Price only £350. Every inquiry and good introduction.

South Coast. — A well-established increasing PRACTICE in a Seaport, returning £400 to £500 a year. No horse or Assistant required. Fees from 2s. 6d., Midwifery 21s. Premium £500.—Apply to Mr. Percival Turner.

Near Manchester.—An improving NUCLEUS of nearly £300 a year will be Sold to a prompt buyer for £150. Good house.—Apply to Mr. Percival Turner.

About £700 a year.—S.W. Suburb. —A good GENERAL PRACTICE in a residential suburb with separate surgery for disposal for one year's purchase. Good position. No horse or assistant required. Garden, tennis, &c. Every investigation.

£750.—In a large Town of over 50,000 in North of England, an old-established General PRACTICE. Clubs £120. Fees 2s. 6d. to 7s. 6d. Good, large, old-fashioned house, stabling, &c.; rent £60. No garden. Premium about one and a half year's purchase. Every investigation.

WANTED.

Wanted, in or near London, a good PRACTICE or PARTNERSHIP in a Residential District. Income £500 upwards to well-qualified Graduate, &c. Can negotiate at once.—Details to 151.2.

Wanted, by M.B. Lond., &c., a PRACTICE in South of London or a Provincial Town with a Hospital. Income £400 upwards.—Details to 105.1, care of Mr. Percival Turner.

Wanted, London Practice, by M.B., &c. Income about £800 a year.—Details to 102.3, care of Mr. Percival Turner.

Wanted, by M.D. Lond., L.R.C.P., &c., a PRACTICE or PARTNERSHIP in London or any good provincial Town. No objection to fair share of poor patients.—Details to 98.3, care of Mr. Percival Turner.

Wanted, to invest about £1000 in a PRACTICE in London or within 100 miles.—Details in confidence to 96.2, care of Mr. Percival Turner.

Wanted, in North of England, a PRACTICE of £400 to £500 a year. Capital ready.—Details to 95.2, care of Mr. Percival Turner.

Wanted, West-End Partnership, to return an income of £800 a year or more, by experienced married man over forty. Being independent of practice, applicant can keep up a good establishment and introduce some connexion.—Details to 92.2, care of Mr. Percival Turner.

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THE SCHOLASTIC, CLERICAL, & MEDICAL ASSOCIATION, LTD.

MEDICAL DEPARTMENT.

This Association was established in 1880 as a Limited Liability Company under the direction of professional men, its object being the creation of a RESPONSIBLE and THOROUGHLY TRUSTWORTHY Agency. The Medical Department has met with so great success that it has been found necessary for one of the Managing Directors (Mr. G. B. Stocker) to devote his whole attention thereto; and he has the assistance of an experienced Medical Accountant and a large staff of clerks. Further, a Board composed entirely of gentlemen of high standing in the Medical Profession has been appointed, and to them matters of dispute and complaint are referred.

The Association undertakes the SALE of PRACTICES and PARTNERSHIPS; the Introduction of LOCUM TENENS and ASSISTANTS; MEDICAL ACCOUNTANCY (by a duly qualified Medical Accountant); INVESTIGATION and VALUATION of Practices, &c.; POSTING BOOKS and sending out Bills, &c., &c.

A Pamphlet relating to the Medical Department, with the names of the "Directors" and "The Medical Advising Board," and terms, will sent on application to—MR. G. B. STOCKER,* MANAGING DIRECTOR, 8, LANCASTER PLACE, STRAND, W.C.

Telegraphic Address—"Triform, London."

FOR SALE.

(1) MIDLANDS.—An old-established PRACTICE in a market town of over £900 per annum, including appointments worth £147. Visiting fees 2s. 6d. to 7s. 6d. Very pretty old-fashioned house standing in about three acres of ground, with stabling for five horses, which must be purchased. Price £1200; £800 can remain on mortgage. Premium for goodwill £1300.

(2) HYDROPATHIC ESTABLISHMENT. — PARTNERSHIP and Succession; yielding large net profits; capable of increase. Suitable for retired Army Surgeon or medical man wishing to give up general practice (or non-medical capitalist). Price for lease, furniture, and goodwill, £5000.

(3) FIRST-RATE LONDON SUBURB.—HIGH-CLASS PRACTICE, averaging £2250 per annum. Fees most 7s. and 10s. 6d. Non-dispensing. A year's introduction. Two years' purchase required or offer.

(4) LONDON, W.—Good-class Non-dispensing PRACTICE, established fifteen years. The cash receipts for the last three years average £900 per annum. Visiting fees 7s. 6d. to 10s. 6d. Very little Midwifery. Large, well-appointed house (which need not be taken); rent £175 per annum. Premium £1350.

(5) DEATH VACANCY, London, N. Established sixteen years. Cash receipts for 1895 about £900. One horse required. Small but well-situated house; rent £36. No reasonable offer will be refused.

(6) DEATH VACANCY.—LONDON, S.E.—Old-established PRACTICE. Cash receipts for the last three years average £568 per annum, including appointments of about £220. Visiting fees 2s. 6d. upwards. Very little Midwifery. Good house, situated in main road. Rent £60 per annum. No reasonable offer refused.

(7) DEATH VACANCY.—LONDON, S.E. (main thoroughfare).—Cash receipts for 1895, £553, including club appointments worth £52 per annum. Visiting fees 2s. 6d. upwards. No carriage. The house contains nine rooms. No reasonable offer refused.

(8) DEATH VACANCY.—GOOD RESIDENTIAL LOCALITY. Close to the Thames. Cash receipts for last two years averaged £300, including appointments of £60. Choice of houses.

(9) WEST OF ENGLAND, SEAPORT TOWN.—PRACTICE for immediate Disposal owing to serious illness of vendor. Established sixteen years. The average takings are from £800 to £700 per annum, including vaccination and club appointments. Good house, garden, and stabling. Rent £46.

(10) SOUTH COAST.—Good Residential Town and Watering-place. Non-dispensing PRACTICE. Cash receipts for 1895, £547. Visiting fees mostly 5s. No horse required. Very good house, in the best residential part of the town, with good-sized garden, which would be let for £110 or sold, price £2400 (£1700 of which can be left on mortgage). Premium for goodwill £800.

(11) WEST OF LONDON.—Cash PRACTICE (chiefly working class) of £600 cash receipts for last year. No Midwifery under £1 1s. No horse required; rent £60. Premium £850.

(12) NORTH MIDLANDS.—TOWN PRACTICE of £1600 per annum. Visiting fees 2s. 6d. to 7s. 6d. Two horses. Good house with stabling, rent £70. Premium £1400.

(13) NORTH OF ENGLAND.—Country Town PRACTICE. Cash receipts for 1895 were £1024, including appointments (Union, Colliery, Clubs, &c.) of £400. One horse. Good house, with bathroom and stabling; rent £45. Good society. Educational facilities. Introduction of six or twelve months. Premium £1100.

(14) NORTH OF ENGLAND.—LARGE SEAPORT TOWN.—Good Middle-class PRACTICE of over £500 per annum, including appointments of over £180. Visiting fees mostly 3s. 6d. Good house in a central position, with garden; rent £45. Premium one year's purchase.

(15) WEST RIDING.—Suburb of a large manufacturing town. Old-established PRACTICE of £580 per annum, including appointments worth over £200. Visiting fees, 2s. to 5s. Good twelve-roomed house with stabling, rent £48 per annum. Premium £590.

(16) PARTNERSHIP (one-third or two-fifths share) in a Practice of about £1500 per annum in a good town in the West Riding. Visits 2s. 6d. and upwards. Rent of house to be taken by Partner £50. Premium for one-third £950, to include share of book debts, drugs, &c., or a two-fifths share (without a share of book debts) for £800.

(17) PARTNERSHIP in a good-class outlying Suburban Practice of £875 per annum, with view to succession in two years. Price £930, and a similar sum upon succession.

(18) YORKS.—West Riding, country town PRACTICE of £400 to £450 per annum, including appointments of about £80 per annum. Visiting fees, 2s. 6d. to 5s. No horse required. Good sport, good society. Rent of house with small garden, £20. Premium £450

FOR SALE (*continued*).

(19) NORTH MIDLANDS.—Unopposed country PRACTICE. Cash receipts for 1895, £580, including appointments of over £50 per annum. Visiting fees, 2s. 6d. to 7s. 6d. Good house, with stabling and two gardens, rent £30 per annum. Premium £600.

(20) SOUTH OF ENGLAND.—PARTNERSHIP in a Country Town Practice of about £800 (increasing), including club appointments worth about £200. Visiting fees 2s. 6d. to 10s. 6d. A one-third share would be sold at once for £400.

(21) WESTERN AUSTRALIA. — PRACTICE in an important and rapidly increasing town. The Practice, though only established two years, returned last year £1700, including appointments of £100 per annum. Fees for advice average 7s. 6d. Midwifery fees from £3 3s. One horse required. Premium only £800.

(22) AUSTRALIA.—An old-established unopposed country PRACTICE within easy distance of capital. The cash receipts up to January, 1895, have averaged £1200 per annum, including £250 from appointments. Good fees. Good house, rent £60. Good climate.

(23) LANCS.—Manufacturing town (population over 30,000). Cash receipts for the last three years average £590 per annum, including appointments of about £50. Good house, with stabling and small garden; rent £50. Premium £630, to include book debts, drugs, &c.

(24) WEST RIDING OF YORKSHIRE.—Country PRACTICE of £440 per annum, average cash receipts. Appointments worth over £30 per annum. Visiting fees, 1s. 6d. to 3s. 6d., medicine charged extra. Semi-detached house. Rent £13 per annum. Premium £400.

(25) YORKS.—LARGE MANUFACTURING TOWN.—For Disposal, a CASH PRACTICE (not a Dispensary). Receipts for the last three years average £467 per annum (1895, £510,) including £200 from appointments. Visiting fees 1s. 6d. to 3s. 6d. No horse or assistant required. Good house; rent £50. Premium only £380.

(26) MIDLANDS (in one of the best towns).—Old established PRACTICE of about £400 per annum with great scope for increase. First-rate house, which need not be taken, rent £100. A suitable house could probably be obtained for £42 per annum. Premium £400.

(27) LONDON.—NORTHERN SUBURB.—Cash receipts for 1895 £385. Visiting fees 2s. 6d. to 3s. 6d. Semi-detached villa containing eight rooms &c., with large garden; rent £45 per annum. Premium £425. Vendor is relinquishing to go abroad.

WANTED TO PURCHASE.

(28) WANTED, a PARTNERSHIP in a Practice in Leeds. Purchaser is an M.B. London (Honours), B.S. Age twenty-five, and has ample capital.

(29) WANTED, a PRACTICE or PARTNERSHIP in a Country Town where trout fishing could be obtained. No clubs. Purchaser can invest up to £1500.

(30) WANTED, a Country PRACTICE anywhere South of Nottingham of £700 to £800 per annum. Purchaser is an L.R.C.S., L.R.C.P., Guy's. Experienced, and can invest up to £1000.

N.B.—There are several hundred purchasers on the books of the Association, so that the sale of any good Practice or Partnership within a reasonable time is virtually certain.

QUALIFIED ASSISTANTS WANTED.

(31) Staffs., £80, in-. (32) Derbyshire, £80 to £100, in-. (33) Yorks., £100, rooms, &c., ride. (34) London, E., £80, in-. (35) Cheshire, £120, rooms, &c. (36) Kent, £72, in- (or £120, out-) and percentage. (37) Yorks., £80, in-. (38) Oxon, £110 to £120, and rooms &c. (39) Radnor, £80 to £100, in-. (40) London, S.E.; time for hospital. (41) Kent, £80, in-; view to Partnership. (42) Cornwall, £140 to £150, out-; ride. (43) Yorks., £85 to £95, in-; ride; view to Partnership. (44) Staffs., £80, in-. (45) Yorks., £130, out-. (46) London, S.E., £80, in-. (47) Durham, £80, in-. (48) Suffolk, £130, out-. (49) Hants, £80, in-. (50) Durham, time for reading, in-door. (51) Lincs., £72, in-; ride. (52) Derbyshire, £130, house, &c. (53) Staffs., £84, in-, view to Partnership; ride. (54) Lancs., £120, rooms, &c. (55) Yorks, £80, in-, ride. (56) London, S.W., £60, in-, increasing. (57) Mon., £120, rooms, &c. (58) Hunts), £80, in-. (59) Durham, £75, in-. (60) Durham, £80, in-. (61) Lincs., £120, out-; ride. (62) Sussex, £70, in-. (63) Essex, £80, in-. (64) N. Wales, £80, in-; ride. (65) Lancs., £80, in-. (66) Staffs., £70, in-; time for reading.

LOCUM TENENS SUPPLIED.

* Author (jointly with Wm. Barnard, M.A., LL.B.), of "Medical Partnerships, Transfers, and Assistantships" (published by Stevens & Sons, Limited, 119, Chancery-lane, E.C.). Price, net 3s. 6d., or by post, 3s.

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MEDICAL PARTNERSHIP AND CONVEYANCING AGENCY.

1, ADAM-STREET, ADELPHI, W.C.

The SALE of PRACTICES and PARTNERSHIPS NEGOTIATED.

Trustworthy LOCUM TENENS and ASSISTANTS can be had at a few hours' notice.

N.B.—No charge made to Purchasers.

Notice.—Mr. J. C. Needes, with an experience of over a quarter of a century, is in an exceptional position to give intending Purchasers independent information concerning most PRACTICES and PARTNERSHIPS. Those investments in the following List marked with an asterisk are well known to him, having been purchased through his Office by the present Incumbents years ago, and in many other cases an introduction can be given to gentlemen who have taken charge of the Practices during the absence of the Incumbents.

UNUSUAL OPPORTUNITY.—COLONIAL.—A gentleman prepared to enter into immediate arrangements can secure for the sum of £250 an old-established PRACTICE, the cash receipts of which last year amounted to £1400. The practice (which has been held by vendor many years) is situated in one of the principal cities in Australia, is non-dispensing, and confined to a comparatively small area. One good horse sufficient. Visiting fees, 10s. 6d., upwards. Midwifery, five guineas. The incumbent (who is the brother of a well-known West-End physician) is now in London, having left the Practice in charge of a locum tenens, who is under a bond not to practise.

*A BARGAIN.—LONDON, S.E.—A well established CASH PRACTICE, returning about £600 a year actual Cash Receipts, for immediate Disposal for the moderate sum of £350. Expenses light. Rent £40. An efficient introduction.

£1000 PER ANNUM.—A good-class Country PRACTICE in a beautiful district about 100 miles from London and within easy reach of a fashionable town can be secured by a suitable Gentleman, who should be at least thirty years of age, married, and of good address. Nearest opponent five miles distant. Fees good, expenses light, and the Practice easily worked. Railway station in place. Moderate-sized house. An efficient introduction given.

JUNIOR PARTNERSHIP.—SOUTH COAST.—A young energetic gentleman required to purchase a small share (yielding £200 to £300 a year at present) of a rapidly-increasing middle-class, situated in favourite watering place. Expenses light. Further particulars on application.

CUMBERLAND.—Totally unopposed, the nearest Medical Man residing eight miles distant. Cash receipts last year over £400, including Appointments £110, certain of transfer. Picturesque district, hunting, fishing, and shooting. Small house, with stabling, greenhouse, and garden attached. Rent low. An introduction given to meet wishes of purchaser.

*SEASIDE.—In a large and fashionable Watering-place, within a few hours' run of London, an old-established PRACTICE, estimated to be worth between £600 and £650 per annum, including Appointments £115. The connexion comprises both residents and visitors. No Midwifery under a guinea. Large family residence facing the sea, containing two reception-rooms, eleven bedrooms, consulting-, waiting-, and dispensing-rooms, &c. Rent moderate. Premium £800. An efficient Partnership. Introduction given.

CASH PRACTICE situated in a large town about 100 miles from London. Residence on the premises is not necessary, the present incumbent residing in a pleasantly situated house in the suburbs of the town. The cash receipts for the past four years average £900 per annum, last year £925. Three months' introduction given. Premium £900.

*SOUTHERN COUNTY.—In a charming and prosperous district an old-established, unopposed PRACTICE worth £650 per annum, inclusive of Union and Club appointments. Average fee for visit and medicine, 5s. Fifty cases of midwifery. One horse sufficient. Detached house, with large garden and stabling. Three months' introduction given. The district possesses many advantages, is increasing, and offers good future prospects.

TWELVE MONTHS' PARTNERSHIP INTRODUCTION will be given to an old-established PRACTICE in a small, pleasant town, containing nearly 2000 inhabitants, forty miles from London. It at present produces between £400 and £500 per annum, and is capable of very considerable increase by a younger and more energetic successor. Appointments (guaranteed) yield about £200. There is a railway station in the place, and the nearest Medical Man resides four miles distant.

Apply to J. C. NEEDES, 1, Adam-street, Adelphi, W.C.

Practice required of £400 to £600 a year (unopposed and with Appointments attached) in the South Midlands or Western Counties. Any gentleman desirous of relinquishing a Practice of the above description can meet with an immediate purchaser prepared with cash on communicating particulars in confidence to J. C. Needes.

Locum Tenens and Temporary ASSISTANTS.—Practitioners requiring the above can immediately obtain thoroughly reliable qualified Gentlemen upon application to 1, Adam-street, Adelphi, W.C. Every Gentleman engaged by the Office in either of the above capacities is personally known to Mr. J. C. Needes. An office fee of half a guinea is payable by the Principal.

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LOCUM TENENS.—Reliable Gentlemen always on the Books.

ASSISTANTS provided free of charge to Principals.

1. MIDLANDS.—Good class PRACTICE situate in a country Town within eighty miles. Receipts average £930 per annum ('95 over £1000), including £150 from appointments. The connexion is the leading one in the locality and no Assistant is required. Old-fashioned family residence standing in three acres of grounds. An efficient introduction given. Premium £1400.
2. £800 PER ANNUM, INCLUDING £250 FROM APPOINTMENTS.—The PRACTICE is situate in a pleasant Country Town about three hours' run from London and is well known to Mr. Needes. Opposition nominal. Patients mainly agricultural with sprinkling of gentry, clergy, &c. Convenient house with garden and stabling. Rent £40. Six months' introduction given.
3. IMMEDIATE.—A gentleman practising in a northern suburb, who is leaving England, wishes to transfer his increasing CONNEXION, which returned last year nearly £500. Good house with large garden, but successor has the option of taking another. Price only £350.
4. CROYDON.—For prompt Sale, a small Private PRACTICE with detached Surgery. Joint rentals £40 per annum. Would suit a young practitioner commencing. About £150 required.
5. COUNTY TOWN WITHIN FORTY MILES OF LONDON.—For Sale, with an introduction to Michaelmas, a well-established PRACTICE held by the Vendor four years and returning under adverse circumstances over £300 a year. Good scope for an active man. Successor can have choice of residences, at moderate rentals. Premium £250.
6. NORTHERN SUBURB.—A good Partnership introduction given to a superior class old-established PRACTICE returning £500 a year, with ample scope for extension. Visiting fees 5s. to 21s. Little midwifery. Good corner family residence in thorough repair. Moderate premium from a prompt purchaser.
7. WITHIN TEN MILES OF LONDON, a small, well-established PRACTICE, held by the vendor over seven years. Receipts last year nearly £300. There is a very good residence built for the incumbent, large garden; rent £60. Premium only £250. An active man would find ample scope for extension.
8. CASH PRACTICE situate in an eastern suburb held by Vendor seven years and realising last year £370. Expenses moderate and radius of work small. Convenient private house well situate, rent £34. Premium, with an efficient introduction, £250.

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Louth, Lincolnshire. — To be Let with immediate possession, Upgate House, containing nine bedrooms, dressing-room, bath-room, w.c., dining, drawing, and breakfast rooms. Good kitchens, cellars, surgery, stabling for six horses (three loose boxes), carriage house, harness-room, &c. For over thirty years occupied by the late T. James Esq., surgeon, and his successor.—Apply, C. R. Surfleet, Auctioneer, &c., Louth, Lincolnshire.

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BOURNEMOUTH.—CANFORD CLIFFS ESTATE, overlooking the English Channel, Solent, and Bournemouth Bay.

Messrs. Philip and George Geen will OFFER by AUCTION, in a Marquee on the Estate, on Thursday, July 2nd, 1896, at 3 P.M., several excellent FREEHOLD BUILDING SITES, ripe for the erection of good Villa Residences and Shops. The Plots vary in extent and possess frontages to excellent roads. The Estate occupies a most healthy position about 120 feet above the sea level, and a fine stretch of sand extending to Bournemouth Pier affords an excellent and easy walk into the town. A natural harbour within a mile forms a well sheltered anchorage for yachts. The property fronts the sea and overlooks pleasure grounds set aside under covenants by the Estate owners. Magnificent pine woods form a valuable protection from the north and east winds, which has caused the Estate to become known as the Mentone of England. Free conveyances. Payments by easy instalments. Luncheon will be served prior to Sale. Cheap railway tickets (not transferable) can be obtained of the Auctioneers.—Printed particulars, plans, and conditions of sale can be had of H. R. Hutchings, Esq., Solicitor, Grosvenor-chambers, Bournemouth; Messrs. Pinder & Fogerty, Architects, 2, St. Peter's-terrace, Bournemouth; or of the Auctioneers, 55, Waterloo-road, London, S.E. Telephone 45,007.

Unique position for a Medical Man in best part of Bournemouth, exactly opposite railway station on main line, and commanding a large and rapidly increasing new neighbourhood. Three reception, eight bedrooms, large hall. In one acre, on the main high road. Freehold £2500, or might let.—Owner, Dolphcot, Parkstone, Dorset.

Consulting-rooms in Grosvenor-street, W., to Let. Large, furnished, and well lighted. Good attendance and share of commodious, well-furnished waiting-room. Immediate occupation. Suitable for Consultant Physician or Surgeon. —Address, Narcotine, THE LANCET Office, 423, Strand, W.C.

To Medical Men.—Capital corner 18-roomed house, facing main road, close to rail and bus, in good neighbourhood, for many years occupied by a doctor, side entrance, surgery, &c. No premium. Rent £70, or could be purchased.—Apply Willmott, 63 and 65, Goldhawk-road, W.

Wanted, Practice or Partnership of about £400 to £600 a year, with appointments. Good house and garden.—Particulars to M. J., THE LANCET Office, 423, Strand, W.C.

City Practice. — A well qualified Gentleman wishes to hear of a genuine City Practice (with Appointments preferred), or a Share in such a one would be entertained.—Address, G. T. C., THE LANCET Office, 423, Strand, W.C.

To Gentlemen Retiring or requiring a Partner.—A successful Practitioner, aged thirty-nine, in large Practice in the South, and wishing to live in London or the Suburbs, is desirous of meeting with one of the above within the next twelve months, or would Exchange his own Practice for a Partnership near Town. Income required £600, and upwards. Advertiser has ample capital. Any replies considered strictly confidential. No agents.—Apply, Messrs. Lanfear, Tanner, and Lanfear, Solicitors, 110, Cannon-street, City, London.

South East of England.—Very old-established PRACTICE of £600 per annum, consisting of middle-class, private, and club, &c., appointments. Share for Disposal, with ultimate Succession to the whole. Suit a practitioner with some private means.—Delta, THE LANCET Office, 423, Strand, W.C.

Partnership, S.W. County (One-third or Two-fifths Share, with larger share in five years).—PRACTICE about £1300 per annum in a small town situate in a lovely country district, with good hunting. House, rent £40. One horse sufficient, supplemented by bicycle. Would suit an energetic well-qualified man about thirty, who should be married. Premium two years' purchase.—Address, Howitt, THE LANCET Office, 423, Strand, W.C.

Working Partnership required near London, by a doubly qualified general practitioner. Many years' experience in hospital, private, and club practice. Accustomed to good-class patients. Well received. Return, without investment, about £200, with option of further share by purchase.—A. B., care of Ellis, Stationer, 32, High-street, Tooting, S.W.

Partnership, pleasant Suburb of London.—The Half-share of a good Middle-class and increasing Practice for immediate Disposal. Receipts over £700. An energetic Gentleman about thirty with some means preferred. Succession to the whole may probably be secured after a time. Premium £700.—Address, with particulars, L. P., THE LANCET Office, 423, Strand, W.C.

A Partner required to help Medical Man in delicate health. Must be a Gentleman who would be well received by ladies, and prepared to pay for half-share, with the option of buying the whole in time.—Apply, M. M. C., 39, Bramley-road, Notting-hill, London, W.

Any reasonable offer.—A cheap Cash PRACTICE in thickly populated neighbourhood in E.C. district, non-resident. Few hours a day only. Transferable club covers expenses. Average receipts this year £2 5s. per week. Have been considerably more. Could be expanded by man who would devote his whole time to the work and take up Midwifery.—J. B., THE LANCET Office, 423, Strand, W.C.

Junior Partner wanted in a West-end Practice between £1000 and £1200 per annum. Must be well qualified and one having some connection in the West-end preferred.—Address, Theta, THE LANCET Office, 423, Strand, W.C.

Dispensary for Sale in large Pro-vincial Town. Cash takings average over £5 per week. No residence, nightwork, or midwifery. Low rent. Scope for increase. Price £50, to include surgery, furniture, and drugs. Genuineness guaranteed.—Address, Omega, THE LANCET Office, 423, Strand, W.C.

For Sale, within 10 miles of Manchester, small but increasing PRACTICE. Last year's receipts over £260, but capable of great increase. Opposition slight. Expenses small. Every investigation allowed.—Address, Lancs, THE LANCET Office, 423, Strand, W.C.

Surgery for Sale in a thickly populated neighbourhood, only opened a few months. Vendor has not time to attend to it, having another practice.—Address, A. K., 4, Church-street, Shoreditch.

Cash Practice for Sale. Open Surgery. Main thoroughfare. Scope for increase. Fees from 1s. Large town in Yorkshire. Income over £200 per annum. Rent £26, Premium £60.—Address, Surgeon, THE LANCET Office, 423, Strand, W.C.

For immediate Disposal, a Country PRACTICE of over £600 a year, inclusive of transferable appointments. Is in a pleasant agricultural district in the West Midlands, and would suit a young man fond of country life.—For further particulars address, Rural, THE LANCET Office, 423, Strand, W.C.

For Disposal, well-established Prac-TICE, about £700 a year, in South-western country town. Charming district, fishing, hunting, &c., pleasant society, and other advantages. Price £1550, to include horses, traps, furniture, &c. No agents.—Address, Veteran, THE LANCET Office, 423, Strand, W.C.

London, W.—For immediate Dis-posal, the owner being unable to give it enough attention by reason of engagements elsewhere, a small Cash NUCLEUS, recently established, yielding about £1 per week but readily capable of immense increase. The house is in good condition and is in a main road in the centre of a large working-class population; rent £35 on agreement, part could be let off. Furniture, fittings, and drugs are worth about £45. Open to offer, or a preliminary Assistantship with view to purchase or Partnership would be entertained.—Address, Calomel, THE LANCET Office, 423, Strand, W.C.

Lancashire.—To be disposed of cheap, a good reliable PRACTICE, doing £350 cash per annum. Satisfactory reasons for leaving.—Address, M., THE LANCET Office, 423, Strand, W.C.

Increasing Nucleus. — Established two and a-half years, S.W. district. Receipts for this year to date over £50. Has not been well looked after, but there is plenty of scope for an energetic man, who would take midwifery and night work.—Apply, Medicus, 162, Ladbroke Grove, W.

Medical Practice in Johannesburg for Sale (office business only). Net profits over £3500 per year. Will stand a thorough investigation. Reason retiring from practice.—Address, Ernest Korne, Esq., P.O. Box 510, Johannesburg, S.A.R. Price £4000.

For immediate Disposal, small PRACTICE, good residential neighbourhood near London; plenty of scope. Easy terms to prompt purchaser.—Address, Nemo, THE LANCET Office, 423, Strand, W.C.

£75 will be accepted for the furni-ture, fittings, drugs, &c., of a good Dispensary PRACTICE, situated in North London. Returns from £250 to £300 per annum (without midwifery, which if taken would easily double the receipts). Established over two years. A death the sole cause of disposal.—Address, Serio, THE LANCET Office, 423, Strand, W.C.

Locum Tenency desired by qualified registered gentleman, experienced. Repeated engagements with the same principals. Total abstainer and non-smoker. Aged thirty. Disengaged.—F. A., 56, Antill-road, Bow, London, E.

A doubly qualified University Graduate, registered, desires engagements as LOCUM TENENS. Advertiser is of considerable experience, and has had charge of several Practices in London and the country. Good testimonials and references.—Address, Zeta, THE LANCET Office, 423, Strand, W.C.

A qualified Man attending hospital would give his mornings and evenings in return for comfortable Home in or near London. Good references.—Address, Hospital, THE LANCET Office, 423, Strand, W.C.

Dentist (registered) having some spare time wishes to arrange with a Surgeon or Chemist, daily or otherwise attendance for mutual advantage. London or district.—Address, Dentist, THE LANCET Office, 423, Strand, W.C.

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Assistants and Medical Men failing to obtain what they require should apply to ADAMS & PARKES (B.A. Cantab.), Medical Agents, 8, John-street, Adelphi, Strand. Telegraphic address: "Interjoin, London." No charges are made for unsuccessful service. Messrs. ADAMS & PARKES are now open to receive for verification the names of Gentlemen, with medical references, who desire L. T. work during the season. Interview desirable.

Reliable and Experienced Gentlemen (only) are available as ASSISTANTS and LOCUM TENENS on short notice to Messrs. Adams and Parkes (B.A. Cantab.), 8, John-street, Adelphi, Strand, W.C., who have an established reputation for promptly providing good men.

Advertiser, qualified, experienced, wishes to ASSIST Practitioner during the day. W., W.C., or S.W. districts preferred. Moderate terms.—Address, Forte, THE LANCET Office, 423, Strand, W.C.

A M.R.C.S., L.R.C.P., aged 48, married, is willing to act as in-door ASSISTANT to widower or bachelor. Wife, who is competent and domesticated, would superintend household. Good references.—Address, M.P., THE LANCET Office, 423, Strand, W.C.

A recently qualified Man (M.R.C.S., L.R.C.P.) desires out-door ASSISTANTSHIP to elderly or overworked Practitioner. Country Town or Seaside. Would Manage Branch, and could invest small capital. Abstainer. No objection to Club work, Dispensing, or Bookkeeping.—Apply, M. H. S., Guy's Hospital, S.E.

Assistantship, Management of BRANCH, or LOCUM TENENCY wanted by an M.B., C.M. (1884), registered. Experienced in all kinds of practice. Able to ride and drive. Aged thirty-four.—Address, Beta, THE LANCET Office, 423, Strand, W.C.

Assistantship in the Country, with view to Partnership, required by Edinburgh University Graduate, married. Has sold his own practice because too small. Highest references. Can ride, drive, and cycle.—Reply, stating terms, to H. Hewer, 3, Highbury-new-park, N.

In exchange for nominal Evening Services a qualified Gentleman will be given comfortable Rooms. Easy access to hospitals, &c.—Address, Rooms, THE LANCET Office, 423, Strand, W.C.

The Blaenavon Workmen and AGENTS DOCTORS' FUND COMMITTEE require on the 1st September next, the services of a Gentleman to take Charge of a large Colliery and Ironworks Practice. Salary £500 (five hundred pounds) per annum, with free house and coal.—Applicants, who must be married, can obtain further particulars from Mr. William Griffiths, Secretary, 38, New William-street, Blaenavon, Mon.

To Medical Men requiring change. —Will any qualified Gentleman give his Services in return for Board, &c., for a week or two? Duties almost nominal. No night-work. Charming country district, six miles from sea, South Coast.—Address, THE LANCET Office, 423, Strand, W.C.

Qualified Assistant wanted at end of July in Manufacturing Town on North-east Coast of Yorkshire. General Practice with Hospital work. Must be steady and single. Time for reading and study. State salary (in-door), age, and experience, and send photo and references to Dr. K., care of Messrs. Grady and Martin, Newcastle-on-Tyne.

Wanted, in Country Practice, a qualified out-door ASSISTANT. Church of England. Aged under thirty. Able to ride a bicycle. Usual bond required. No Dispensing. Applicants to send photographs and references. Salary £100, with rooms.—Address, A., THE LANCET Office, 423, Strand, W.C.

Wanted, by a Manchester Surgeon, a qualified ASSISTANT, in-doors, to Visit, Dispense, and attend Midwifery.—Apply, stating terms and references, with photo if possible, to Celeriter, THE LANCET Office, 423, Strand, W.C.

Wanted, from August 15th to August 29th, a qualified Man to act as LOCUM TENENS for a working-class Practice in a South-Eastern Suburb. Terms £3 3s. a week, with board. Work moderate.—Apply, A. P., 156, Trafalgar-road, Greenwich, between 10 and 11 A.M. or 6 and 7 P.M.

Wanted, by Medical Man near Dartmoor a LOCUM TENENS for August, who, in exchange for board, lodgings, and railway fare, will assist Partner No Midwifery. Work extremely light. Night cases rare. Fishing.—Address, Asticus, THE LANCET Office, 423, Strand, W.C.

Wanted, end September, a married qualified Out-door ASSISTANT, to Visit, Dispense, keep Books and attend occasional case of Midwifery in a good class Practice in large Yorkshire town. Present assistant has been nine years.—Apply, stating age, experience, salary, references, to F.R.C.S., THE LANCET Office, 423, Strand, W.C.

Wanted, in return for Board and lodging and a small salary, a qualified Gentleman to ASSIST in Visiting, chiefly mornings. Plenty of time for hospital and reading. A Dispenser kept.—Medicus, 105A, Queen's-road, Battersea.

Wanted, in a Country Practice in the North of England, a doubly qualified Out-door ASSISTANT. Must be able to ride and a good Accoucheur. An abstainer preferred. Must sign the usual bond. Salary £120 per annum.—Address, Signum, THE LANCET Office, 423, Strand, W.C.

Wanted, by an experienced, doubly qualified Gentleman, single, an appointment as Visiting ASSISTANT in a good-class private Practice, or to take charge temporarily or otherwise. Highest references.—Address, stating duties required and stipend given, Physician, 134, Great Portland-street, London, W.

Usual Bond.—Richardson's Medical ASSISTANT'S AGREEMENT for SERVICES. "This is a form of agreement which principals may find useful in engaging Assistants. It is very explicit."—THE LANCET, February 9th, 1895. It contains all the conditions of the usual bond as well as several useful and necessary clauses. Stamped copies, price 11s. Entered at the Stationers' Hall, and can only be obtained from RICHARDSON BROS. & CO., Medical Agents, Liverpool. ASSISTANTS and LOCUM TENENS supplied.

NOTICE.

WITH regard to advertisements affecting unqualified assistants, the Proprietors of THE LANCET think it right to point out that they obviously cannot guarantee that each individual advertiser offers his services under such conditions as would be approved by the General Medical Council. The Proprietors consider that inconvenience to practitioners and hardship to unqualified assistants may be caused by the entire exclusion of these advertisements from the columns of THE LANCET. The General Medical Council do not, it is understood, object to unqualified assistants being employed by practitioners when resident in or near their employers' houses, but the Council will not allow unqualified persons to conduct branch practices, or dispensaries which are situated at a distance from the principal's house and are not under his immediate supervision.

Dispenser.—Wanted, Senior Student to Dispense about one hour in afternoon, and occasionally fill a gap out-door (near Oxford-circus).—Address, Colcum, Willing's Advertising Offices, 162, Piccadilly, W.

Dispenser wanted, out-door, for a firm of Surgeons in a Provincial Town.—Apply, by letter only, to X., care of Wyman & Westwood, 58 & 59, Bunhill-row, E.C.

Wanted, an unqualified Assistant (in-door), for short period, to help a Doctor in an East-end Practice. Must be able to attend Midwifery and a quick and accurate Dispenser. Fourth years' student preferred. Time for reading.—Apply, stating terms &c., to Alpha, THE LANCET Office, 423, Strand, W.C.

Wanted, a Man about 30 as a DISPENSER. Able on an emergency to see patients or Visit. Married preferred, no children. Unfurnished rooms and 25s. a week to begin with.—Address, by letter only, X. Z., care of Mr. Hill, chemist, Well-street, South Hackney.

Medical Student, experienced Dispenser, accustomed to Midwifery and Visiting, requires SITUATION in-doors. Time required for hospital attendance. Highest references.—Address, Permanency, THE LANCET Office, 423, Strand, W.C.

Assistancy.—Gentleman, full curriculum, and reading for final, well up in Midwifery and General Practice, and a neat, accurate, and expert dispenser, wants engagement about 1st August, splendid references.—Address, Medicus, THE LANCET Office, 423, Strand, W.C.

Wanted, by a fourth year's student of London Hospital, with full curriculum, aged thirty-six, an ASSISTANTSHIP. Visiting, midwifery, and dispensing. Several years' experience.—Address Medicus, care of Miss Burne, 130, Edgware-road, London, W.

Out-door Assistancy wanted by a married Gentleman without incumbrance. Several years' experience in Private, Union, Club, and Colliery practice. Good Accoucheur and Dispenser, and accustomed to keep Books. Permanency desired. Now disengaged.—Address, Norfolk, THE LANCET Office, 423, Strand, W.C.

A Swede, fully qualified and licensed in Sweden to practise the Manual or Movement Treatment, asks if there is any Doctor in London who will take up the treatment and give him EMPLOYMENT.—Further particulars by letter to F. W., THE LANCET Office, 423, Strand, W.C.

Translations of Medical Works, &c., from the German or French into English are done by a German, an Undergraduate, London, and qualified in Surgery, Forensic Medicine, and Midwifery. Address, M. N., THE LANCET Office, 423, Strand, W.C.

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("INGLUVIN.—A powder from the gizzard of the chicken (*Ventriculus callosus gallinaceus*) prescribed in the same manner, doses, and combinations as Pepsin."

Per oz., 4s. 0d., prepared by W. R. WARNER & Co. Wrapper, design, and word "INGLUVIN" registered under the Trade Marks Act.)

A VERY appropriate name for this remedy is **INGLUVIN.** It is the essential principle of the gizzard, and bears the same relation to poultry that pepsin does to the higher animals. The honour of its discovery and utilisation, in its crude state, remotely dates with the Chinese gastronomer, as well as (in its refined condition) to the Caucasian chemist. From time immemorial the inhabitants of the Celestial Empire have used the gizzard of chickens and ducks in nearly all made dishes. Their writers have recommended the practice as a sovereign treatment of dyspepsia, weak stomach, and vomiting. A favourite prescription of Chinese physicians for chronic indigestion is to cut up and digest chicken gizzards in hot water until they are reduced to a pulp, and then add some spices. A tablespoonful or two of the resulting paste is taken at each meal until the patient has entirely recovered. From China the practice passed to other parts of Asia, and was adopted here and there among the Mediterranean peoples. Strange to say, it was never learned by the great nations of Europe until the latter part of the present century. On the other hand, the organic chemists of Europe discovered, about 1850, a powerful nitrogenous radical in the gizzard. Experiments thereafter showed it to possess many of the qualities of pepsin. These experiments led to its isolation. Numberless experiments have proven it to be a very valuable addition to therapeutics. Where pepsin refuses to act, and where in severe cases it has even been rejected by the stomach, **INGLUVIN** effected relief rapidly and with the greatest ease.

In four cases of poisoning by root beer (Brooklyn, June, 1886), Dr. GEORGE EVERSON, Jr., a well-known physician of that city, reports that after pepsin and all similar compounds had been rejected by the stomachs of his patients **INGLUVIN** stayed the retching and enabled them to retain and digest food.

Dr. LASSING reports a similar experience in several cases of acute dyspepsia.

A priori, it would seem as if **INGLUVIN** should be more efficient and potent than pepsin in many cases of physical disorder.

Our poultry are chiefly granivores, and have no beak or other buccal apparatus for crushing the hard grain and seeds on which they so largely feed. The food is swallowed when apprehended, and passes directly into the crop or gizzard. This seems to act both mechanically and chemically. Its interior walls are covered by a dense, hard membrane, surrounded by muscles of the most powerful type. Along with the food is always a small amount of sand and gravel. The organ acts apparently by bruising and cracking, rather than, as is commonly believed, by trituration. The motion of the ingluvial muscles is accompanied by a slow but continuous exudation, from the walls of the crop, of a strong organic fluid, of which **INGLUVIN** is the chief constituent. The hull of the grain, or the shell of the seed, is broken by the pressure of the walls and the gravel, and their interior is exposed to the chemical action of the **INGLUVIN.** By the time it reaches the stomach it is ready for the gastric juices. From this point on, digestion proceeds as with the higher animals. As the gallinaceæ have very small salivary glands, and as the fluids secreted by these resemble the secretion of the parotid rather than that of the sublingual and submaxillary glands of the human being, it would seem as if **INGLUVIN** played a double part, exercising the functions of the ptyalin of the saliva as well as the pepsin of the stomach. **INGLUVIN** is prepared by WM. R. WARNER & Co., Pharmaceutical Chemists. It is made from selected gizzards, and is so carefully extracted as to be free from all foreign organic bodies. It is already known and appreciated by the Medical Profession. The AMERICAN ANALYST bespeaks for it the same appreciation by its readers. We extract the following:—

"Prof. ROBERTS BARTHOLOW, M.A., M.D., LL.D., in his late work on 'Materia Medica and Therapeutics,' says:—**INGLUVIN:** This is a preparation from the gizzard of the domestic chicken—*ventriculus callosus gallinaceus.* Dose, gr. v.—℈ j.

"**INGLUVIN** has the remarkable property of arresting certain kinds of vomiting—notably the *vomiting of pregnancy.* It is a stomachic tonic, and relieves *indigestion, flatulence*, and *dyspepsia.*

"The author's experience is confirmatory of the statements which have been put forth regarding the exceptional power of this agent to arrest the vomiting of pregnancy. It can be administered in inflammatory conditions of the mucous membrane, as it has no irritant effect. Under ordinary circumstances, and when the object of its administration is to promote the digestive function, it should be administered after meals. When the object is to arrest the vomiting of pregnancy it should be given before meals."—*From the* AMERICAN ANALYST, *August 1st, 1886.*

Per bottle, 4s. 0d. Of all first-class Chemists.

SAMPLES FREE TO PRACTITIONERS.

British Depôt—**F. NEWBERY & SONS,**

1, King Edward-street, Newgate-street, London.

[*Established 1746.*]

PRINTED and PUBLISHED by the REGISTERED PROPRIETORS, at No. 423, Strand, and Nos. 1 and 2, Bedford-street, adjoining, in the Parish of St. Martin-in-the-Fields, Westminster, in the County of London, and sold by all Booksellers and Newsvendors in Great Britain and Ireland and the Colonies.—Saturday, June 27th, 1896.

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The PUMP HOUSE, LAKE HOTEL, and BATHS,

LLANGAMMARCH WELLS, CENTRAL WALES.

Telegraphic Address—"BARIUM, LLANGAMMARCH WELLS." [For Terms apply to MANAGERESS.

(CENTRAL WALES.) **BARIUM SPRINGS.** (ALTITUDE 600 ft.)

THE LLANGAMMARCH WELLS, PUMP HOUSE, LAKE HOTEL AND BATHS. This first-class Hotel standing in its own ornamental grounds, is situated on the slope of the Eppynt Hills, looking down one of the most beautiful valleys of Wales. All the rooms have been furnished with every regard to the comfort of visitors; special attention has also been given to the sanitary drainage and water supply, which has been carried out on the most modern principles. There is splendid Salmon and Trout Fishing to be obtained in the River Irfon, over two miles of this charming tributary of the Wye flowing through the hotel grounds and is reserved for visitors, who also have the privilege of shooting over several thousand acres of Mountain and Moorland, while the picturesque lake affords every facility for boating.

It has been stated in a recently published work on Chronic Diseases of the Heart, as the result of experiment, that the Mineral Waters of Llangammarch, employed as baths as well as taken internally, exercise healing effects similar to those of the celebrated springs of Nauheim and Kreuznach in Germany. The Proprietors of the Llangammarch Wells have, therefore, secured the attendance at the Pump Room and Bath House, during the season, 9th March to October, of a Physician, who is practically acquainted with the various methods employed for the relief of Gout, Rheumatism, and Heart Affections, including those advocated by Dr. Schott at Nauheim.

A trained nurse, who administers massage under Medical Supervision, will also be in attendance.

RESULT OF ANALYSIS BY DR. DUPRÉ, August, 1883:—

"A Sample contained in two Winchester quart bottles, stoppered, from Llangammarch Springs. The water is clear, slightly saline taste.

Chloride of Sodium	189·56
Chloride of Calcium	84·56
Chloride of Magnesium	24·31
CHLORIDE OF BARIUM	6·26
Carbonate of Calcium	2·80
Silicia	1·40
	308·89 grains per gallon.

"The characteristic feature of the water is the presence of a notable quantity of BARIUM CHLORIDE and a consequent total absence of sulphates. BARIUM is a rare constituent of Mineral Waters.

"*Westminster Hospital, August 23rd, 1883.*" "A. DUPRÉ.

As a remedial agent **BARIUM** ranks high in cases of Strumous Disease in its protean forms, Glandular Enlargements, Scrofula, Chronic Rheumatism, Epilepsy, and Diseases of the Heart. It is also useful in other Diseases, such as Liver Derangements, &c.

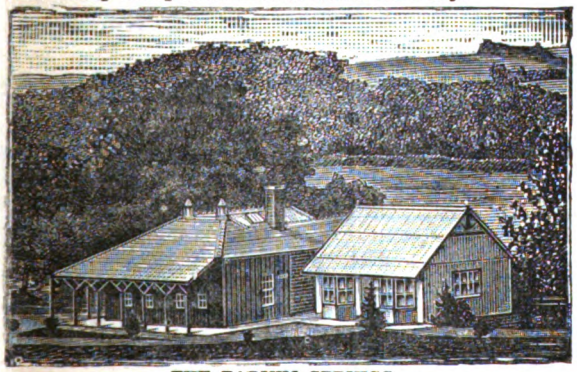
Extract from THE LANCET, Nov. 24th, 1894:—

"A sample of the barium water was obtained, sealed, and despatched to THE LANCET Laboratory for detailed examination, and the results may be compared with the analysis of the sample first submitted. In the following analyses Sample 1 is the sample obtained by ourselves, and Sample 2 the sample first submitted. The results are expressed in grains per gallon (70,000 grains):—

	No. 1.	No. 2.
Chloride of barium	6·749	6·490
Chloride of sodium	186·200	185·900
Chloride of calcium	85·160	85·470
Chloride of magnesium	20·100	20·315
Chloride of lithium	0·847	0·910
Chloride of ammonium	0·262	0·262
Alumina and silica	3·340	3·100
Bromine as bromide	Distinct traces	Distinct traces
Total mineral matters	302·658	302·447

"It is important and interesting to observe that the quantity of barium salt has varied only within very small limits during the last ten years, as in 1883 Dr. Dupré made an analysis, in which he found 6·26 grains of barium chloride per gallon. The amount of chloride of barium may therefore be fairly regarded as constant—a fact which is of especial importance in view of the powerful action of barium salts. ..... The quantity of barium present renders the internal administration of the Llangammarch waters quite safe, and no harm could result from drinking the water in reasonably large amounts. One tumblerful is a sufficient dose in most cases and two tumblerfuls should seldom, if ever, be exceeded though the dose may be repeated three or four times a day."

THE LAKE, LLANGAMMARCH WELLS.



THE BARIUM SPRINGS.

Extract from the MEDICAL ANNUAL, 1890:—

"*Heart—new treatment.*—Continued trial has affirmed the efficacy of **BARIUM CHLORIDE** as a cardiac tonic. It has been found to slacken and regulate the heart-beat and to augment the amplitude of the pulse without producing as much increase in the arterial tension as does digitalis. Da Costa and Hare have both added their experience of the drug to the published statements of Boehm, Kobert, Bacey, Lauder Brunton, and Bartholm on this subject. Da Costa finds that it can be taken for a long time without disordering the stomach, that it has some diuretic action, and that it has the valuable property of lessening cardiac pain—a statement which Hare confirms. The latter has obtained good results from the use of Barium Chloride in both mitral diseases, in acute dilatation of the heart, and in functional derangement of the heart. H. A. Haze (JOURNAL DE MÉDECINE DE PARIS) has obtained good results from its use in all the above diseases, and also in aortic diseases.

"*Glandular Enlargement.*—An eminent London Physician writes:—'My experience in the two cases which I sent to Llangammarch has been eminently satisfactory, and the well-recognised efficacy of the Kreuznach waters in glandular enlargement encourages the hope that the waters of Llangammarch may prove to be of signal and widespread benefit in the future.'"

BARIUM WATER is supplied, both Still and Aerated, by the London Agents—

INGRAM & ROYLE, Ltd., 52, Farringdon St., E.C. [Telegraphic Address "Ingram Royle, London."

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SQUIRE'S CHEMICAL FOOD.

Known for 30 years as the best preparation of its kind

FOR DELICATE CHILDREN.

The Profession is cautioned against imitations, which differ in strength both from the original and one another in the most essential ingredients.

SYRUP OF SENNA.

A mild Aperient for Children, pleasant in flavour. Since its introduction, a quarter of a century ago, has been in continuously increasing demand.

CONFECTIO BELÆ RECENTIS.

A valuable remedy in Chronic Diarrhœa and Dysentery. Prepared in this country from Bael Fruits, Imported ripe and fresh in their Natural State.

DOSE—A Tablespoonful.

"It possesses all the aroma of the fruit, and is not only astringent where diarrhœa exists, but possesses the singular property of being aperient if the bowels be irregular or costive."

Messrs. SQUIRE'S preparation is all that can be wished."—THE LANCET.

KASAK ELIXIR.

A Tonic Laxative — reliable, palatable, uniform in strength — without constipating reaction.

DOSE—For a Child, one or two Teaspoonfuls (according to age) at bedtime or in the early morning.

For an Adult, one Tablespoonful.

ALSO

KASAK PILULES. KASAK CAPSULES.

LIQUOR MORPHIÆ BIMECONATIS.

Syn.: LIQUOR MECONII.

A purified Solution of Opium with the Alkaloids in their natural state of combination, and standardised to contain 1 p.c. of Morphia.

NOTE.—The B.P. Solution, made by dissolving Morphia in Meconic Acid, differs very considerably from the above, and is no substitute for it.

LEHLIA.

The New and Admired Toilet Requisites.

LEHLIA Cream. Emollient for Face & Hands. 1s.

LEHLIA Dentifrice. A Perfect Tooth Powder. 1s.

LEHLIA Dusting Powder. For Nursery and Toilet. 1s.

LEHLIA Extract. For Use after Exposure to Sun or Cold Winds. 1s.

LEHLIA Soap. Pure and Refreshing. In boxes, containing 3 cakes, 2s.

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HER MAJESTY'S CHEMISTS,

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